

RTEMS Release Notes

Release 6.3

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RTEMS 6.3

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CHAPTER

ONE

RTEMS 6.3

1.1 RTEMS / Documentation / Documentation

Go to *Issues* (page 346) or *Merge Requests* (page 351)

Issues Summary

163 - The mdump example output is broken (page 8)
160 - Build warnings on 6 branch with Python 3.14 (page 5)
158 - Update waf on 6 branch (page 6)
157 - Docs version.py on 6 needs updating (page 2)
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143 - hexdump formats disks (opened) (page 11)
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Merge Requests Summary

262 - shell/memory_commands.rst: Correct mdump example (page 13)
260 - shell/file_and_directory.rst: Correct wrong summary for hexdump (page 14)
258 - build: Fix python warnings (page 15)
257 - version: Fix building a release with Python 3.14 (page 17)
255 - waf: Update to 2.1.9 (page 18)
253 - user/start/sources: Make release examples consistent (page 19)
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1.1.1 Issues

1.1.1.1 157 - Docs version.py on 6 needs updating

Id	157
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Chris Johns
Created	2026-08-25T06:37:17.022Z
Closed	2026-10-31T16:46:04.398Z
Updated	2026-10-31T16:46:04.448Z
Milestone	6.3
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/157
Merges	0

Summary

Building a release set of docs on 5 raises this error:

```
Traceback (most recent call last):
File "/opt/work/chris/rtems/releasing/rtems-release.git/5.4-rc2/ws-rtems-docs/rtems-docs-5.4-rc2/.waf3-2.0.19-1f3c580272b15a03d2566843c5fe872a/waflib/Scripting.py", line 119, in waf_entry_point
run_commands()
~~~~~~~~~~~~^^
File "/opt/work/chris/rtems/releasing/rtems-release.git/5.4-rc2/ws-rtems-docs/rtems-docs-5.4-rc2/.waf3-2.0.19-1f3c580272b15a03d2566843c5fe872a/waflib/Scripting.py", line 182, in run_commands
ctx=run_command(cmd_name)
File "/opt/work/chris/rtems/releasing/rtems-release.git/5.4-rc2/ws-rtems-docs/rtems-docs-5.4-rc2/.waf3-2.0.19-1f3c580272b15a03d2566843c5fe872a/waflib/Scripting.py", line 173, in run_command
ctx.execute()
~~~~~~~~~~~^^
File "/opt/work/chris/rtems/releasing/rtems-release.git/5.4-rc2/ws-rtems-docs/rtems-docs-5.4-rc2/.waf3-2.0.19-1f3c580272b15a03d2566843c5fe872a/waflib/Scripting.py", line 375, in execute
return execute_method(self)
File "/opt/work/chris/rtems/releasing/rtems-release.git/5.4-rc2/ws-rtems-docs/rtems-docs-5.4-rc2/.waf3-2.0.19-1f3c580272b15a03d2566843c5fe872a/waflib/Build.py", line 93, in execute
self.execute_build()
~~~~~~~~~~~~~~~~~~^^
File "/opt/work/chris/rtems/releasing/rtems-release.git/5.4-rc2/ws-rtems-docs/rtems-docs-5.4-rc2/.waf3-2.0.19-1f3c580272b15a03d2566843c5fe872a/waflib/Build.py", line 96, in execute_build
self.recurse([self.run_dir])
~~~~~~~~~~~~^^^^^^^^^^^^^^^^
File "/opt/work/chris/rtems/releasing/rtems-release.git/5.4-rc2/ws-rtems-docs/rtems-docs-5.4-rc2/.waf3-2.0.19-1f3c580272b15a03d2566843c5fe872a/waflib/Context.py", line 133, in recurse
user_function(self)
~~~~~~~~~~~~~^^^^^^
File "/opt/work/chris/rtems/releasing/rtems-release.git/5.4-rc2/ws-rtems-docs/rtems-docs-5.4-rc2/wscript", line 85, in build
ver_version, ver_date, ver_released = version.get(ctx, rtems_major_version)
~~~~~~~~~~~^^^^^^^^^^^^^^^^^^^^^^^^^^^^
File "/opt/work/chris/rtems/releasing/rtems-release.git/5.4-rc2/ws-rtems-docs/rtems-docs-5.4-rc2/common/version.py", line 135, in get
v = configparser.SafeConfigParser()
^^^^^^^^^^^^^^^^^^^^^^^^^^^^
AttributeError: module 'configparser' has no attribute 'SafeConfigParser'. Did you mean: 'RawConfigParser'?
```

I guess pulling `version.py` from `main` would help if that version is also OK?

Author: Chris Johns 2026-08-25T06:37:17.148Z

cloned from #152

Author: Chris Johns 2026-08-25T06:37:31.989Z

added rtems#15 as parent item

Author: Chris Johns 2026-08-25T06:37:43.985Z

set status to **In progress**

Author: Chris Johns 2026-08-25T06:37:47.421Z

changed title from

Docs version.py on

5

needs updating

to

Docs version.py on

6

needs updating

Author: Chris Johns 2026-08-26T02:14:53.238Z

mentioned in merge request !257

Author: Chris Johns 2026-10-31T16:46:04.421Z

set status to **Done**

1.1.1.2 160 - Build warnings on 6 branch with Python 3.14

Id	160
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-08-26T02:16:52.110Z
Closed	2026-10-31T16:45:51.483Z
Updated	2026-10-31T16:45:51.489Z
Milestone	6.3
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/160
Merges	0

Summary

Running `waf` with Python 3.14 has these warnings:

```
./waf configure --prefix=/opt/src/rtems/docs/test
/opt/work/chris/rtems/docs/rtems-docs.git/common/waf.py:104: SyntaxWarning: "\\D" is an invalid escape sequence. Such sequences will not work in the future. Did you mean "\\\\D"? A raw string is also an option.


ver = tuple(map(int, re.split('[\\D]', version)))
/opt/work/chris/rtems/docs/rtems-docs.git/common/waf.py:111: SyntaxWarning: "\\D" is an invalid escape sequence. Such sequences will not work in the future. Did you mean "\\\\D"? A raw string is also an option.


ver = tuple(map(int, re.split('[\\D]', version)))
/opt/work/chris/rtems/docs/rtems-docs.git/common/latex.py:9: SyntaxWarning: "\\d" is an invalid escape sequence. Such sequences will not work in the future. Did you mean "\\\\d"? A raw string is also an option.


'\\documentclass[a4paper,11pt,english]{report}']
```

Author: Chris Johns 2026-08-26T02:16:52.232Z

cloned from #154

Author: Chris Johns 2026-08-26T02:17:03.952Z

added rtems#15 as parent item

Author: Chris Johns 2026-08-26T02:17:13.117Z

set status to **In progress**

Author: Chris Johns 2026-08-26T02:19:03.159Z

mentioned in merge request !258

Author: Chris Johns 2026-10-31T16:45:42.878Z

changed title from

Build warnings on

5

branch with Python 3.14

to

Build warnings on

6

branch with Python 3.14

Author: Chris Johns 2026-10-31T16:45:42.912Z

changed the description

Author: Chris Johns 2026-10-31T16:45:51.504Z

set status to **Done**

1.1.1.3 158 - Update waf on 6 branch

Id	158
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-08-25T06:42:15.656Z
Closed	2026-10-31T16:33:43.610Z
Updated	2026-10-31T16:33:43.667Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/158
Merges	0

We should use the latest which is 2.1.9.

Author: Chris Johns 2026-08-25T06:42:15.827Z

added rtems#15 as parent item

Author: Chris Johns 2026-08-25T06:42:15.920Z

set status to **In progress**

Author: Chris Johns 2026-08-25T06:42:16.063Z

assigned to @chris

Author: Chris Johns 2026-08-25T06:43:11.197Z

changed title from

Updat

r

e waf on 6 branch

to

Update waf on 6 branch

Author: Chris Johns 2026-08-25T06:45:16.124Z

mentioned in merge request !255

Author: Chris Johns 2026-08-26T14:22:14.355Z

mentioned in commit 2d65f5324eebad79b8a2fb4d90e16723c60efeae

Author: Chris Johns 2026-10-31T16:33:43.636Z

set status to **Done**

1.1.1.4 163 - The mdump example output is broken

Id	163
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Chris Johns
Created	2026-09-10T15:22:51.959Z
Closed	2026-10-31T16:26:46.108Z
Updated	2026-10-31T16:26:46.113Z
Milestone	6.3
Labels	cpukit::shell, doc, rtems::shell
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/163
Merges	1

Summary

This work item is the same problem as #142 but for the 6 branch.

The mdump example output is broken. There are spaces missing between the address and the first byte.

```
SHLL [/] $ mdump 0x10000 32
0x0001000000 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 ................
0x0001001000 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00 ................
SHLL [/] $ mdump 0x02000000 32
0x02000000A1 48 00 00 29 00 80 33-81 C5 22 BC A6 10 21 00 .H..)..3.."...!.
0x02000010A1 48 00 00 29 00 80 33-81 C5 22 BC A6 10 21 01 .H..)..3.."...!.
SHLL [/] $ mdump 0x02001000 32
0x0200100003 00 80 00 82 10 60 00-81 98 40 00 83 48 00 00 ......`.....H..
0x0200101084 00 60 01 84 08 A0 07-86 10 20 01 87 28 C0 02 ..`....... ..(..
```

Note the ten hex digits after each 0x (there should be only 8, followed by a SPACE character).

Steps to reproduce

1. Surf to https://docs.rtems.org/docs/main/shell.html
2. Scroll to mdump example

Author: Joel Sherrill	2026-09-10T15:22:52.084Z

set status to **To do**

Author: Joel Sherrill	2026-09-10T15:22:52.254Z

assigned to @joel

Author: Joel Sherrill 2026-09-10T15:23:49.429Z

marked as related to #142

Author: Joel Sherrill 2026-09-10T15:29:49.744Z

mentioned in merge request !261

Author: Joel Sherrill 2026-09-10T15:32:27.701Z

mentioned in merge request !262

Author: Joel Sherrill 2026-09-17T21:11:57.538Z

mentioned in commit joel/rtems@9cc928746e97b99c86af6a0829bb7fd5a0550137

Author: Joel Sherrill 2026-09-17T21:12:22.276Z

mentioned in merge request rtems/rtos/rtems!1495

Author: Chris Johns 2026-09-17T23:26:25.297Z

mentioned in commit joel/rtems@22b3389e262ce3325d2b919c2fa36f3de4398955

Author: Joel Sherrill 2026-09-18T17:00:41.466Z

removed the relation with #142

Author: Joel Sherrill 2026-09-18T17:01:23.518Z

marked this item as blocked by #142

Author: Joel Sherrill 2026-09-18T18:03:14.249Z

mentioned in commit joel/rtems@f61b3cf5f8ef7be14faa50e197aee15116518050

Author: Joel Sherrill 2026-09-18T18:04:50.774Z

mentioned in merge request rtems/rtos/rtems!1496

Author: Joel Sherrill 2026-09-18T18:06:37.691Z

mentioned in merge request rtems/rtos/rtems!1497

Author: Vijay Banerjee 2026-09-21T15:52:51.541Z

mentioned in commit joel/rtems@4a76fe06008c70dc40f01bce76071bdca612a52c

Author: Joel Sherrill 2026-10-08T22:54:14.525Z

mentioned in commit 0b1af0cdd8045845934e09f691102f06fe3d6708

Author: Chris Johns 2026-10-31T16:26:46.131Z

set status to **Done**

1.1.1.5 151 - Backport to 6 branch “user: Update remaining references to autotools”

Id	151
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2026-07-31T14:55:23.643Z
Closed	2026-08-13T23:08:01.572Z
Updated	2026-08-13T23:08:01.663Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/151
Merges	0

The following discussion from !249 should be addressed:

- [] @opticron started a discussion:

  This needs a backport to 6 branch.

  Author: Kinsey Moore 2026-07-31T14:55:23.824Z

  added rtems#15 as parent item

  Author: Kinsey Moore 2026-07-31T14:55:23.915Z

  set status to **To do**

Author: Kinsey Moore 2026-07-31T14:55:24.017Z

assigned to @opticron

Author: Kinsey Moore 2026-07-31T16:24:18.736Z

mentioned in merge request !250

Author: Kinsey Moore 2026-07-31T17:20:05.841Z

set status to **In progress**

Author: Kinsey Moore 2026-08-13T23:08:01.635Z

set status to **Done**

1.1.1.6 143 - hexdump formats disks (opened)

Id	143
State	opened
Type	ISSUE
Author	Jens Schweikhardt
Created	2026-03-26T19:22:26.098Z
Updated	2026-09-09T19:23:57.732Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/143
Merges	0

Summary

The docs erroneously (I hope) state that hexdump formats disks.

Steps to reproduce

Surf to https://docs.rtems.org/docs/main/shell.html section 4.1 Introduction, where is says "[hexdump] - format disks"

Author: Jens Schweikhardt 2026-03-26T19:22:26.212Z

set status to **To do**

Author: Joel Sherrill 2026-09-09T19:23:53.000Z

mentioned in merge request !260

Author: Joel Sherrill 2026-09-17T23:27:58.439Z

mentioned in commit 0ccc71f1d8033ea873e29faa28cfb759ba4f2ab0

1.1.1.7 93 - rtems-ver-minor set wrong in release? (opened)

Id	93
State	opened
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Created	2025-02-27T16:51:58.067Z
Updated	2026-07-31T00:19:05.031Z
Milestone	6.3
Labels	doc, release
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/93
Merges	0

Summary

The minor number is `0` in the released docs for RTEMS `6.1`

I'm not sure if this belongs to docs or release.

See for example https://docs.rtems.org/docs/6.1/user/start/sources.html#releases

@chris

Author: Gedare Bloom 2025-02-27T16:51:58.192Z

assigned to @gedare

Author: Chris Johns 2025-02-28T05:39:05.939Z

The 6.1 released docs can be found here https://ftp.rtems.org/pub/rtems/releases/6/6.1/docs/html/user/index.html and they look OK to me:

!`image.png <https://gitlab.rtems.org/-/project/uploads/0bd474ff5290a8c38a7b1783e937d97e/image.png>`_

@amar ?

Author: Chris Johns 2025-02-28T05:54:50.923Z

Checked docs.rtems.org and it also looks OK.

Author: Chris Johns 2025-10-02T22:36:06.067Z

added rtems#10 as parent epic

Author: Chris Johns 2025-12-16T20:45:23.300Z

added rtems#15 as parent epic

Author: Chris Johns 2026-07-31T00:19:05.004Z

Please update the Status.

1.1.2 Merge Requests

1.1.2.1 262 - shell/memory_commands.rst: Correct mdump example

Id	262
State	merged
Merged by	Joel Sherrill
Merged at	2026-10-08T22:54:12.426Z
Assignee(s)	Joel Sherrill
Created	2026-09-10T15:32:24.693Z
Updated	2026-10-08T22:54:12.418Z
Milestone	6.3
Labels	cpukit::misc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/262
Commit	0b1af0cdd8045845934e09f691102f06fe3d6708

Summary

shell/memory_commands.rst: Correct mdump example

Replaced output with a run on leon3 using the base text address.

Closes #163

Generative AI

Closes #6

Author: Joel Sherrill 2026-09-10T15:32:24.866Z

assigned to @joel

Author: Joel Sherrill 2026-09-10T20:00:30.528Z

enabled an automatic merge when all merge checks for 64c58ee342a200ff8aa717b614da2273d972a51f pass

Author: Joel Sherrill 2026-09-17T23:27:59.226Z

aborted the automatic merge because target branch was updated

Author: Joel Sherrill 2026-09-18T17:39:52.732Z

added 2 commits

- 0ccc71f1 - 1 commit from branch `rtems/docs:6`
- 0b1af0cd - shell/memory_commands.rst: Correct mdump example

Compare with previous version

Author: Joel Sherrill 2026-09-24T22:05:52.445Z

enabled an automatic merge when all merge checks for 0b1af0cdd8045845934e09f691102f06fe3d6708 pass

Author: Chris Johns 2026-10-08T22:54:09.263Z

approved this merge request

1.1.2.2 260 - shell/file_and_directory.rst: Correct wrong summary for hexdump

Id	260
State	merged
Merged by	Joel Sherrill
Merged at	2026-09-17T23:27:56.748Z
Assignee(s)	Joel Sherrill
Created	2026-09-09T19:23:47.903Z
Updated	2026-09-17T23:27:56.740Z
Milestone	6.3
Labels	cpukit::shell, doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/260
Commit	0ccc71f1d8033ea873e29faa28cfb759ba4f2ab0

Summary

shell/file_and_directory.rst: Correct wrong summary for hexdump

The list of commands at the beginning of the chapter described hexdump as a disk formatter.

Closes #143

Generative AI

Closes #6

Author: Joel Sherrill 2026-09-09T19:23:48.109Z

assigned to @joel

Author: Joel Sherrill 2026-09-09T19:48:31.312Z

added 1 commit

- 0ccc71f1 - shell/file_and_directory.rst: Correct wrong summary for hexdump

Compare with previous version

Author: Joel Sherrill 2026-09-10T20:00:50.491Z

enabled an automatic merge when all merge checks for 0ccc71f1d8033ea873e29faa28cfb759ba4f2ab0 pass

Author: Chris Johns 2026-09-17T23:27:53.179Z

approved this merge request

1.1.2.3 258 - build: Fix python warnings

Id	258
State	merged
Merged by	Kinsey Moore
Merged at	2026-08-26T14:24:46.804Z
Assignee(s)	Chris Johns
Created	2026-08-26T02:18:56.924Z
Updated	2026-08-26T14:24:46.725Z
Milestone	6.3
Labels	doc, tool::waf
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/258
Commit	ec0d16dc69dcd2db6ed9cc2c323d7e6b5695a845

Summary

build: Fix python warnings

Closes #160

Generative AI

None

Author: Chris Johns 2026-08-26T02:18:57.117Z

assigned to @chris

Author: Chris Johns 2026-08-26T02:19:50.311Z

enabled an automatic merge when all merge checks for fee9bd15f798bd7f980182d031f9dc78dd87049a pass

Author: Chris Johns 2026-08-26T14:22:16.848Z

aborted the automatic merge because target branch was updated

Author: Kinsey Moore 2026-08-26T14:24:16.702Z

approved this merge request

Author: Kinsey Moore 2026-08-26T14:24:26.836Z

added 3 commits

- fee9bd15...47bf011e - 2 commits from branch `rtems/docs:6`
- ec0d16dc - build: Fix python warnings

Compare with previous version

Author: Kinsey Moore 2026-08-26T14:24:31.931Z

enabled an automatic merge when all merge checks for ec0d16dc69dcd2db6ed9cc2c323d7e6b5695a845 pass

Author: Joel Sherrill 2026-08-26T14:24:45.657Z

approved this merge request

1.1.2.4 257 - version: Fix building a release with Python 3.14

Id	257
State	merged
Merged by	Kinsey Moore
Merged at	2026-08-26T14:23:35.573Z
Assignee(s)	Chris Johns
Created	2026-08-26T02:14:46.781Z
Updated	2026-08-26T14:23:38.123Z
Milestone	6.3
Labels	doc, tool::waf
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/257
Commit	47bf011eaa2eac3798003e7c023b52ee8b7d5f47

Summary

version: Fix building a release with Python 3.14

Closes #157

Generative AI

None

Author: Chris Johns 2026-08-26T02:14:46.962Z

assigned to @chris

Author: Chris Johns 2026-08-26T02:15:26.211Z

enabled an automatic merge when all merge checks for 4748127ecdc9e66b24f9e1cbae7c4a2a32dc9f2f pass

Author: Chris Johns 2026-08-26T14:22:14.968Z

aborted the automatic merge because target branch was updated

Author: Joel Sherrill 2026-08-26T14:22:51.343Z

approved this merge request

Author: Joel Sherrill 2026-08-26T14:23:00.306Z

added 2 commits

- 2d65f532 - 1 commit from branch `rtems/docs:6`

- 47bf011e - version: Fix building a release with Python 3.14

Compare with previous version

1.1.2.5 255 - waf: Update to 2.1.9

Id	255
State	merged
Merged by	Chris Johns
Merged at	2026-08-26T14:22:12.995Z
Assignee(s)	Chris Johns
Created	2026-08-25T06:45:07.693Z
Updated	2026-08-26T14:22:12.986Z
Milestone	6.3
Labels	doc, tool::waf
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/255
Commit	2d65f5324eebad79b8a2fb4d90e16723c60efeae

Summary

waf: Update to 2.1.9

Closes #158

Generative AI

None

Author: Chris Johns 2026-08-25T06:45:08.607Z

assigned to @chris

Author: Chris Johns 2026-08-25T06:45:18.918Z

enabled an automatic merge when all merge checks for 2d65f5324eebad79b8a2fb4d90e16723c60efeae pass

Author: Joel Sherrill 2026-08-26T14:22:07.748Z

approved this merge request

1.1.2.6 253 - user/start/sources: Make release examples consistent

Id	253
State	merged
Merged by	Kinsey Moore
Merged at	2026-08-20T23:17:43.839Z
Assignee(s)	Kinsey Moore
Created	2026-08-18T13:50:13.681Z
Updated	2026-08-20T23:17:43.832Z
Milestone	6.3
Labels	doc::user
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/253
Commit	ef5ddcc15e41435a32e530709135e99e46c92592

Summary

user/start/sources: Make release examples consistent

When version numbers were updated to replaceable references, this section was made confusing due to only part of the example getting updated. This makes the example self-consistent again.

Generative AI

Author: Kinsey Moore 2026-08-18T13:50:13.882Z

assigned to @opticron

Author: Kinsey Moore 2026-08-20T23:00:42.789Z

enabled an automatic merge when all merge checks for ef5ddcc15e41435a32e530709135e99e46c92592 pass

Author: Joel Sherrill 2026-08-20T23:17:41.140Z

approved this merge request

1.1.2.7 250 - user: Update remaining references to autotools

Id	250
State	merged
Merged by	Joel Sherrill
Merged at	2026-08-13T22:50:23.293Z
Assignee(s)	Kinsey Moore
Created	2026-07-31T16:24:12.591Z
Updated	2026-08-13T22:50:23.285Z
Milestone	6.3
Labels	doc::user
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/250
Commit	cfdf4ec0c64dd7b40dc5851bc3bf028cd6292b2c

Summary

user: Update remaining references to autotools

This swaps the remaining references to autotools for their waf equivalents.

Closes #151

Generative AI

Author: Kinsey Moore 2026-07-31T16:24:12.891Z

assigned to @opticron

Author: Kinsey Moore 2026-07-31T16:24:29.468Z

enabled an automatic merge when all merge checks for 7f128af9a6034e8ea7d30f9df20a6150c6e5b9da pass

Author: Kinsey Moore 2026-07-31T16:24:49.863Z

marked this merge request as blocked by !249

Author: Kinsey Moore 2026-07-31T16:26:27.089Z

mentioned in issue rtems/rtos/rtems#4130

Author: Kinsey Moore 2026-08-13T22:42:54.018Z

added 2 commits

- 1df6cde3 - user: Update remaining references to autotools

- cfdf4ec0 - Misc: Update instructions to not reference autoconf build system

Compare with previous version

Author: Joel Sherrill 2026-08-13T22:50:12.580Z

enabled an automatic merge when all merge checks for cfdf4ec0c64dd7b40dc5851bc3bf028cd6292b2c pass

Author: Joel Sherrill 2026-08-13T22:50:21.173Z

approved this merge request

1.2 RTEMS / Packages / LittlevGL

Go to *Issues* (page 796) or *Merge Requests* (page 804)

Issues Summary

6 - Update rtems_waf for 6 (opened) (page 22)

Merge Requests Summary

1.2.1 Issues

1.2.1.1 6 - Update rtems_waf for 6 (opened)

Id	6
State	opened
Type	ISSUE
Author	Chris Johns
Created	2026-07-08T05:11:56.897Z
Updated	2026-07-08T05:12:10.719Z
Milestone	6.3
Labels	lang::python, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-littlevgl/-/work_items/6
Merges	0

Summary

Update `rtems_waf` to fix python warnings.

Author: Chris Johns 2026-07-08T05:11:56.980Z

cloned from #5

Author: Chris Johns 2026-07-08T05:12:10.771Z

changed title from

Update rtems_waf for

7

to

Update rtems_waf for

6

1.3 RTEMS / Packages / Network Services

Go to *Issues* (page 23) or *Merge Requests* (page 24)

Issues Summary

21 - Update rtems_waf (opened) (page 23)

Merge Requests Summary

38 - Backport of ntpd fix and update rtems_waf (page 24)

1.3.1 Issues

1.3.1.1 21 - Update rtems_waf (opened)

Id	21
State	opened
Type	ISSUE
Author	Chris Johns
Created	2026-07-08T04:59:38.947Z
Updated	2026-07-08T04:59:48.513Z
Milestone	6.3
Labels	lang::python, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/work_items/21
Merges	0

Summary

Update `rtems_waf` to fix python wanrings

Author: Chris Johns 2026-07-08T04:59:39.039Z

cloned from #20

1.3.2 Merge Requests

1.3.2.1 38 - Backport of ntpd fix and update rtems_waf

Id	38
State	merged
Merged by	Chris Johns
Merged at	2026-07-27T13:50:23.237Z
Assignee(s)	Chris Johns
Created	2026-07-27T06:27:53.398Z
Updated	2026-07-27T13:50:23.216Z
Milestone	6.3
Labels	pkg::network-services
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/38
Commit	c630d97e5fc29c50270b6f401370a5b055e5ea6e

Back port a fix for NTPD's `msyslog` and update `rtems_waf` to pick up fixes for warnings for newer pythons.

Generative AI

None

Author: Chris Johns 2026-07-27T06:27:53.621Z

assigned to @chris

Author: Chris Johns 2026-07-27T06:28:02.144Z

enabled an automatic merge when all merge checks for c630d97e5fc29c50270b6f401370a5b055e5ea6e pass

Author: Kinsey Moore 2026-07-27T13:50:19.706Z

approved this merge request

1.4 RTEMS / Packages / lwIP

Go to *Issues* (page 834) or *Merge Requests* (page 841)

Issues Summary

14 - Follow-up from "embeddedsw/xadapter: Start link detect thread after init" (page 25)
12 - Follow-up from "embeddedsw/xemacps: Expand protection to BD ring" (page 26)
11 - Backport to 6 branch: "embeddedsw/emacps: Backport iteration limit fix" (page 27)

17 - Update rtems_waf for 6 (opened) (page 28)

Merge Requests Summary

53 - rtemslwip: Add gethostbyname wrapper (page 30)
51 - rtems_waf: Update to main (page 29)
43 - embeddedsw/xadapter: Start link detect thread after init (page 31)
39 - embeddedsw/xemacps: Expand protection to BD ring (page 32)
36 - embeddedsw/emacps: Backport iteration limit fix (page 33)

49 - rtems_waf: Update to the latest on main in rtems_waf (closed) (page 34)

1.4.1 Issues

1.4.1.1 14 - Follow-up from "embeddedsw/xadapter: Start link detect thread after init"

Id	14
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Chris Johns
Created	2026-05-29T18:08:29.887Z
Closed	2026-07-28T01:37:05.840Z
Updated	2026-07-28T01:37:05.845Z
Milestone	6.3
Labels	network::lwip
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/work_items/14
Merges	0

The following discussion from !42 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to 6 branch.

Author: Kinsey Moore 2026-05-29T18:08:30.078Z

  added rtems#15 as parent epic

Author: Kinsey Moore 2026-05-29T18:08:30.172Z

  set status to **To do**

Author: Kinsey Moore 2026-05-29T18:10:08.888Z

  mentioned in merge request !43

Author: Chris Johns 2026-07-28T01:36:56.621Z

  assigned to @opticron

Author: Chris Johns 2026-07-28T01:37:05.878Z

  set status to **Done**

1.4.1.2 12 - Follow-up from “embeddedsw/xemacps: Expand protection to BD ring”

Id	12
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2026-01-30T15:45:07.147Z
Closed	2026-01-30T19:41:31.853Z
Updated	2026-01-30T19:41:32.178Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/work_items/12
Merges	0

The following discussion from !38 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to 6 branch as it is a critical bug fix.

Author: Kinsey Moore 2026-01-30T15:45:07.312Z

added rtems#15 as parent epic

Author: Kinsey Moore	2026-01-30T15:45:07.417Z

set status to **To do**

Author: Kinsey Moore	2026-01-30T15:45:07.551Z

assigned to @opticron

Author: Kinsey Moore	2026-01-30T15:49:16.565Z

mentioned in merge request !39

Author: Kinsey Moore	2026-01-30T19:41:31.977Z

set status to **Done**

1.4.1.3 11 - Backport to 6 branch: “embeddedsw/emacps: Backport iteration limit fix”

Id	11
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-12-19T19:00:47.460Z
Closed	2026-01-30T19:37:51.891Z
Updated	2026-01-30T19:37:51.996Z
Milestone	6.3
Labels	network::lwip
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/work_items/11
Merges	0

The following discussion from !35 should be addressed:

- [] @opticron started a discussion:

  This is a bug fix and needs to be backported to 6 branch.

Author: Kinsey Moore	2025-12-19T19:00:47.673Z

added rtems#10 as parent epic

Author: Kinsey Moore	2025-12-19T19:00:47.782Z

set status to **To do**

Author: Kinsey Moore	2025-12-19T19:00:47.932Z

assigned to @opticron

Author: Kinsey Moore	2025-12-19T19:03:03.827Z

mentioned in merge request !36

Author: Kinsey Moore	2025-12-25T03:29:07.320Z

mentioned in commit 96e17bdbf19e485ece80bc391478b68b26184306

Author: Kinsey Moore	2026-01-30T19:37:51.971Z

set status to **Done**

1.4.1.4 17 - Update rtems_waf for 6 (opened)

Id	17
State	opened
Type	ISSUE
Author	Chris Johns
Created	2026-07-08T05:07:43.707Z
Updated	2026-07-08T05:08:01.099Z
Milestone	6.3
Labels	lang::python, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/work_items/17
Merges	0

Summary

Update `rtems_waf` to fix python warnings

Author: Chris Johns	2026-07-08T05:07:43.797Z

cloned from #16

Author: Chris Johns	2026-07-08T05:07:57.455Z

changed title from

Update rtems_waf for

7

to

Update rtems_waf for

6

Author: Chris Johns 2026-08-25T04:17:35.656Z

mentioned in merge request !49

Author: Chris Johns 2026-08-25T05:41:35.839Z

mentioned in merge request !51

1.4.2 Merge Requests

1.4.2.1 51 - rtems_waf: Update to main

Id	51
State	merged
Merged by	Vijay Banerjee
Merged at	2026-08-26T14:25:50.661Z
Assignee(s)	Chris Johns
Created	2026-08-25T05:41:29.262Z
Updated	2026-08-26T14:25:50.651Z
Milestone	6.3
Labels	network::lwip, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/51
Commit	d07165ebba7d689a18500e26aaa668441f57fa54

Summary

rtems_waf: Update to main

Closes #17

Generative AI

None

Author: Chris Johns 2026-08-25T05:41:29.442Z

assigned to @chris

Author: Chris Johns 2026-08-25T05:42:07.628Z

enabled an automatic merge when all merge checks for bca7807ebb8cae2779130476b9ecdaea7785d9b4 pass

Author: Vijay Banerjee 2026-08-26T14:24:25.402Z

aborted the automatic merge because target branch was updated

Author: Vijay Banerjee 2026-08-26T14:25:10.449Z

added 2 commits

- 0d1ca3a8 - 1 commit from branch `rtems/pkg:6`
- d07165eb - rtems_waf: Update to main

Compare with previous version

Author: Vijay Banerjee 2026-08-26T14:25:37.584Z

enabled an automatic merge when all merge checks for d07165ebba7d689a18500e26aaa668441f57fa54 pass

Author: Vijay Banerjee 2026-08-26T14:25:47.413Z

approved this merge request

1.4.2.2 53 - rtemslwip: Add gethostbyname wrapper

Id	53
State	merged
Merged by	Vijay Banerjee
Merged at	2026-08-26T14:24:23.512Z
Assignee(s)	Kinsey Moore
Created	2026-08-25T18:11:45.702Z
Updated	2026-08-26T14:24:23.501Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/53
Commit	0d1ca3a8897c41a47682a921a10ab873352efbd3

Summary

rtemslwip: Add gethostbyname wrapper

Applications and libraries compiled without the benefit of the lwIP headers may require gethostbyname() instead of lwip_gethostbyname(). This wrapper allows those applicationns and libraries to link properly.

Generative AI

Author: Kinsey Moore 2026-08-25T18:11:45.857Z

assigned to @opticron

Author: Vijay Banerjee 2026-08-26T14:24:19.078Z

approved this merge request

1.4.2.3 43 - embeddedsw/xadapter: Start link detect thread after init

Id	43
State	merged
Merged by	Kinsey Moore
Merged at	2026-06-26T00:14:01.599Z
Assignee(s)	Kinsey Moore
Created	2026-05-29T18:10:01.531Z
Updated	2026-06-26T00:14:01.590Z
Milestone	6.3
Labels	network::lwip
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/43
Commit	6be6b4664e04cfa200462fd51371f75211dfb19d

Summary

embeddedsw/xadapter: Start link detect thread after init

This moves the start of the link detection thread after the initialization of the interface to remove the race condition where the link detection thread might start running before initialization of the netif structures has been completed.

Closes #14

Generative AI

None

Author: Kinsey Moore 2026-05-29T18:10:01.718Z

assigned to @opticron

Author: Kinsey Moore 2026-05-29T18:10:18.433Z

enabled an automatic merge when all merge checks for 6be6b4664e04cfa200462fd51371f75211dfb19d pass

Author: Amar Takhar 2026-06-26T00:13:57.992Z

approved this merge request

1.4.2.4 39 - embeddedsw/xemacps: Expand protection to BD ring

Id	39
State	merged
Merged by	Joel Sherrill
Merged at	2026-01-30T15:56:38.746Z
Assignee(s)	Kinsey Moore
Created	2026-01-30T15:49:11.202Z
Updated	2026-01-30T15:56:38.737Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/39
Commit	9a5ca00781f933eadfc7ed7cd9d29954ad9588e9

Summary

embeddedsw/xemacps: Expand protection to BD ring

This expands the locking protection of pbufs to encompass calls to the BD Ring API. Testing has shown that this descriptor ring is also succeptible to the same issues as the pbuf arrays under heavy load.

Updates #12

rtemslwip/zynqmp/netstart: Drop core-zero locking of threads

This removes the locking of emacps servicing thread to core 0 as it is no longer necessary given the added locking around the BD ring manipulations.

Closes #12

Author: Kinsey Moore 2026-01-30T15:49:11.368Z

assigned to @opticron

Author: Joel Sherrill 2026-01-30T15:52:52.070Z

changed the description

Author: Joel Sherrill 2026-01-30T15:52:56.804Z

enabled an automatic merge when all merge checks for 9a5ca00781f933eadfc7ed7cd9d29954ad9588e9 pass

Author: Joel Sherrill 2026-01-30T15:52:58.706Z

approved this merge request

1.4.2.5 36 - embeddedsw/emacps: Backport iteration limit fix

Id	36
State	merged
Merged by	Kinsey Moore
Merged at	2025-12-25T03:29:06.740Z
Assignee(s)	Kinsey Moore
Created	2025-12-19T19:02:57.740Z
Updated	2025-12-25T03:29:06.731Z
Milestone	6.3
Labels	network::lwip
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/36
Commit	96e17bdbf19e485ece80bc391478b68b26184306

Summary

embeddedsw/emacps: Backport iteration limit fix

Prevent iterating beyond the buffer descriptor ring tail node. Iterating over the tail node can cause unexpected behavior such as failure to send and receive further packets.

Closes #11

Author: Kinsey Moore 2025-12-19T19:02:57.955Z

assigned to @opticron

Author: Kinsey Moore 2025-12-24T13:53:43.433Z

enabled an automatic merge when all merge checks for 96e17bdbf19e485ece80bc391478b68b26184306 pass

Author: Chris Johns 2025-12-25T03:29:04.569Z

approved this merge request

1.4.2.6 49 - rtems_waf: Update to the latest on main in rtems_waf (closed)

Id	49
State	closed
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-08-25T04:17:31.222Z
Closed	2026-08-25T04:24:03.891Z
Updated	2026-08-25T04:24:03.878Z
Milestone	6.3
Labels	network::lwip
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/49
Commit	92bdfd7fcdc0cfaddbd092426baa7d6eead38193

Summary

rtems_waf: Update to the latest on main in rtems_waf

Closes #17

Generative AI

None

Author: Chris Johns 2026-08-25T04:17:31.414Z

assigned to @chris

Author: Chris Johns 2026-08-25T04:17:50.257Z

added 10 commits

- 29c09015...6be6b466 - 9 commits from branch `rtems/pkg:6`
- 25dac3a3 - rtems_waf: Update to the latest on main in rtems_waf

Compare with previous version

Author: Chris Johns 2026-08-25T04:17:54.719Z

enabled an automatic merge when all merge checks for 25dac3a36a5c18ae32f92d38b8fe996bbb72d889 pass

Author: Chris Johns 2026-08-25T04:21:16.292Z

added 32 commits

- 25dac3a3...064b35f1 - 22 earlier commits
- 9f8004da - rtemslwip/zynqmp/netstart.c: Resolve build warning

- ea7d599e - rtemslwip/tms570: Resolve driver build errors
- decdfb9b - defs/bsps/arm: Add tms570lc4357_hdk BSP definitions
- 8e5d264b - greth: Add initial driver
- 49d42ef0 - greth: Format source code
- c5d8236a - greth: Make HW attachment BSP agnostic
- b1e49914 - greth: Driver improvements
- 9e617e31 - greth: User can supply PHY address
- 58be8958 - embeddedsw/xadapter: Start link detect thread after init
- 92bdfd7f - rtems_waf: Update to the latest on main in rtems_waf

Compare with previous version

Author: Chris Johns 2026-08-25T04:24:03.384Z

Hmm I wonder if my GitLab fork is broken and it has pulled `main` on 6 when I pressed the Update fork button?

1.5 RTEMS / Packages / Legacy Networking

Go to *Issues* (page 852) or *Merge Requests* (page 862)

Issues Summary

29 - Update rtems_waf for 6 (page 36)
22 - Follow-up from "leon3: Use sreload" (page 37)

Merge Requests Summary

33 - rtems_waf: Update to get fixes for warnings with newer pythons (page 38)
24 - leon3: Use sreload instead of scaler_reload for GPTIMER scaler value (page 39)

1.5.1 Issues

1.5.1.1 29 - Update rtems_waf for 6

Id	29
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Chris Johns
Created	2026-07-08T05:09:24.174Z
Closed	2026-08-25T04:08:22.069Z
Updated	2026-08-25T04:08:22.134Z
Milestone	6.3
Labels	lang::python, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/work_items/29
Merges	0

Summary

Update `rtems_waf` to fix python warnings.

Author: Chris Johns 2026-07-08T05:09:24.264Z

cloned from #28

Author: Chris Johns 2026-07-08T05:09:33.271Z

changed title from

Update rtems_waf for

7

to

Update rtems_waf for

6

Author: Chris Johns 2026-07-27T06:41:26.980Z

mentioned in merge request !33

Author: Chris Johns 2026-08-25T04:08:22.107Z

set status to **Done**

1.5.1.2 22 - Follow-up from “leon3: Use sreload”

Id	22
State	closed
Type	ISSUE
Author	Gedare Bloom
Closed by	Gedare Bloom
Created	2025-08-21T17:06:20.483Z
Closed	2025-08-21T17:12:07.019Z
Updated	2025-09-23T02:41:38.356Z
Milestone	6.3
Labels	arch:sparc, backport, network::legacy
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/work_items/22
Merges	0

The following discussion from !22 should be addressed:

- [] @gedare started a discussion: (+3 comments)

  leon.h was removed from bsp.h in commit 1577a48369fae

  I cannot find that commit?

Author: Gedare Bloom 2025-08-21T17:06:20.741Z

added rtems#34 as parent epic

Author: Gedare Bloom 2025-08-21T17:06:20.865Z

set status to **To do**

Author: Gedare Bloom 2025-08-21T17:10:15.321Z

mentioned in merge request !24

Author: Gedare Bloom 2025-08-21T17:12:07.078Z

set status to **Done**

Author: Chris Johns 2025-09-23T02:41:38.326Z

added rtems#15 as parent epic

1.5.2 Merge Requests

1.5.2.1 33 - rtems_waf: Update to get fixes for warnings with newer pythons

Id	33
State	merged
Merged by	Chris Johns
Merged at	2026-07-27T13:50:08.398Z
Assignee(s)	Chris Johns
Created	2026-07-27T06:41:21.794Z
Updated	2026-07-27T13:50:08.327Z
Milestone	6.3
Labels	network::legacy
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/merge_requests/33
Commit	ca91b2c6b1995c89ce63064c3e00a84553535b91

Summary

rtems_waf: Update to get fixes for warnings with newer pythons

Closes #29

Generative AI

None

Author: Chris Johns 2026-07-27T06:41:21.958Z

assigned to @chris

Author: Chris Johns 2026-07-27T06:41:33.002Z

enabled an automatic merge when all merge checks for ca91b2c6b1995c89ce63064c3e00a84553535b91 pass

Author: Kinsey Moore 2026-07-27T13:50:03.501Z

approved this merge request

1.5.2.2 24 - leon3: Use sreload instead of scaler_reload for GPTIMER scaler value

Id	24
State	merged
Merged by	Kinsey Moore
Merged at	2025-08-21T17:11:37.962Z
Created	2025-08-21T17:10:02.616Z
Updated	2025-08-21T17:11:39.097Z
Milestone	6.3
Labels	backport, network::legacy
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/merge_requests/24
Commit	ceb0657332349f5d32493373957bad87b5e06367

Summary

leon3: Use sreload instead of scaler_reload for GPTIMER scaler value

LEON3_Timer_Regs->scaler_reload does not access the Scaler Reload Value Register as intended. The correct field is LEON3_Timer_Regs->sreload, which retrieves the GPTIMER core's scaler reload value.

(cherry picked from commit ea84592c823b606f44e652e9a05c01e58a69c20e)

Co-authored-by: Prithvi Tambewagh <prithvitambewagh789@gmail.com>

Closes #22

Author: Kinsey Moore 2025-08-21T17:11:32.834Z

approved this merge request

1.6 RTEMS / Packages / LibBSD

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152 - Backport 7-freebsd-14 fixes to 6-freebsd-14 (page 62)
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1.6.1 Issues

1.6.1.1 109 - Fix BBB networking

Id	109
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-09-29T04:02:37.141Z
Closed	2026-10-31T16:25:49.151Z
Updated	2026-10-31T16:25:49.210Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/109
Merges	0

Summary

Beagle Bone Black networking is broken on `7-freebsd-14`. A number of drivers are missing and the FDT is broken.

Author: Chris Johns 2026-09-29T04:02:37.225Z

cloned from #108

Author: Chris Johns 2026-09-29T04:02:55.522Z

added rtems#15 as parent item

Author: Chris Johns 2026-09-29T04:48:03.606Z

mentioned in merge request !164

Author: Chris Johns 2026-09-29T04:58:13.817Z

The FDT sources I have tested with are:

am335x-boneblack.dts

This file is derived from the FreeBSD FDT some of which are GPL 2 so please check and consider the license. I have not regenerated the DTB from the original sources as I think there are some mistakes in it.

Author: Chris Johns 2026-10-31T16:25:49.177Z

set status to **Done**

1.6.1.2 113 - counter_u64 is broken on SMP archs

Id	113
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Sebastian Huber
Closed by	Chris Johns
Created	2026-10-02T08:31:08.403Z
Closed	2026-10-08T05:31:47.430Z
Updated	2026-10-08T05:31:47.477Z
Milestone	6.3
Labels	libbsd::freebsd-14, smp
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/113
Merges	0

Summary

Running `netstat -i` on an SMP LibBSD build of RTEMS just after booting results in:

```
xcon [/] # netstat -i
Name    Mtu Network       Address              Ipkts  Ierrs  Idrop     Opkts
↪Oerrs   Coll
cgem0  1500 <Link#1>      72:44:fa:b0:29:da    153687      0      0     86831
↪  0      0
cgem0      - 10.10.5.0/24   10.10.5.70           86733      -      -     48516
↪  -      -
lo0   16384 <Link#2>      lo0                    128      0      0  26324640
↪13999735  26384
lo0        - ::1/128        ::1                     64      -      -        64
↪  -      -
lo0        - fe80::%lo0/64  fe80::1%lo0              0      -      -         0
↪  -      -
lo0        - 127.0.0.0/8    127.0.0.1               48      -      -        48
↪  -      -
```

It looks like something is not aligned correctly. These calls are used by LibBSD in `if.c` to manage the 64bit counters in a safe way on SMP.

Steps to reproduce

Run `netstat -i` on a Zynq or ZynqMP SMP system. Verified on Zynq and ZynqMP hardware.

> **Author:** Chris Johns 2026-10-02T08:31:08.496Z
>
> cloned from rtems/rtos/rtems#5793
>
> **Author:** Chris Johns 2026-10-02T08:31:25.402Z

added rtems/rtos/rtems#15 as parent item

Author: Chris Johns 2026-10-02T08:31:37.912Z

changed title from

coun

d

er_u64 is broken on SMP archs

to

coun

t

er_u64 is broken on SMP archs

Author: Chris Johns 2026-10-03T00:53:08.219Z

moved from rtems/rtos/rtems#5794

Author: Chris Johns 2026-10-08T05:31:47.453Z

set status to **Done**

1.6.1.3 107 - Backport Fxp fix to 6-freebsd-14

Id	107
State	closed
Type	ISSUE
Author	Vijay Banerjee
Assignee(s)	Vijay Banerjee
Closed by	Vijay Banerjee
Created	2026-08-31T15:11:08.537Z
Closed	2026-10-07T14:11:49.452Z
Updated	2026-10-07T14:11:49.510Z
Milestone	6.3
Labels	arch:powerpc, backport, libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/107
Merges	0

Summary

Backport https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/157

Steps to reproduce

Author: Vijay Banerjee 2026-08-31T15:11:08.640Z

set status to **To do**

Author: Vijay Banerjee 2026-08-31T15:11:08.742Z

assigned to @vijay

Author: Vijay Banerjee 2026-09-04T18:09:39.965Z

set status to **In progress**

Author: Vijay Banerjee 2026-09-04T18:25:38.477Z

mentioned in issue rtems/rtos/rtems#5681

Author: Vijay Banerjee 2026-09-04T19:49:20.379Z

changed type to **Issue**

Author: Vijay Banerjee 2026-09-04T19:49:41.313Z

moved from rtems/rtos/rtems#5735

Author: Vijay Banerjee 2026-09-04T19:53:28.415Z

mentioned in merge request !161

Author: Joel Sherrill 2026-09-17T22:13:54.214Z

mentioned in commit eaa16d77718dd4c73198fdd3304cf91f794bac22

Author: Vijay Banerjee 2026-10-07T14:11:49.484Z

set status to **Done**

1.6.1.4 100 - Backport 7-freebsd-14 changes to 6-freebsd-14

Id	100
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-07-28T02:21:41.393Z
Closed	2026-07-31T00:35:08.058Z
Updated	2026-07-31T00:35:08.062Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/100
Merges	0

Summary

A number of MR has been added to `7-freebsd-14` that should be back ported to `6-freebsd-14`. This work item is to provide a place in the 6.3 to track this.

Merge request !152 has the commits. It is a single MR of all the commits and the MR warning is from a commit to `7-freebsd-14` that has been merged.

Author: Chris Johns 2026-07-28T02:21:41.553Z

added rtems#15 as parent item

Author: Chris Johns 2026-07-28T02:21:41.663Z

set status to **In progress**

Author: Chris Johns 2026-07-28T02:21:41.840Z

assigned to @chris

Author: Sang Woo Kim 2026-07-28T12:35:18.607Z

mentioned in merge request !154

Author: Chris Johns 2026-07-31T00:35:08.091Z

set status to **Done**

1.6.1.5 99 - Add rc.cont generation from RTEMS_NET_* environment variables

Id	99
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-07-27T04:51:52.047Z
Closed	2026-07-31T00:33:59.904Z
Updated	2026-07-31T00:33:59.961Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/99
Merges	0

Summary

Provide support to generate `/rtc/rc.conf` from environment variables. A BSP can define environment variables based on boot loader settings and these can then be used as the settings to initialize LibBSD using `rc.conf`.

Author: Chris Johns 2026-07-27T04:51:52.146Z

cloned from #88

Author: Chris Johns 2026-07-27T04:52:05.067Z

set status to **In progress**

Author: Chris Johns 2026-07-28T02:13:41.190Z

added rtems#15 as parent item

Author: Chris Johns 2026-07-31T00:33:59.937Z

set status to **Done**

1.6.1.6 34 - sendmsg() is not POSIX compliant

Id	34
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-02-03T03:07:35.278Z
Closed	2026-07-31T00:17:51.016Z
Updated	2026-07-31T00:17:51.076Z
Milestone	6.3
Labels	libbsd
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/34
Merges	0

I found a POSIX compliance bug. In file `rtems-bsd-syscall-api.c`,line 644.

https://pubs.opengroup.org/onlinepubs/009604599/functions/sendmsg.html

> Upon successful completion, sendmsg() shall return the number of bytes sent.
>
> But in RTEMS `sendmsg()` only returns an errno.
>
> This problem exists in `6-freebsd-14`

Author: Chris Johns	2025-02-03T03:07:35.505Z

> cloned from #33

Author: Chris Johns	2025-02-03T03:07:35.439Z

> assigned to @chris

Author: Chris Johns	2025-02-03T03:07:44.022Z

Author: Chris Johns	2025-02-03T03:10:18.939Z

> changed the description

Author: Chris Johns	2025-02-03T03:10:26.219Z

> cloned to #35

Author: Chris Johns	2025-02-03T03:10:38.567Z

> changed the description

Author: Chris Johns 2025-02-03T04:37:14.373Z

mentioned in merge request !52

Author: Chris Johns 2025-02-03T04:54:27.394Z

mentioned in merge request !54

Author: Chris Johns 2025-10-09T22:51:30.697Z

added rtems#15 as parent epic

Author: Chris Johns 2026-07-31T00:14:16.247Z

changed the description

Author: Chris Johns 2026-07-31T00:17:51.051Z

set status to **Done**

1.6.1.7 89 - Fix beatnik BSP when used on MVME5500

Id	89
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-05-26T00:43:20.669Z
Closed	2026-07-27T04:17:33.080Z
Updated	2026-07-27T04:17:33.149Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/89
Merges	0

Summary

The `beatnik` BSP supports the MVME6100 and MVME5500 however these boards have different networking devices. Provide suitable support.

Author: Chris Johns 2026-05-26T00:43:20.777Z

cloned from #79

Author: Chris Johns 2026-05-26T00:43:41.754Z

added rtems#15 as parent epic

Author: Chris Johns 2026-05-26T00:43:47.769Z

set status to **In progress**

Author: Chris Johns 2026-05-26T00:51:13.035Z

mentioned in merge request !142

Author: Chris Johns 2026-05-28T02:00:03.714Z

mentioned in commit 1cb550467decbd2d56ee611448fd761196a840e2

Author: Chris Johns 2026-07-27T04:17:33.121Z

set status to **Done**

1.6.1.8 90 - Add E1000 support to the powerpc/beatnik BSP

Id	90
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-05-26T00:44:07.953Z
Closed	2026-07-27T04:17:11.708Z
Updated	2026-07-27T04:17:11.778Z
Milestone	6.3
Labels	arch:powerpc, libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/90
Merges	0

Add support for the E1000 driver to the `powerpc/beatnik` BSP.

Author: Chris Johns 2026-05-26T00:44:08.076Z

cloned from #85

Author: Chris Johns 2026-05-26T00:44:18.522Z

added rtems#15 as parent epic

Author: Chris Johns 2026-05-26T01:05:55.036Z

mentioned in merge request !143

Author: Chris Johns 2026-07-27T04:17:11.749Z

set status to **Done**

1.6.1.9 87 - Add KDTRACE support

Id	87
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-05-26T00:05:30.954Z
Closed	2026-07-27T03:57:35.843Z
Updated	2026-07-27T03:57:35.907Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/87
Merges	0

Add:

1. The ability to build with `KDTRACE_HOOKS`
2. Add FreebSD `KDTRACE` support files.
3. Provide a simple probe and an `ltrace` command to access the probe data

The support to trace the probes. It does not attempt to do anything close to what `dtrace` can do. A full `dtrace` needs CTF format support and specific target back end support and that is a massive task. The purpose of this support is to get at the runtime probe support built into FreeBSD.

Author: Chris Johns 2026-05-26T00:05:31.388Z

cloned from #82

Author: Chris Johns 2026-05-26T00:05:47.464Z

added rtems#15 as parent epic

Author: Chris Johns 2026-05-26T00:32:13.433Z

mentioned in merge request !141

Author: Chris Johns 2026-07-27T03:57:35.881Z

set status to **Done**

1.6.1.10 81 - INVARIANTS do not build

Id	81
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Chris Johns
Created	2026-04-27T01:48:31.389Z
Closed	2026-05-08T05:31:13.258Z
Updated	2026-05-08T05:31:13.319Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/81
Merges	0

Adding `--freebsd-options=invariants` to libbsd's configure does not build:

```
In file included from ../../freebsd/sys/sys/systm.h:44,
from ../../freebsd/sys/sys/mbuf.h:41,
from ../../rtemsbsd/rtems/rtems-bsd-cxx.cc:49:
../../freebsd/sys/sys/libkern.h: In function 'u_char bcd2bin(int)':
../../freebsd/sys/sys/kassert.h:129:17: error: 'kassert_panic' was not declared␣
↪in this scope
129 |                 kassert_panic msg;                                      \\
|                 ^~~~~~~~~~~~~
../../freebsd/sys/sys/libkern.h:65:9: note: in expansion of macro 'KASSERT'
65 |         KASSERT(bcd >= 0 && bcd < LIBKERN_LEN_BCD2BIN,
|         ^~~~~~~
../../freebsd/sys/sys/libkern.h: In function 'u_char bin2bcd(int)':
../../freebsd/sys/sys/kassert.h:129:17: error: 'kassert_panic' was not declared␣
↪in this scope
129 |                 kassert_panic msg;                                      \\
|                 ^~~~~~~~~~~~~
../../freebsd/sys/sys/libkern.h:74:9: note: in expansion of macro 'KASSERT'
74 |         KASSERT(bin >= 0 && bin < LIBKERN_LEN_BIN2BCD,
|         ^~~~~~~
../../freebsd/sys/sys/libkern.h: In function 'char hex2ascii(int)':
../../freebsd/sys/sys/kassert.h:129:17: error: 'kassert_panic' was not declared␣
↪in this scope
129 |                 kassert_panic msg;                                      \\
|                 ^~~~~~~~~~~~~
../../freebsd/sys/sys/libkern.h:83:9: note: in expansion of macro 'KASSERT'
83 |         KASSERT(hex >= 0 && hex < LIBKERN_LEN_HEX2ASCII,
```

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```
|         ^~~~~~~
../../freebsd/sys/sys/libkern.h: In function 'int ilog2_int(int)':
../../freebsd/sys/sys/kassert.h:129:17: error: 'kassert_panic' was not declared␣
↪in this scope
129 |                 kassert_panic msg;                                      \\
|                 ^~~~~~~~~~~~~~
../../freebsd/sys/sys/libkern.h:242:9: note: in expansion of macro 'KASSERT'
242 |         KASSERT(n != 0, ("ilog argument must be nonzero"));
|         ^~~~~~~
../../freebsd/sys/sys/libkern.h: In function 'int ilog2_long(long int)':
../../freebsd/sys/sys/kassert.h:129:17: error: 'kassert_panic' was not declared␣
↪in this scope
129 |                 kassert_panic msg;                                      \\
|                 ^~~~~~~~~~~~~~

[snip]
```

Author: Chris Johns 2026-04-27T01:48:31.534Z

cloned from #80

Author: Chris Johns 2026-04-27T01:49:06.918Z

unassigned @chris

Author: Chris Johns 2026-04-27T01:49:13.021Z

set status to **To do**

Author: Chris Johns 2026-05-08T05:31:13.290Z

set status to **Done**

1.6.1.11 93 - Backport Python fixes for waf_libbsd.py (opened)

Id	93
State	opened
Type	ISSUE
Author	Chris Johns
Created	2026-07-04T05:24:40.481Z
Updated	2026-07-08T05:05:05.021Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/93
Merges	0

Summary

Python 3.13.3 warns about escape sequences that will become errors.

The MR is !151 .

Author: Chris Johns 2026-07-04T05:24:40.586Z

set status to **To do**

Author: Chris Johns 2026-07-04T05:25:37.170Z

See #92

Author: Chris Johns 2026-07-08T04:57:28.538Z

added rtems#40 as parent item

Author: Chris Johns 2026-07-08T05:05:04.984Z

cloned to #98

1.6.1.12 96 - Update rtems_waf for 6-freebsd-14 (opened)

Id	96
State	opened
Type	ISSUE
Author	Chris Johns
Created	2026-07-08T05:03:23.280Z
Updated	2026-07-08T05:03:43.062Z
Milestone	6.3
Labels	lang::python, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/96
Merges	0

Summary

Update `rtems_waf` to fix python warnings.

Author: Chris Johns 2026-07-08T05:03:23.380Z

cloned from #95

Author: Chris Johns 2026-07-08T05:03:43.133Z

changed title from

Update rtems_waf for

7

-freebsd-14

to

Update rtems_waf for

6

-freebsd-14

Author: Chris Johns 2026-07-08T05:03:49.585Z

cloned to #97

1.6.1.13 78 - powerpc qoriq does not build on 6-freebsd-14 (opened)

Id	78
State	opened
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2026-03-28T01:52:45.309Z
Updated	2026-03-30T03:29:58.547Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/78
Merges	0

Summary

LibBSD fails to build on `powerpc-rtems7-qoriq_core_0`

Building 7-freebsd-14 I get the following errors:

```
target (_bsd_ ./libbsd.a(vfs_cache.c.23.o):
vfs_smr) of a R_PPC_SDAREL16 relocation is in the wrong output section (.data)
/opt/work/aaron/rtems/libbsd/rtems-libbsd/build/powerpc-rtems7-qoriq_core_0-
↪everything/../../freebsd/sys/kern/vfs_cache.c:2722:(.t
ext.nchinit+0x11e): relocation truncated to fit: R_PPC_SDAREL16 against symbol `_
↪bsd_vfs_smr' defined in .data.read_frequently sec
tion in ./libbsd.a(vfs_subr.c.23.o)
/opt/work/rtems/7/lib/gcc/powerpc-rtems7/15.2.0/../../../../powerpc-rtems7/bin/
↪ld: ./libbsd.a(vfs_cache.c.23.o): the target (_bsd_
```

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```
12
13
14
15 vfs_smr) of a R_PPC_SDAREL16 relocation is in the wrong output section (.data)
16 ./libbsd.a(vfs_cache.c.23.o): in function `atomic_store_rel_int':
17 /opt/work/aaron/rtems/libbsd/rtems-libbsd/build/powerpc-rtems7-qoriq_core_0-
   ↪everything/../../rtemsbsd/include/machine/atomic.h:313
18
19
20
21
22 :(.text.cache_fpl_aborted_impl.isra.0+0x8e): relocation truncated to fit: R_PPC_
   ↪SDAREL16 against symbol `_bsd_vfs_smr' defined in
23 .data.read_frequently section in ./libbsd.a(vfs_subr.c.23.o)
24 /opt/work/rtems/7/lib/gcc/powerpc-rtems7/15.2.0/../../../../powerpc-rtems7/bin/
   ↪ld: ./libbsd.a(vfs_cache.c.23.o): the target (_bsd_
25
26
27
28
29 vfs_smr) of a R_PPC_SDAREL16 relocation is in the wrong output section (.data)
30 /opt/work/aaron/rtems/libbsd/rtems-libbsd/build/powerpc-rtems7-qoriq_core_0-
   ↪everything/../../rtemsbsd/include/machine/atomic.h:313
31
32
33
34
35 :(.text.cache_fplookup_partial_setup.constprop.0+0x66): relocation truncated to␣
   ↪fit: R_PPC_SDAREL16 against symbol `_bsd_vfs_smr'
36 defined in .data.read_frequently section in ./libbsd.a(vfs_subr.c.23.o)
37 /opt/work/rtems/7/lib/gcc/powerpc-rtems7/15.2.0/../../../../powerpc-rtems7/bin/
   ↪ld: ./libbsd.a(vfs_cache.c.23.o): the target (_bsd_
38
39
40
41
42 vfs_smr) of a R_PPC_SDAREL16 relocation is in the wrong output section (.data)
43 /opt/work/aaron/rtems/libbsd/rtems-libbsd/build/powerpc-rtems7-qoriq_core_0-
   ↪everything/../../rtemsbsd/include/machine/atomic.h:313
44
45
46
47
48 :(.text.cache_fplookup_dirfd+0x8a): additional relocation overflows omitted from␣
   ↪the output
49 /opt/work/rtems/7/lib/gcc/powerpc-rtems7/15.2.0/../../../../powerpc-rtems7/bin/
   ↪ld: ./libbsd.a(vfs_cache.c.23.o): the target (_bsd_
50
51
```

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```
52
53
54 vfs_smr) of a R_PPC_SDAREL16 relocation is in the wrong output section (.data)
55 /opt/work/rtems/7/lib/gcc/powerpc-rtems7/15.2.0/../../../../powerpc-rtems7/bin/
   ↪ld: ./libbsd.a(vfs_cache.c.23.o): the target (_bsd_
56
57
58
59
60 vfs_smr) of a R_PPC_SDAREL16 relocation is in the wrong output section (.data)
61 ...
62 /opt/work/rtems/7/lib/gcc/powerpc-rtems7/15.2.0/../../../../powerpc-rtems7/bin/
   ↪ld: ./libbsd.a(vfs_cache.c.23.o): the target (_bsd_vfs_smr) of a R_PPC_SDAREL16␣
   ↪relocation is in the wrong output section (.data)
63
64
65
66
67 /opt/work/rtems/7/lib/gcc/powerpc-rtems7/15.2.0/../../../../powerpc-rtems7/bin/
   ↪ld: ./libbsd.a(vfs_cache.c.23.o): the target (_bsd_vfs_smr) of a R_PPC_SDAREL16␣
   ↪relocation is in the wrong output section (.data)
68
69
70
71
72 collect2: error: ld returned 1 exit status
```

Steps to reproduce

Build a powerpc BSP on LibBSD on 7-freebsd-14

Author: Chris Johns 2026-03-28T01:52:45.417Z

cloned from #75

Author: Chris Johns 2026-03-28T01:53:23.005Z

added rtems#15 as parent epic

Author: Chris Johns 2026-03-30T03:29:58.638Z

changed title from

powerpc qoriq does not build on

7

-freebsd-14

to

powerpc qoriq does not build on

6

-freebsd-14

Author: Chris Johns 2026-03-30T03:29:58.670Z

changed the description

1.6.2 Merge Requests

1.6.2.1 166 - ZONE(9): Fix per-CPU counters on SMP

Id	166
State	merged
Merged by	Chris Johns
Merged at	2026-10-08T05:30:28.618Z
Assignee(s)	Sebastian Huber
Created	2026-10-03T07:08:59.006Z
Updated	2026-10-08T05:30:31.884Z
Milestone	6.3
Labels	libbsd::freebsd-14, smp
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/166
Commit	a5a18251301a8aa7daa16f7e62a052ac6f5137e1

Summary

Issue #112: counter_u64 is broken on SMP archs

This is the backport of !165 to 6-freebsd-14. The commit applies without a change.

The update to FreeBSD 14 dropped the processor offset from `zpcpu_get()`. All processors added to the slot of processor 0 without an atomic operation.

The new `keg_layout()` places the items of a per-CPU slab in its first page and the copy of each processor in a page of its own. The RTEMS value of `UMA_PCPU_ALLOC_SIZE` was `PAGE_SIZE / 32`. `counter_u64_fetch()` therefore added the values of unrelated counters, and an `M_ZERO` allocation cleared them. This gave the `netstat -i` output of the issue.

Use `PAGE_SIZE` for `UMA_PCPU_ALLOC_SIZE` and restore the processor offset in `zpcpu_get()`, as FreeBSD does. Give the size of the early counter in `uint64_t` elements. On a target with 32 processors, the early counter takes 128 KiB.

The new test `counter01` checks the sum of each counter and the slot of each processor. It fails without the fix. With the fix, `counter01`, `epoch01`, `smp01`, `loopback01` and `init01` pass against RTEMS 6.

The branch does not build for sparc/gr740 without a local change. `freebsd/sys/arm/ti/am335x/am335x_scm.c` uses `phandle_t`, but no header of an RTEMS 6 build provides `<dev/ofw/openfirm.h>` to it. The tests ran with this include added. This defect predates the merge request.

BSP sparc/gr740 with RTEMS_SMP · **Simulator** sis -gr740 -m 4

AI Details

1.6.2.1.2.1 Prompt used

None as a single prompt. The work was done in an interactive Claude Code session on the rtems-libbsd tree. The task was to fix issue #112 and to backport the fix. Each change was directed and reviewed.

1.6.2.1.2.2 AI model used

Claude Opus 5.5 (claude-opus-5-5), through Claude Code.

1.6.2.1.2.3 How AI was used for the contribution

- ( ) Formatting
- (x) Test creation.
- (x) Code comments.
- ( ) The entire contribution was generated using AI
- ( ) AI code completion such as Copilot in VSCode.

The diagnosis, the implementation and the test were produced in that session under my direction, and the commit message was drafted there.

1.6.2.1.2.4 Access

I have not used a product which claims copyright in its output, and I have legitimate access to the one I used.

Author: Chris Johns 2026-10-08T05:30:24.335Z

enabled an automatic merge when all merge checks for a5a18251301a8aa7daa16f7e62a052ac6f5137e1 pass

Author: Chris Johns 2026-10-08T05:30:25.443Z

approved this merge request

Author: Chris Johns 2026-10-08T05:30:55.516Z

assigned to @sebhub

1.6.2.2 164 - Fix Beagle Bone Black networking in 6-freebsd14

Id	164
State	merged
Merged by	Chris Johns
Merged at	2026-10-01T02:14:57.827Z
Created	2026-09-29T04:48:01.260Z
Updated	2026-10-01T02:14:57.817Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/164
Commit	86102312403dca2087e3d565aaa99a519ba1d301

Summary

Fix Beagle Bone Black networking

Closes #109

Generative AI

None

Author: Chris Johns 2026-09-29T04:48:01.526Z

marked this merge request as blocked by !163

Author: Chris Johns 2026-09-29T04:48:10.080Z

enabled an automatic merge when all merge checks for 8330264d7a1e105355709d0044508836684f8718 pass

Author: Chris Johns 2026-09-29T07:02:18.487Z

added 1 commit

- 2f2ab2d2 - arm/beagleboneblack: Fix Beagle Bone Black networking

Compare with previous version

Author: Chris Johns 2026-09-29T07:03:25.228Z

enabled an automatic merge when all merge checks for 2f2ab2d206f357d56039aa3e640db45f06a36360 pass

Author: Chris Johns 2026-10-01T01:34:13.515Z

Blocking this MR until !163 has been merged and I can update this MR with the changes.

Author: Chris Johns 2026-10-01T01:34:13.515Z

I have updated this MR to the commits merged on to `7-freebsd-14`.

Author: Chris Johns 2026-10-01T01:33:15.218Z

added 2 commits

- e873f140 - arm/beagleboneblack: Import TI drivers from FreeBSD 14
- 86102312 - arm/beagleboneblack: Fix Beagle Bone Black networking

Compare with previous version

Author: Chris Johns 2026-10-01T01:34:13.535Z

resolved all threads

Author: Chris Johns 2026-10-01T01:34:19.212Z

enabled an automatic merge when all merge checks for 86102312403dca2087e3d565aaa99a519ba1d301 pass

Author: Joel Sherrill 2026-10-01T02:14:53.298Z

approved this merge request

1.6.2.3 161 - rtemsbsd: Fix fxp support for motorola powerpc bsps

Id	161
State	merged
Merged by	Joel Sherrill
Merged at	2026-09-17T22:13:53.023Z
Assignee(s)	Vijay Banerjee
Created	2026-09-04T19:53:22.652Z
Updated	2026-09-17T22:13:53.015Z
Milestone	6.3
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/161
Commit	eaa16d77718dd4c73198fdd3304cf91f794bac22

Summary

rtemsbsd: Fix fxp support for motorola powerpc bsps

This commit fixes the fxp support used by mvme5100 bsp

Closes #107

(Cherry picked from 181401815565c5563ac1e05ea20e2c70affbf505)

Generative AI

Author: Vijay Banerjee 2026-09-04T19:53:22.892Z

assigned to @vijay

Author: Joel Sherrill 2026-09-17T22:13:49.242Z

approved this merge request

1.6.2.4 154 - rtemsbsd/libio: Give a duplicated descriptor an identity of its own (6-freebsd-14)

Id	154
State	merged
Merged by	Joel Sherrill
Merged at	2026-08-20T23:19:05.944Z
Assignee(s)	Sang Woo Kim
Reviewer(s)	Chris Johns
Created	2026-07-28T12:35:01.408Z
Updated	2026-08-20T23:19:05.873Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/154
Commit	d8a187bc2e54deb31e319e63d6e12ec531fed209

The 6-freebsd-14 version of !153: dup() of a socket returns a broken descriptor (#101), a kqueue-registered descriptor can never be closed (#102), pipe() is not connected to the libbsd implementation (#39), select/poll drop the hold of the wrong descriptor after a dup2 (#103), and getdirentries() reads a vnode out of a descriptor that has none (#104). Each commit carries its testsuite case; filed on the 6-freebsd-14 tracking issue #100 alongside !152.

Author: Sang Woo Kim 2026-07-28T12:35:20.800Z

mentioned in issue #104

Author: Sang Woo Kim 2026-07-30T12:13:31.284Z

added 5 commits

- 08d8e275 - rtemsbsd/libio: Give a duplicated descriptor an identity of its own
- 36880e4d - rtemsbsd/kqueue: Release the hold taken on a registered descriptor
- 4ede31f8 - rtems/syscall: Give pipe() and pipe2() the libbsd implementation
- 1d06fe5a - freebsd/sys_generic: Pass the scan the descriptor whose hold it drops
- d8a187bc - rtems/syscall: Do not read a vnode out of a descriptor that has none

Compare with previous version

Author: Chris Johns 2026-08-02T22:53:38.060Z

assigned to @physwkim

Author: Chris Johns 2026-08-02T22:54:17.150Z

requested review from @chris

Author: Joel Sherrill 2026-08-20T23:18:57.652Z

enabled an automatic merge when all merge checks for d8a187bc2e54deb31e319e63d6e12ec531fed209 pass

Author: Joel Sherrill 2026-08-20T23:18:59.278Z

approved this merge request

1.6.2.5 152 - Backport 7-freebsd-14 fixes to 6-freebsd-14

Id	152
State	merged
Merged by	Amar Takhar
Merged at	2026-07-28T03:10:47.103Z
Assignee(s)	Chris Johns
Created	2026-07-27T05:52:33.631Z
Updated	2026-07-28T03:10:47.092Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/152
Commit	4c6f3c4063740c1175c846f45185f6c9eee3d022

This MR is a back port of commits to the 7-freebsd-14 branch. The commits are:

- caaef66868608f43efaf902dfd7a0a23a61247d0

- 82c13a1871a90b335aeba6aac6e7db6e66d96cd8
- eece52c53d32a9c05f3ed65b13076d7f087c0763
- 9a2ef1040f298d9e348ed50c4b729f98b1e68ade
- 8012a095ce304ac32d1f4b2eeecd433c464081b1
- 7e11daba6b80ca1fa74149c113fccc113357dd42
- 83e6f365b5900823839ba8da83168830991f0b74
- 29161cfb4d37ebc596f3663ce1fdc519edc58b20
- e966cc4db8729b8c01b444dd61861c20aeb5593f
- b9ca539ce8a89351882cd3531de4637bcde6182b

Generative AI

None

Author: Chris Johns 2026-07-27T05:52:33.857Z

assigned to @chris

Author: Chris Johns 2026-07-27T05:52:47.764Z

enabled an automatic merge when all merge checks for ec8c8464f20632767515f1fe68db1533486f383f pass

Author: Chris Johns 2026-07-28T03:10:39.386Z

The pipeline warning for an empty commit message is from one of the back ported commits.

Author: Chris Johns 2026-07-28T02:12:24.047Z

added 2 commits

- 2c3fdef0 - rtemsbsd: Add support to create rc.conf from environment variables
- 4c6f3c40 - libbsd.py: Use implicit declaration warning on cflags only

Compare with previous version

Author: Chris Johns 2026-07-28T02:21:42.559Z

mentioned in issue #100

Author: Amar Takhar 2026-07-28T03:10:43.981Z

enabled an automatic merge when all merge checks for 4c6f3c4063740c1175c846f45185f6c9eee3d022 pass

Author: Amar Takhar 2026-07-28T03:10:44.642Z

approved this merge request

Author: Sang Woo Kim 2026-07-28T12:35:19.101Z

mentioned in merge request !154

1.6.2.6 143 - 6-freebsd-14 - powerpc/beatnik: Support generic interrupts and add e1000

Id	143
State	merged
Merged by	Joel Sherrill
Merged at	2026-05-28T23:23:03.557Z
Assignee(s)	Chris Johns
Created	2026-05-26T01:05:49.195Z
Updated	2026-05-28T23:23:03.428Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/143
Commit	b53ff40126329139129b54148f210fae43bb25b3

Summary

- Support generic interrupts on the beatnik
- Support legacy bus scans for more than PCI bus 0 for the MVME5500
- Add e1000 driver to the beatnik

Closes #90

Generative AI

None

Author: Chris Johns 2026-05-26T01:05:49.365Z

assigned to @chris

Author: Chris Johns 2026-05-26T01:06:03.381Z

enabled an automatic merge when all merge checks for b0675bd0c033aa3126eeece971f2672199781e31 pass

Author: Chris Johns 2026-05-26T01:17:12.094Z

Results of running `nuttcp` on a MVME5500:

```
SHLL [/] # nuttcp -v 10.10.5.8
nuttcp-t: v8.2.2: socket
nuttcp-t: buflen=65536, nstream=1, port=5101 tcp -> 10.10.5.8
nuttcp-t: time limit = 10.00 seconds
nuttcp-t: connect to 10.10.5.8 with mss=1460, RTT=0.142 ms af=inet
nuttcp-t: send window size = 33580, receive window size = 65700
nuttcp-t: 201.4375 MB in 18.00 real seconds = 11458.56 KB/sec = 93.8685␣
↪Mbps
nuttcp-t: 3223 I/O calls, msec/call = 5.72, calls/sec = 179.04
nuttcp-t: 4.2user 13.7sys 0:18real 99% i+d maxrss +pf csw

nuttcp-r: v8.2.2: socket
nuttcp-r: buflen=65536, nstream=1, port=5101 tcp
nuttcp-r: accept from 10.10.5.45 with af=inet
nuttcp-r: send window size = 33580, receive window size = 65700
nuttcp-r: 201.4375 MB in 18.13 real seconds = 11379.40 KB/sec = 93.2200␣
↪Mbps
nuttcp-r: 149078 I/O calls, msec/call = 0.12, calls/sec = 8224.18
nuttcp-r: 0.0user 0.1sys 0:18real 1% 114i+218d 660maxrss 0+18pf␣
↪145873+0csw
```

Author: Joel Sherrill 2026-05-28T23:19:45.855Z

aborted the automatic merge because target branch was updated

Author: Joel Sherrill 2026-05-28T23:20:52.667Z

approved this merge request

Author: Joel Sherrill 2026-05-28T23:20:59.638Z

added 3 commits

- b0675bd0...6157414b - 2 commits from branch `rtems/pkg:6-freebsd-14`
- b53ff401 - powerpc/beatnik: Support generic interrupts and add e1000

Compare with previous version

Author: Joel Sherrill 2026-05-28T23:21:04.726Z

enabled an automatic merge when all merge checks for b53ff40126329139129b54148f210fae43bb25b3 pass

1.6.2.7 141 - 6-freebsd-14: Add KDTRACE support

Id	141
State	merged
Merged by	Joel Sherrill
Merged at	2026-05-28T23:19:44.167Z
Assignee(s)	Chris Johns
Created	2026-05-26T00:32:04.237Z
Updated	2026-05-28T23:19:44.155Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/141
Commit	6157414bb362c86bc9d9b73e11f9e7445fcb81df

Summary

Add `KDTRACE` support

Added FreeBSD source files for `KDTRACE`

Updates #87

Generative AI

None

Author: Chris Johns 2026-05-26T00:32:04.404Z

assigned to @chris

Author: Chris Johns 2026-05-26T00:32:18.417Z

enabled an automatic merge when all merge checks for d694f6d90d3349ad5c72f51d951cc5272057ecc1 pass

Author: Chris Johns 2026-05-28T02:00:07.666Z

aborted the automatic merge because target branch was updated

Author: Joel Sherrill 2026-05-28T23:19:28.252Z

approved this merge request

Author: Joel Sherrill 2026-05-28T23:19:29.989Z

added 3 commits

- 1cb55046 - 1 commit from branch `rtems/pkg:6-freebsd-14`
- 702d9020 - freebsd: Add KDTRACE support
- 6157414b - freebsd/kdtrace: Add probe support for KDTRACE

Compare with previous version

Author: Joel Sherrill 2026-05-28T23:19:42.347Z

enabled an automatic merge when all merge checks for 6157414bb362c86bc9d9b73e11f9e7445fcb81df pass

1.6.2.8 142 - 6-freebsd-14 - rtemsbsd/if_mve: Use probe to check if the driver is supported

Id	142
State	merged
Merged by	Chris Johns
Merged at	2026-05-28T02:00:02.584Z
Assignee(s)	Chris Johns
Created	2026-05-26T00:51:04.922Z
Updated	2026-05-28T02:00:02.569Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/142
Commit	1cb550467decbd2d56ee611448fd761196a840e2

Summary

Use probe to check if the driver is supported in `rtemsbsd/if_mve`

Update #89

Generative AI

None

Author: Chris Johns 2026-05-26T00:51:05.099Z

assigned to @chris

Author: Chris Johns 2026-05-26T00:51:17.898Z

enabled an automatic merge when all merge checks for 1cb550467decbd2d56ee611448fd761196a840e2 pass

Author: Kinsey Moore 2026-05-28T02:00:00.552Z

approved this merge request

1.7 RTEMS / Programs / Google Summer of Code

Go to *Issues* (page 68) or rtems/programs/gsoc-merges

Issues Summary

20 - Improve Accessibility of User Manual (opened) (page 68)

Merge Requests Summary

1.7.1 Issues

1.7.1.1 20 - Improve Accessibility of User Manual (opened)

Id	20
State	opened
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Created	2019-04-23T16:31:50.000Z
Updated	2026-07-30T23:16:26.631Z
Milestone	6.3
Labels	gsoc, old-indefinite, priority::normal, tickettype::project, version::6
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/20
Merges	0

The User Manual has undergone several iterations in the last few years, and the current state is much better than [in the past](https://docs.rtems.org/all.html), but we are still not sure that the flow and accessibility of the sections within the manual are appropriate for on-boarding new RTEMS users and developers. This project will focus on improving the organization and presentation of the User Manual to improve the reader's experience in approaching RTEMS.

Improving accessibility of other manuals, or providing other improvements to the User Manual, could also be considered within the scope of this project.

Author: Amar Takhar 2024-04-26T01:25:54.090Z

assigned to @chris

Author: Amar Takhar 2024-04-25T20:47:21.566Z

changed the description

Author: Chris Johns 2026-07-30T23:16:26.592Z

assigned to @gedare and unassigned @chris

Author: Chris Johns 2026-07-30T23:16:57.066Z

Any progress?

1.8 RTEMS / RTOS / RTEMS

Go to *Issues* (page 998) or *Merge Requests* (page 2535)

Issues Summary

5803 - Backport to 6 branch: "bsps/shared/nandpsu: Invalidate page cache on erase" (page 74)
5794 - counter_u64 is broken on SMP archs (page 80)
5735 - Backport Fxp fix to 6-freebsd-14 (page 85)
5734 - Backport page table-base vme window initializations for MVME5100 (page 79)
5681 - Add libbsd support for MVME5100 (page 87)
5679 - Fix mvme2100 bspreset (page 78)
5678 - MVME3100 libi2c support (page 76)
5677 - Backport MVME5100 support (page 75)
5676 - Remove 6-freebsd-12 from 6 releases (page 74)
5666 - Set environment variables from PPCBug GEV data on MVME2700 (page 180)
5665 - Backport powerpc/beatnik converting MOTLoad GEV variables into env variables (page 182)
5664 - Print all environment variables with the shell getenv command (page 181)
5662 - Libdebugger register block corruption (page 185)
5661 - Backport PowerPC ASM warning fixes (page 184)
5652 - Backport to 6 branch "cpukit/flashdev: Clarify interface and update consumers" (page 183)
5640 - Add TCB pointer to libdebugger's extra thread info (page 179)
5638 - Fix thread names in top to show classic and POSIX names (page 178)
5589 - Move powerpc/beatnik BSP to generic interrupts (page 189)
5580 - Backport to 6 branch: "bsps/zynq-uart: fix parity configuration handling" (page 191)
5490 - Backport "cpukit/libio: Fix race condition in iop free" (page 216)
5488 - Complete the u-boot support for qoriq_e500 (page 220)
5481 - Backport to 6 branch: "Complete the u-boot support for qoriq BSP" (page 93)
5435 - Add -D_LDBL_EQ_DBL=1 workaround to ABI_FLAGS on Coldfires (page 212)
5422 - Follow-up from "bsps/aarch64: Add isb instruction after write to sctlr_el1 in aarch64_mmu_enable" (page 224)
5411 - Follow-up from "cpukit/libio: Support close with IOP references held" (page 217)
5410 - Follow-up from "cpukit/sapi/src/interrtext.c: Add missing definition" (page 223)
5403 - Backport to 6 branch: "bsps/shared/dev/flash: Add a flashdev simulation backend" (page 225)
5386 - Initializing network (libbsd) issue on 6-freebsd-12 powerpc beatnik (page 94)
5382 - Back port fix for flashdev JFFS2 double free of mount_data and instance to 6 (page 211)
5375 - Backport to 6 branch "bsps/qspi: Make flashdev control structure private" (page 210)
5367 - Remove Mongoose Web Server (page 205)
5310 - Remove Mongoose Web Server from RTEMS 6.3 (page 177)

continues on next page

Table 1 – continued from previous page

5269 - 6.1 GR740 SMP Driver Manager build fail (page 83)
5236 - Runtime symbols loading is broken (page 208)
5235 - RTEMS GPIO Clear bug (page 82)
5227 - testsuites/psxtests: psxaio05 fails on ZynqMP (page 221)
5212 - machine/_timecounter.h is missing _Timecounter_Getboottime(_tvp) (page 213)
5202 - Termios: cannot set all baud rates with rtems_termios_set_best_baud() (page 207)
5165 - Use of pkg-config –libs is unreliable (page 97)
4981 - Overwork Flashdev (page 100)
4922 - QEMU delivers back-to-back timer ticks after task switches (page 187)
4919 - QEMU CGEM Priority Queue Bug (page 104)
4890 - Defect: devel/qemu does not build (page 192)
4883 - GDB cannot see TLS variables (page 106)
4852 - Deprecated Functions (page 108)
4849 - "Timer Server" Cannot be Used in Systems with Static Memory Allocation (page 109)
4846 - Code for test software (page 190)
4825 - Issue building stack using RTEMS quick start guide (page 200)
4773 - Can't build ATSAM BSP (page 201)
4736 - RISC-V - ISR_stack allocation and usage by harts > CONFIG-URE_MAXIMUM_PROCESSORS (page 214)
4570 - devel/qemu is not buildable on Mac OS X. (page 111)
4498 - libelftc_dem_gnu3.c: Resource leak spotted by Coverity (page 114)
4497 - libelftc_dem_gnu2.c: Resource leak spotted by Coverity (page 115)
4496 - libelftc_dem_arm.c: Resource leak spotted by Coverity (page 116)
4447 - rtems-source-builder undefined reference to `BCryptGenRandom' (page 118)
4431 - record-filter-zlib.cc: Unchecked return value from library error spotted by Coverity (page 120)
4381 - crypt-sha256.c: Constant variable guards dead code (page 121)
4379 - crypt-sha512.c: Constant variable guards dead code (page 122)
4373 - qemu: qemu-system-arm hangs during cron'ed test runs with rtems-test (page 124)
4333 - rtl-allocator.c: Dereference null return value error spotted by Coverity (page 126)
4332 - rtl-obj.c: Derefernce null return value error spotted by Coverity (page 127)
4327 - shell.c: Dereference after null check error spotted by Coverity (page 128)
4300 - rtl-shell.c: Resource leak error spotted by Coverity (page 130)
4296 - hexdump-parse.c: Resource leak error spotted by Coverity (page 131)
4292 - rtems-rfs-bitmaps.c: Useless call (CID 1399749) (page 129)
4208 - RSB: GMP not configured correctly in MSYS in newlib build step (page 132)
4199 - MSYS2: Building newlib appears to be stuck (page 134)
4188 - Quick Start 2.6 Not working for me and some tests failing for sparc-rtems6 (page 197)
4187 - Update QuickStart 2.4 for git install (page 198)
4183 - MinGW64 RSB build fails with encoding error (page 136)
4147 - rtems-bsp-builder: Attempts all even when tools are not in PATH (page 163)
4130 - Multiple references to autoconf build system left in documentation (page 88)
4095 - Remove doc from rtems-tools (page 226)

continues on next page

Table 1 – continued from previous page

4091 - tester: BlockingIOError: [Errno 11] write could not complete without blocking (page 137)
4087 - libbsd: sh architecture build is broken (page 166)
4085 - libbsd: x86_64 architecture build is broken (page 167)
3963 - Add build specification item verification (page 164)
3923 - Add traceability information to the application configuration options (page 90)
3738 - Refactor the Software Engineering Manual (page 168)
3597 - Variable tmp_dirent not initialized CID 1440356 (page 169)
3431 - Eliminate use of __ppc_generic and other PowerPC model defines in BSP configure.ac (page 196)
3230 - RSB does not report –rsb-file for patches correctly. (page 172)
2960 - RSB: Reports modified Git version in case RSB is a Git submodule (page 173)
2780 - Capture engine accesses 'capture_per_cpu' without first checking. (page 176)

5771 - Complete the u-boot support for qoriq_e500 (opened) (page 227)
5663 - Follow-up from "spintrcritical0[1-5, 20, 23]: Fix sporadic test failures" (opened) (page 247)
4903 - TMS570 console driver, SCI frame error (baudrate calculation error) (opened) (page 228)
4364 - rtems-test Fails to list failed tests to user (opened) (page 247)
3701 - RTEMS Pre-Qualification (ECSS) for SMP (opened) (page 231)

Merge Requests Summary

1523 - bsps/shared/nandpsu: Invalidate page cache on erase (page 253)
1510 - powerpc/shared/console: Fix uart build for beatnik (page 255)
1497 - cpukit/libmisc/shell/main_mdump.c: Use uintptr_t to print address (page 256)
1476 - Fix mvme2100 reset (page 260)
1475 - Use page tables for MVME5100 VME window Init (page 257)
1474 - motorola_powerpc: Add support for MVME5100 (page 262)
1473 - Backport Libi2c support for mvme3100 (page 264)
1439 - libfs/pipe: Add pipe and pipe2 indirect handler calls (page 265)
1380 - powerpc/motorola_powerpc: Convert PPCBug NVRAM vars into env vars (page 272)
1379 - powerpc/beatnik: Convert MOTLoad GEV variables into env variables (page 273)
1378 - libmisc/shell: Add -a to print all vars in the shell getenv command (page 271)
1376 - Backport libdebugger to add TCB to extra thread info (page 279)
1375 - Backport libdebugger fix for corruption of thread registers with 32 or more threads (page 276)
1374 - Backport cpuuse fix of thread names in top (page 278)
1372 - Remove MGHTTP (Mongoose) Web server (page 280)
1371 - Backport PowerPC assembler warnings fixes (page 282)
1354 - cpukit/flashdev: Clarify interface and update consumers (page 274)
1262 - 6 - powerpc/beatnik: Support generic IRQ (page 283)
1252 - bsps/zynq-uart: fix parity configuration handling (page 284)
1060 - cpukit/libio: Fix race condition in iop free (page 285)
976 - Complete the u-boot support for qoriq BSP (page 266)
951 - bsps/m68k: Add -D_LDBL_EQ_DBL=1 workaround to ABI_FLAGS (page 286)
916 - bsps/aarch64: Add missing ISB after SCTLR write (page 289)
884 - Fix failing tests (page 287)
863 - bsps/shared/dev/flash: Add a flashdev simulation backend (page 290)
806 - bsps/qspi: Make flashdev control structure private (page 293)
763 - bsps/noelv: Align instruction in bsp_reset() (page 290)
697 - bbb bsp: add modified gpio handling and adc section (page 248)

1373 - Backport of Flashdev fix to clarify interface and update consumers (closed) (page 297)
424 - build: Provide LDFLAGS for pkg-config (closed) (page 294)

1.8.1 Issues

1.8.1.1 5676 - Remove 6-freebsd-12 from 6 releases

Id	5676
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Chris Johns
Created	2026-08-05T02:00:49.647Z
Closed	2026-10-31T16:46:14.513Z
Updated	2026-10-31T16:46:14.518Z
Milestone	6.3
Labels	libbsd::freebsd-12
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5676
Merges	0

Summary

The `6-freebsd-12` is not secure and will be removed from 6 releases.

Author: Chris Johns 2026-08-05T02:00:49.817Z

added rtems#15 as parent item

Author: Chris Johns 2026-08-05T02:00:49.916Z

set status to **To do**

Author: Chris Johns 2026-10-31T16:46:14.536Z

set status to **Done**

1.8.1.2 5803 - Backport to 6 branch: “bsps/shared/nandpsu: Invalidate page cache on erase”

Id	5803
State	closed
Type	ISSUE
Author	Kinsey Moore
Closed by	Chris Johns
Created	2026-10-05T13:41:57.160Z
Closed	2026-10-31T16:27:22.645Z
Updated	2026-10-31T16:27:22.650Z
Milestone	6.3
Labels	arch:aarch64, bsp::shared, device::flash
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5803
Merges	0

The following discussion from !1522 should be addressed:

- [] @opticron started a discussion:

  This will need a backport to 6 branch.

Author: Kinsey Moore 2026-10-05T13:41:57.363Z

  added rtems#15 as parent item

Author: Kinsey Moore 2026-10-05T13:41:57.457Z

  set status to **To do**

Author: Kinsey Moore 2026-10-05T13:57:07.949Z

  mentioned in merge request !1523

Author: Chris Johns 2026-10-31T16:27:22.668Z

  set status to **Done**

1.8.1.3 5677 - Backport MVME5100 support

Id	5677
State	closed
Type	ISSUE
Author	Vijay Banerjee
Assignee(s)	Vijay Banerjee
Closed by	Vijay Banerjee
Created	2026-08-06T17:12:17.746Z
Closed	2026-10-07T14:12:54.436Z
Updated	2026-10-07T14:12:54.486Z
Milestone	6.3
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5677
Merges	0

Summary

Backport commit https://gitlab.rtems.org/rtems/rtos/rtems/-/commit/47ffb323e53323278992ca4e511813198059b377

Steps to reproduce

Author: Vijay Banerjee 2026-08-06T17:12:17.847Z

set status to **To do**

Author: Vijay Banerjee	2026-08-06T17:12:17.905Z

changed Version to

6

Author: Vijay Banerjee	2026-08-06T17:12:18.024Z

assigned to @vijay

Author: Vijay Banerjee	2026-08-06T17:13:50.611Z

added rtems#15 as parent item

Author: Vijay Banerjee	2026-09-04T18:04:06.959Z

set status to **In progress**

Author: Vijay Banerjee	2026-09-04T18:45:56.588Z

mentioned in merge request !1474

Author: Vijay Banerjee	2026-10-07T14:12:54.466Z

set status to **Done**

1.8.1.4 5678 - MVME3100 libi2c support

Id	5678
State	closed
Type	ISSUE
Author	Vijay Banerjee
Assignee(s)	Vijay Banerjee
Closed by	Vijay Banerjee
Created	2026-08-06T17:17:55.666Z
Closed	2026-10-07T14:12:48.677Z
Updated	2026-10-07T14:12:48.727Z
Milestone	6.3
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5678
Merges	0

Summary

Backport the following commits:

https://gitlab.rtems.org/rtems/rtos/rtems/-/commit/c185664998928fc4da19348e9a274bf772e7dc8d
https://gitlab.rtems.org/rtems/rtos/rtems/-/commit/e09a58011673723ceceedc9a8419ea377ed81c28
https://gitlab.rtems.org/rtems/rtos/rtems/-/commit/4a513030e20e42069e904ae4d6ebe5da4c58c32b

Author: Vijay Banerjee 2026-08-06T17:17:55.848Z

added rtems#15 as parent item

Author: Vijay Banerjee 2026-08-06T17:17:55.942Z

set status to **To do**

Author: Vijay Banerjee 2026-08-06T17:20:01.405Z

assigned to @vijay

Author: Vijay Banerjee 2026-09-04T18:02:24.478Z

mentioned in merge request !1473

Author: Vijay Banerjee 2026-09-04T18:03:22.038Z

set status to **In progress**

Author: Joel Sherrill 2026-09-17T22:18:24.455Z

mentioned in commit 07ed8c4d3f2ce70631a240027e299e3eb7affeb1

Author: Joel Sherrill 2026-09-17T22:18:24.640Z

mentioned in commit 57fced43f11f9b2d1e46ebbafe70ce72ba62cca7

Author: Joel Sherrill 2026-09-17T22:18:24.905Z

mentioned in commit 4f7547c2a2811da0eeef59d559214352b4d38f40

Author: Joel Sherrill 2026-09-17T22:18:24.931Z

mentioned in commit 87b542fab7da957e06df5dc3428e9c52130de7e9

Author: Joel Sherrill 2026-09-17T22:18:24.979Z

mentioned in commit a49d524167868e9eee31351315c9451343f4239c

Author: Vijay Banerjee 2026-10-07T14:12:48.701Z

set status to **Done**

1.8.1.5 5679 - Fix mvme2100 bspreset

Id	5679
State	closed
Type	ISSUE
Author	Vijay Banerjee
Assignee(s)	Vijay Banerjee
Closed by	Vijay Banerjee
Created	2026-08-06T17:21:40.740Z
Closed	2026-10-07T14:12:28.498Z
Updated	2026-10-07T14:12:28.547Z
Milestone	6.3
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5679
Merges	0

Summary

Backport MVME2100 bsp reset fix https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1390

Steps to reproduce

Author: Vijay Banerjee 2026-08-06T17:21:40.927Z

added rtems#15 as parent item

Author: Vijay Banerjee 2026-08-06T17:21:41.019Z

set status to **To do**

Author: Vijay Banerjee 2026-08-06T17:21:41.145Z

assigned to @vijay

Author: Vijay Banerjee 2026-09-04T18:09:51.265Z

set status to **In progress**

Author: Vijay Banerjee	2026-09-04T19:59:31.839Z

mentioned in merge request !1476

Author: Vijay Banerjee	2026-10-07T14:12:28.522Z

set status to **Done**

1.8.1.6 5734 - Backport page table-base vme window initializations for MVME5100

Id	5734
State	closed
Type	ISSUE
Author	Vijay Banerjee
Assignee(s)	Vijay Banerjee
Closed by	Vijay Banerjee
Created	2026-08-31T15:08:45.859Z
Closed	2026-10-07T14:12:00.908Z
Updated	2026-10-07T14:12:00.964Z
Milestone	6.3
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5734
Merges	0

Summary

Backport https://gitlab.rtems.org/rtems/rtos/rtems/-/commit/6cd5277f92227f436151f588b5e63607a1abc02

Steps to reproduce

Author: Vijay Banerjee	2026-08-31T15:08:46.041Z

added rtems#7 as parent item

Author: Vijay Banerjee	2026-08-31T15:08:46.138Z

set status to **To do**

Author: Vijay Banerjee	2026-08-31T15:08:46.288Z

assigned to @vijay

Author: Vijay Banerjee 2026-09-04T18:04:33.920Z

set status to **In progress**

Author: Vijay Banerjee 2026-09-04T19:30:27.355Z

mentioned in merge request !1475

Author: Vijay Banerjee 2026-10-07T14:12:00.936Z

set status to **Done**

1.8.1.7 5794 - counter_u64 is broken on SMP archs

Id	5794
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Sebastian Huber
Closed by	Chris Johns
Created	2026-10-02T08:31:08.403Z
Closed	2026-10-03T00:53:08.369Z
Updated	2026-10-03T00:53:08.376Z
Milestone	6.3
Labels	libbsd::freebsd-14, smp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5794
Merges	0

Summary

Running `netstat -i` on an SMP LibBSD build of RTEMS just after booting results in:

```
xcon [/] # netstat -i
Name    Mtu Network       Address              Ipkts  Ierrs  Idrop     Opkts␣
↪Oerrs   Coll
cgem0  1500 <Link#1>      72:44:fa:b0:29:da    153687      0      0     86831␣
↪  0      0
cgem0     - 10.10.5.0/24  10.10.5.70            86733      -      -     48516␣
↪  -      -
lo0   16384 <Link#2>      lo0                     128      0      0  26324640␣
↪13999735  26384
lo0       - ::1/128       ::1                      64      -      -        64␣
↪  -      -
lo0       - fe80::%lo0/64 fe80::1%lo0               0      -      -         0␣
↪  -      -
lo0       - 127.0.0.0/8   127.0.0.1                48      -      -        48␣
↪  -      -
```

It looks like something is not aligned correctly. These calls are used by LibBSD in `if.c` to manage the 64bit counters in a safe way on SMP.

Steps to reproduce

Run `netstat -i` on a Zynq or ZynqMP SMP system. Verified on Zynq and ZynqMP hardware.

Author: Chris Johns 2026-10-02T08:31:08.496Z

cloned from #5793

Author: Chris Johns 2026-10-02T08:31:25.402Z

added rtems#15 as parent item

Author: Chris Johns 2026-10-02T08:31:37.912Z

changed title from

coun

d

er_u64 is broken on SMP archs

to

coun

t

er_u64 is broken on SMP archs

Author: Chris Johns 2026-10-03T00:53:08.265Z

moved to rtems/pkg/rtems-libbsd#113

Author: Chris Johns 2026-10-03T00:53:08.419Z

set status to **Done**

Author: Chris Johns 2026-10-03T00:53:08.940Z

removed parent item rtems#15

1.8.1.8 5235 - RTEMS GPIO Clear bug

Id	5235
State	closed
Type	ISSUE
Author	Ryan Simcock
Assignee(s)	Heinz Junkes
Closed by	Christian Mauderer
Created	2025-03-31T12:18:22.125Z
Closed	2026-09-30T08:19:10.186Z
Updated	2026-09-30T08:19:10.883Z
Milestone	6.3
Labels	bsp:beaglebone
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5235
Merges	1

Summary

This bug has been produced on the Beagleboneblack (AM335 chip). When the RTEMS API is used to clear a GPIO pin, all pins which are set, are cleared. I am using the released version of RTEMS 6.1.

Steps to reproduce

Environment: Ubuntu 22.04.5 (LTS) Using the released RTEMS source builder 6.1, I built the toolchain and the BSP for the beagleboneblack (following the user guide).

Expected behaviour

BSP - beagleboneblack RTEMS 6.1 When the function, rtems_gpio_bsp_clear is called, any GPIO that is currently set, is cleared. This is because mmio_set is being used, when in fact mmio_write is sufficient. mmio_set does a read of the register first and OR's with your wanted pin and writes again. The AM335X_GPIO_CLEARDATAOUT does not work this way, when it is read, it returns the register value of GPIO_DATAOUT (In the datasheet), so it clears all set GPIO pins at that time.

Author: Heinz Junkes 2025-09-25T23:07:05.154Z

Hi Ryan, I'm currently working on this BSP and especially the GPIO.

https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/5198

Here is my current status, but it is not reviewed and may still contain some errors.
It would be nice if you could take a look at it. Thanks Heinz patch_2

Author: Chris Johns 2025-09-25T23:07:05.105Z

@junkes is the patch an MR? If not would you please be able to create one?

Author: Chris Johns 2026-07-31T00:20:00.314Z

@junkes Any update on making the patch an merge request?

Author: Chris Johns 2025-09-25T23:06:25.618Z

changed Version to

6

Author: Chris Johns 2025-09-25T23:07:20.935Z

assigned to @junkes

Author: Heinz Junkes 2026-07-31T09:16:54.445Z

There is a merge request, which fixes the GPIO Clear bug, IIRC https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/697

Author: Yang Zhang 2026-09-03T07:59:14.241Z

mentioned in merge request !1469

Author: Christian Mauderer 2026-09-30T08:19:13.323Z

set status to **Done**

1.8.1.9 5269 - 6.1 GR740 SMP Driver Manager build fail

Id	5269
State	closed
Type	ISSUE
Author	Matteo Concas
Closed by	Matteo Concas
Created	2025-06-17T07:52:54.262Z
Closed	2026-09-21T15:02:52.240Z
Updated	2026-09-21T15:02:52.479Z
Milestone	6.3
Labels	arch:sparc, smp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5269
Merges	0

Summary

Building the GR740 BSP with `RTEMS_SMP` and `RTEMS_DRVMGR_STARTUP` set to True will fail in multiple ways.

The issues appear in `bsps/shared/grlib/btimer/tlib_ckinit.c` .

1.8.1.9.1.1 First issue

Excerpt from the build log:

```
../../../bsps/shared/grlib/btimer/tlib_ckinit.c: In function 'irqamp_get_timecount
↪':
../../../bsps/shared/grlib/btimer/tlib_ckinit.c:373:28: error: 'irqamp' has no␣
↪member named 'timestamp'
373 |   return LEON3_IrqCtrl_Regs->timestamp[0].counter;
|                            ^~
```

The first issue appears in every instance of `LEON3_IrqCtrl_Regs->timestamp[0]` such as:

```
irqmp_ts = &LEON3_IrqCtrl_Regs->timestamp[0];
```

This stems from an earlier change where the type of the IRQ(A)MP timestamp register block was changed from `irqmp_timestamp_regs` to `irqamp_timestamp`. These two types represent the same thing but have different names for their members.

1.8.1.9.1.2 Possible fix

This can be fixed by using `&LEON3_IrqCtrl_Regs->itstmp[0];` instead.

1.8.1.9.1.3 Second issue

Excerpt from the build log:

```
/opt/rtems/rtems-7-sparc/bin/../lib/gcc/sparc-rtems7/13.4.0/../../../../sparc-
↪rtems7/bin/ld: ./librtemsbsp.a(tlib_ckinit.c.9.o): in function `tlib_clock_find_
↪timer':
/home/matteo/dev/rtems-gaisler/build/sparc/gr740_smp/../../../bsps/shared/grlib/
↪btimer/tlib_ckinit.c:141:(.text._Clock_Initialize+0x30): undefined reference to␣
↪`leon3_up_counter_is_available'
collect2: error: ld returned 1 exit status
```

The second issue appears when linking the object files, the `tlib_clock_find_timer()` function calls `leon3_up_counter_is_available()` (declared and defined in `bsps/sparc/leon3/include/bsp/leon3.h`) but this function is only available when the BSP is defined as not having the SPARC ASR22 and ASR23 registers. This is not the case for the GR740 BSP:

```
LEON3_HAS_ASR_22_23_UP_COUNTER = True
```

From the output of `./waf bspdefaults --rtems-bsp=sparc/gr740` .

1.8.1.9.1.4 Possible fix

I am not sure why `leon3_up_counter_is_available()` is not always defined like the rest of the up_counter functions in the file. Removing the define guards fixes the issue.

1.8.1.9.1.5 Steps to reproduce

Create a `gr740.ini` file with the following contents:

```
[sparc/gr740_smp]
INHERIT=gr740
RTEMS_SMP=True
RTEMS_DRVMGR_STARTUP=True
```

Run `./waf configure --prefix=$RTEMS_PREFIX --rtems-config=gr740.ini` and then `./waf .`

1.8.1.9.1.6 Expected behaviour

The build should complete successfully.

/bsp sparc/gr740

> **Author:** Chris Johns 2026-07-31T00:20:44.891Z
>
> Please update the Status or move the milestone.
>
> **Author:** Matteo Concas 2026-09-21T15:02:52.295Z
>
> set status to **Done**
>
> **Author:** Matteo Concas 2026-09-21T15:02:53.490Z
>
> Fixed with !1309.

1.8.1.10 5735 - Backport Fxp fix to 6-freebsd-14

Id	5735
State	closed
Type	ISSUE
Author	Vijay Banerjee
Assignee(s)	Vijay Banerjee
Closed by	Vijay Banerjee
Created	2026-08-31T15:11:08.537Z
Closed	2026-09-04T19:49:41.443Z
Updated	2026-09-04T19:49:41.450Z
Milestone	6.3
Labels	arch:powerpc, backport, libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5735
Merges	0

Summary

Backport https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/157

Steps to reproduce

Author: Vijay Banerjee 2026-08-31T15:11:08.640Z

set status to **To do**

Author: Vijay Banerjee 2026-08-31T15:11:08.742Z

assigned to @vijay

Author: Vijay Banerjee 2026-09-04T18:09:39.965Z

set status to **In progress**

Author: Vijay Banerjee 2026-09-04T18:25:38.477Z

mentioned in issue #5681

Author: Vijay Banerjee 2026-09-04T19:49:20.379Z

changed type to **Issue**

Author: Vijay Banerjee 2026-09-04T19:49:41.357Z

moved to rtems/pkg/rtems-libbsd#107

Author: Vijay Banerjee 2026-09-04T19:49:41.490Z

set status to **Done**

1.8.1.11 5681 - Add libbsd support for MVME5100

Id	5681
State	closed
Type	ISSUE
Author	Vijay Banerjee
Assignee(s)	Vijay Banerjee
Closed by	Vijay Banerjee
Created	2026-08-06T17:29:01.822Z
Closed	2026-09-04T18:25:04.603Z
Updated	2026-09-04T18:25:04.608Z
Milestone	6.3
Labels	resolution::duplicate
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5681
Merges	0

Summary

Add libbsd networking support for mvme5100

Steps to reproduce

Author: Vijay Banerjee 2026-08-06T17:29:02.077Z

added rtems#15 as parent item

Author: Vijay Banerjee 2026-08-06T17:29:02.208Z

set status to **To do**

Author: Vijay Banerjee 2026-08-06T17:29:02.372Z

assigned to @vijay

Author: Vijay Banerjee 2026-09-04T18:04:15.457Z

set status to **In progress**

Author: Vijay Banerjee 2026-09-04T18:25:04.639Z

set status to **Duplicate**

Author: Vijay Banerjee 2026-09-04T18:25:37.900Z

Duplicate of #5735

1.8.1.12 4130 - Multiple references to autoconf build system left in documentation

Id	4130
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Kinsey Moore
Closed by	Joel Sherrill
Created	2020-10-07T13:59:25.000Z
Closed	2026-08-13T22:42:29.263Z
Updated	2026-08-13T22:42:29.498Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4130
Merges	1

I searched for “enable-” in rtems-docs and it looks like there are multiple places where the autoconf build system is referenced. I got over 50 hits on that phrase but some do appear to ok as they are for rtems-tools. All need to be reviewed.

Searching for bootstrap turned up 39 hits.

Searching for the word configure is probably too hard. We need to have a few key phrases to search for to find documentation that needs to change.

The same list of search terms needs to be done to the wiki but that’s a separate ticket.

Author: Trac Migrate 2020-10-10T13:20:23.000Z

From my point of view this is not a waf blocker. Once the old build system is removed from the tree and the user interface of the new build system is stable, we should start cleaning up the documentation.

Author: Trac Migrate 2021-12-16T21:31:02.000Z

- **Milestone** changed from %”6.1” to %”Indefinite”

Author: Amar Takhar 2025-09-05T02:57:44.949Z

changed the description

Author: Kinsey Moore 2026-05-15T15:31:41.897Z

There are still references to the old build system in `user/bld/index.md`, `user/hosts/posix.md`, `user/tools/bsp-builder.md`, and `user/tracing/examples.md`.

Author: Kinsey Moore 2026-06-11T22:33:25.509Z

assigned to @opticron

Author: Kinsey Moore 2026-06-11T22:33:29.986Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:23:13.507Z

set status to **In progress**

Author: Chris Johns 2026-07-30T23:23:22.371Z

added rtems#15 as parent item

Author: Kinsey Moore 2026-07-31T15:25:29.055Z

mentioned in commit opticron/rtems-docs@795c8ffc7f75cc4dc83bd3de38e13f772a932eb3

Author: Kinsey Moore 2026-07-31T15:25:54.394Z

mentioned in merge request rtems/docs/rtems-docs!249

Author: Kinsey Moore 2026-07-31T16:26:25.527Z

The most recent pair of MRs for main and 6 branch should resolve this issue: rtems/docs/rtems-docs!249 rtems/docs/rtems-docs!250

Author: Joel Sherrill 2026-08-13T22:38:36.702Z

mentioned in commit opticron/rtems-docs@81b03b69334e63e563c2d2f4f81a658eaddda8d2

Author: Kinsey Moore 2026-08-13T22:41:53.129Z

mentioned in commit opticron/rtems-docs@4497b3c9e7263249c6a6356dafb945ab87b8fe8a

Author: Joel Sherrill 2026-08-13T22:42:31.828Z

set status to **Done**

1.8.1.13 3923 - Add traceability information to the application configuration options

Id	3923
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Sebastian Huber
Closed by	Sebastian Huber
Created	2020-04-02T08:32:10.000Z
Closed	2026-08-05T08:41:21.303Z
Updated	2026-08-05T08:41:21.571Z
Milestone	6.3
Labels	priority::normal, qualification, tickettype::project, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3923
Merges	0

Original author: sebastian.huber

There exists a specification of the application configuration options here:

https://git.rtems.org/rtems-central/tree/spec/acfg

For the RTEMS Qualification project we need traceability from the specification to the source code and vice versa. Methods and tools for this needs to be agreed on, documented, and implemented:

https://lists.rtems.org/pipermail/devel/2020-March/058744.html

https://lists.rtems.org/pipermail/devel/2020-March/058745.html

Document the configuration related specification items in the RTEMS Software Engineering manual along with the traceability approach.

Author: Trac Migrate 2020-04-02T08:35:41.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
- There exist a specification of the application configuration options␣
↪(work in progress) here:
+ There exists a specification of the application configuration options␣
↪(work in progress) here:
?            +


https://git.rtems.org/sebh/rtems-qual.git/tree/spec/acfg/opt/

For the RTEMS Qualification project we need traceability from the␣
↪specification to the source code and vice versa. Methods and tools␣
↪for this needs to be agreed on, documented, and implemented:
```

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```
9
10 https://lists.rtems.org/pipermail/devel/2020-March/058744.html
11
12 https://lists.rtems.org/pipermail/devel/2020-March/058745.html
```

Author: Trac Migrate 2020-04-02T08:38:37.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
1  There exists a specification of the application configuration options␣
   ↪(work in progress) here:
2
3  https://git.rtems.org/sebh/rtems-qual.git/tree/spec/acfg/opt/
4
5  For the RTEMS Qualification project we need traceability from the␣
   ↪specification to the source code and vice versa. Methods and tools␣
   ↪for this needs to be agreed on, documented, and implemented:
6
7  https://lists.rtems.org/pipermail/devel/2020-March/058744.html
8
9  https://lists.rtems.org/pipermail/devel/2020-March/058745.html
10 +
11 + Document the configuration related specification items in the RTEMS␣
   ↪Software Engineering manual along with the traceability approach.
```

Author: Trac Migrate 2022-07-21T07:52:00.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
1  - There exists a specification of the application configuration options␣
   ↪(work in progress) here:
2  ?                                                                    ␣
   ↪-------------------
3
4  + There exists a specification of the application configuration options␣
   ↪here:
5
6  - https://git.rtems.org/sebh/rtems-qual.git/tree/spec/acfg/opt/
7  ?                       -----      ^^  ----               -----
8
9  + https://git.rtems.org/rtems-central/tree/spec/acfg
```

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(continued from previous page)

```
?                               ^^^^^


For the RTEMS Qualification project we need traceability from the␣
↪specification to the source code and vice versa. Methods and tools␣
↪for this needs to be agreed on, documented, and implemented:

https://lists.rtems.org/pipermail/devel/2020-March/058744.html

https://lists.rtems.org/pipermail/devel/2020-March/058745.html

Document the configuration related specification items in the RTEMS␣
↪Software Engineering manual along with the traceability approach.
```

- **Milestone** changed from %”6.1” to %”7.1”

Author: Trac Migrate 2022-07-21T07:55:34.000Z

Original author: sebastian.huber

The application configuration options (defines) are evaluated by header files in `cpukit/include/rtems/confdefs*`. Traceability from the specification to the source code and vice versa can be done via a Doxygen map file. However, this doesn’t work for the application configuration since the evaluation of defines cannot be documented through Doxygen. We would need the ability to reference source code blocks in the specification.

Author: Amar Takhar 2024-04-25T20:47:58.690Z

changed the description

Author: Joel Sherrill 2025-09-19T00:02:03.741Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:19:12.663Z

assigned to @sebhub

Author: Chris Johns 2026-07-30T23:19:27.939Z

Please update the Status.

Author: Sebastian Huber 2026-08-05T08:41:21.371Z

set status to **Done**

Author: Sebastian Huber 2026-08-05T08:41:22.191Z

This was fixed in the tooling.

1.8.1.14 5481 - Backport to 6 branch: “Complete the u-boot support for qoriq BSP”

Id	5481
State	closed
Type	ISSUE
Author	Kinsey Moore
Closed by	Kinsey Moore
Created	2026-02-05T22:12:31.856Z
Closed	2026-07-31T00:34:35.652Z
Updated	2026-07-31T00:34:35.812Z
Milestone	6.3
Labels	backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5481
Merges	1

The following discussion from !976 should be addressed:

- [] @opticron started a discussion:

  This needs a backport issue and the issue should be referenced from the commit message with: `Closes #issuenumberhere`

  Author: Kinsey Moore 2026-02-05T22:12:32.023Z

  added rtems#15 as parent epic

  Author: Kinsey Moore 2026-02-05T22:12:32.119Z

  set status to **To do**

  Author: Kinsey Moore 2026-02-05T22:12:58.324Z

  mentioned in merge request !976

  Author: Vijay Banerjee 2026-07-09T15:50:23.465Z

  set status to **Done**

  Author: Joel Sherrill 2026-07-19T15:26:11.796Z

  set status to **To do**

Author: Joel Sherrill 2026-07-19T15:26:12.409Z

The MR for this seems to be the origin of this warning across a lot of PowerPC BSPS:

```
no-posix powerpc/qoriq_e6500_64 build:
configure: /home/tester/rtems-cron-7/rtems/waf configure\\
--prefix=/home/tester/rtems-cron-7/tools/7/bsps\\
--top=/home/tester/rtems-cron-7/rtems --rtems-config=config-powerpc-\\
qoriq_e6500_64-no-posix.ini
error: home/tester/bsps/powerpc/shared/u-boot/uboot_getenv.c:73:13:
error: no previous prototype for 'bsp_uboot_getenv'
[-Werror=missing-prototypes]
```

See build sweep post for a full list of BSPs impacted.

Author: Vijay Banerjee 2026-07-20T15:43:59.900Z

mentioned in merge request !1359

Author: Vijay Banerjee 2026-07-20T15:45:26.173Z

The MR removed the HAS_UBOOT guard from the implementation but kept it in the header file. I added !1359 to add the conditional and remove unused function

Author: Kinsey Moore 2026-07-31T00:34:35.711Z

set status to **Done**

1.8.1.15 5386 - Initializing network (libbsd) issue on 6-freebsd-12 powerpc beatnik

Id	5386
State	closed
Type	ISSUE
Author	Heinz Junkes
Closed by	Chris Johns
Created	2025-10-31T21:28:53.777Z
Closed	2026-07-31T00:25:20.250Z
Updated	2026-07-31T00:25:20.255Z
Milestone	6.3
Labels	libbsd::freebsd-12
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5386
Merges	0

Summary

on call rtems_bsd_initialize() :

_taskqueue_start_threads: kthread_add(kqueue_ctx taskq): error 12emerg: kproc_create() failed with 12

```
git clone https://gitlab.rtems.org/rtems/tools/rtems-source-builder rsb
cd rsb
git checkout tags/6.1

git clone https://gitlab.rtems.org/rtems/rtos/rtems.git kernel
cd kernel
git checkout tags/6.1

git clone https://gitlab.rtems.org/rtems/pkg/rtems-libbsd
cd rtems-libbsd
git checkout 6-freebsd-12
git submodule init
git submodule update rtems_waf

## Steps to reproduce
Booting beatnik:
```

Startup. get time from RTC time set to : 10/31/25 22:13:26.000006539 UTC

* RTEMS Version: rtems-6.0.0 (PowerPC/Generic (classic FPU)/beatnik) *

* Initializing network (libbsd) * _taskqueue_start_threads: kthread_add(kqueue_ctx taskq): error 12emerg: kproc_create() failed with 12

```
/milestone %6.2
```

Author: Heinz Junkes 2025-10-31T21:28:53.911Z

set status to **To do**

Author: Heinz Junkes 2025-11-01T07:37:33.337Z

Please do not work on this issue yet. I cannot rule out a hardware defect at this point. The battery that powers the NVRAM is dead. This means that the CPU settings may be corrupt. I will test it on another CPU on Monday. Sorry...

Author: Heinz Junkes 2025-11-03T09:01:37.585Z

Unfortunately, the behavior is the same on another CPU:

```
Now BSP_mem_size = 0x1fe00000
Configuration.work_space_size = f99e0
Page table setup finished; will activate it NOW...
```

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```
Going to start PCI buses scanning and initialization
Number of PCI buses found is : 3
MSR 0x2003032
Exit from bspstart
unable to find the universe in pci config space
Tundra Tsi148 PCI-VME bridge detected at 0x81100000, IRQ 84
Tsi148 Outbound Ports:
Port  VME-Addr   Size       PCI-Adrs   Mode:
0:    0x20000000 0x0e000000 0x90000000 A32, SUP, D32, SCT
1:    0x00000000 0x00ff0000 0x9f000000 A24, SUP, D32, SCT
2:    0x00000000 0x00010000 0x9fff0000 A16, SUP, D32, SCT
7:    0x00000000 0x01000000 0x9e000000 CSR, SUP, D32, SCT
Tsi148 Inbound Ports:
Port  VME-Addr   Size       PCI-Adrs   Mode:
0:    0x90000000 0x1fe00000 0x00000000 A32, PGM, DAT, SUP, USR, MBLT,␣
↪BLT
vmeTsi148 IRQ manager: looking for registers on VME...
Trying to find CSR on VME...
vmeTsi148 - IRQ manager using VME CSR to flush FIFO
Registering /dev/console as minor 0 (==/dev/ttyS0)
Startup.
time set to : 04/14/24 07:30:35.000006119 UTC

***** RTEMS Version: rtems-6.0.0 (PowerPC/Generic (classic FPU)/
↪beatnik) *****

***** Initializing network (libbsd) *****
_taskqueue_start_threads: kthread_add(kqueue_ctx taskq): error 12emerg:␣
↪kproc_create() failed with 12
```

What strikes me is that after “Registering /dev/console . . . ” it takes a very long time for the next output to appear.

Author: Heinz Junkes 2025-11-03T10:23:11.646Z

With 6-freebsd-14 I see this:

```
***** Initializing network (libbsd) *****
emerg: assertion "area != NULL" failed: file "../../rtemsbsd/rtems/
↪rtems-kernel-page.c", line 143, function: rtems_bsd_page_init
```

Author: Chris Johns 2025-11-10T22:26:28.150Z

set status to **Needs funding**

Author: Chris Johns 2025-11-10T22:27:37.775Z

Please try `6-freebsd-14` to see if the problem exists there?

Author: Chris Johns	2025-11-10T22:27:44.329Z

set status to **To do**

Author: Chris Johns	2026-07-31T00:25:16.866Z

Please use `6-freesd-14`.

Author: Chris Johns	2026-07-31T00:25:20.287Z

set status to **Won't do**

1.8.1.16 5165 - Use of pkg-config –libs is unreliable

Id	5165
State	closed
Type	ISSUE
Author	Sebastian Huber
Assignee(s)	Sebastian Huber
Closed by	Chris Johns
Created	2024-11-28T12:58:42.398Z
Closed	2026-07-31T00:12:35.422Z
Updated	2026-07-31T00:12:35.427Z
Milestone	6.3
Labels	qualification
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5165
Merges	0

Summary

I noticed a strange issue with pkg-config for a BSP with special linker flags:

https://github.com/pkgconf/pkgconf/issues/371

I think we should provide the linker flags also through an `LDFLAGS` variable.

Author: Sebastian Huber	2024-11-28T12:58:42.511Z

assigned to @sebhub

Author: Sebastian Huber	2024-11-28T14:26:59.811Z

mentioned in merge request !335

Author: Sebastian Huber 2024-11-28T14:28:04.148Z

mentioned in merge request !336

Author: Gedare Bloom 2024-12-04T21:39:42.250Z

Author: Sebastian Huber 2024-12-05T03:02:18.776Z

cloned to #5169

Author: Chris Johns 2024-12-22T03:37:31.386Z

Author: Chris Johns 2025-02-11T05:34:34.959Z

This change breaks libbsd and I suspect more. See https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/issues/38 for details.

Author: Chris Johns 2025-02-11T05:36:33.803Z

The MR needs to be revert it.

Author: Sebastian Huber 2025-02-11T05:38:22.683Z

mentioned in commit e36ba91110724b5cc8a9e07659d98d0bcb96e4d4

Author: Sebastian Huber 2025-02-11T05:38:56.744Z

I would first like to investigate why this change causes something to break. The LDFLAGS were previously not visible by pkg-config.

Author: Sebastian Huber 2025-02-11T06:26:22.134Z

It seems the removal of the `Ldflags:` is the issue here. This part of the patch needs to be reverted. The `rtems_waf` package uses the option `--ldflags` which is not documented by `pkg-config --help`.

Author: Chris Johns 2025-02-11T06:26:22.134Z

I suggest this change is reverted and then a new change can created, review and merged. Any change has to build `rtems_waf` base packages such as `libbsd` to be approved.

Author: Sebastian Huber 2025-02-11T06:26:22.134Z

Why don't you give people a business day to fix this?

Author: Chris Johns 2025-02-11T06:26:22.134Z

That depends on the fix and how long it takes to be reviewed and merged. A revert works, I have tested it so it lets LibBSD build which is important. I am a little unsure what the problem is with a revert?

Author: Sebastian Huber 2025-02-11T06:26:22.134Z

I am already working on a patch.

Author: Chris Johns 2025-02-11T06:26:22.134Z

Sure and thanks. I am only providing a way to solve this breakage. It would helpful if you could please explain your position of no reverts? Gitlab has a Revert button because it is useful and used so if a change breaks something it is helpful.

Author: Sebastian Huber 2025-02-11T06:26:22.134Z

In the past, patches were not reverted this quickly.

Author: Amar Takhar 2025-02-11T06:27:01.628Z

These should be reverted because it caused the breakage it's a good way to record the issue in GitLab. New MRs should come with the alternate change.

The reason we moved to GitLab is to make these processes easy we're not in a race I appreciate you wanting more time but the policy should always be to revert ASAP when we see breakage and have a new change in come via a new MR this is an easier way to track changes. This also means that any future changes can be properly considered without being under pressure due to current breakage.

Author: Sebastian Huber 2025-02-11T06:26:22.134Z

Please go ahead, I will have a look at it in a couple of days.

Author: Chris Johns 2025-02-11T05:50:43.935Z

mentioned in merge request !413

Author: Amar Takhar 2025-02-11T05:58:44.327Z

mentioned in merge request !414

Author: Chris Johns 2025-10-02T22:29:33.931Z

added rtems#15 as parent epic

Author: Chris Johns 2026-07-31T00:12:35.455Z

set status to **Obsolete**

1.8.1.17 4981 - Overwork Flashdev

Id	4981
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2023-12-28T16:01:07.000Z
Closed	2026-07-31T00:08:30.074Z
Updated	2026-07-31T00:08:30.078Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4981
Merges	0

Original author: blofeld80

Hi, Aaron Nyholm has added a nice flashdev API this year. I wanted to put LittleFS on top of this API and encountered some difficulties / found some bugs / have some open questions / would like to make some breaking API changes. Therefore, I hope that Aaron can comment.

1. C++ include guards are missing in flashdev.h
2. The switch case in flashdev.c => rtems_flashdev_ioctl is missing a default case
3. Is there a guideline for naming IOCTLs? There are several defines and functions which, I feel, could have a more descriptive name. For example, there is the define RTEMS_FLASHDEV_IOCTL_PAGE_COUNT which is used to get the number of pages within the flash. Could we have it called RTEMS_FLASHDEV_IOCTL_GET_PAGE_COUNT so that it is immediately clear what is good for? Basically, I would like to add "_GET" / "_get" at all appropriate places (i.e. refactor the corresponding function names, too). I guess there will be an issue with the 80 char per line limit, but I'd provide a proposal for handling them at a final stage when all other issues have been addressed.

4. I need to be able to create more than one flashdev. Therefore, the mutex initializer in rtems_flashdev_do_init is a bit of a roadblocker as it would use the same name for the mutex inside each flashdev instance. From my point of view, the easiest way to deal with this is to have the mutex name as an argument to the initializer. However, I'd prefer to a. shorten the

name - like FDEV_MTX_${Number} b. loop over ${Number} until we can create the mutex Is there an rtems_get_id_by_name? I've only found a function to get the name of an id.

5. Some thoughts on the "regions". Regions behave much like paritions, except that not every region / partition gets its own file handle, right? a. Why not calling the regions partitions? b. Do we really need to set them up "dynamically", or could we pass a partition table to the flashdev initialisation? c. There are the IOCTLs RTEMS_FLASHDEV_IOCTL_REGION_SET and RTEMS_FLASHDEV_IOCTL_REGION_UNSET. Looking at the implementation I feel they do more than I'd expect. For example, RTEMS_FLASHDEV_IOCTL_REGION_SET creates the region, or even redefines a region if one has not called unset, and then it activates the region. I'd like to refactor this into four IOCTLs: * **RTEMS_FLASHDEV_IOCTL_** REGION or PARTITION _CREATE * **RTEMS_FLASHDEV_IOCTL_** REGION or PARTITION _DELETE * **RTEMS_FLASHDEV_IOCTL_** REGION or PARTITION _ACTIVATE * **RTEMS_FLASHDEV_IOCTL_** REGION or PARTITION _DEACTIVATE

For my use case, setting up a static partition table would be good enough. We could spare the _CREATE, _DELETE, check the partitions more thoroughly during initalisation (for example that they do not overlap), and would not have to provide a mechanism to be able to resize them during runtime.

Flashdev shall work for NAND flashes, too. I am not an expert when it comes to NAND flashes. Therefore, I would like to outline my basic understanding and hope someone tells me if I am completely off.

Some parts I find often in designs:

NOR - MT25Q https://www.micron.com/-/media/client/global/documents/products/data-sheet/nor-flash/serial-nor/mt25q/die-rev-b/mt25q_qlkt_u_01g_bbb_0.pdf

NOR - S25FL512 https://www.infineon.com/dgdl/Infineon-S25FL512S_512_Mb_(64_MB)_3.0_V_SPI_Flash_Memory-DataSheet-v20_00-EN.pdf?fileId=8ac78c8c7d0d8da4017d0ed046ae4b53

NAND - W25N01 https://www.mouser.de/datasheet/2/949/w25n01gv_revl_050918_unsecured-1489588.pdf

Memory layout: bytes form pages, pages form sectors and sectors form blocks. There is always some confusion as some vendors omit the term sector

Read operations: can start at every address and have arbitrary length

Write / Program operations: work on single pages. Therefore, at max. PAGE_SIZE Bytes can be written in one go. There is a wrap around in case the configured address was not byte 0 in the current page. Usually, the minimum write size is 1 byte. However, setting a minimum write size to a different value might allow using additional features (such as ECC for the s25fl when using 16 Byte writes to 16 byte aligned addresses).

Erase operations: work on sectors and they always erase the complete sector. If an address is passed which points right in the middle of the sector, also the sector memory before the address is erased.

6. Wrt. the write operations. I think RTEMS_FLASHDEV_IOCTL_WRITE_BLOCK_SIZE is misleading as the term "block" is already defined in the context of flash memories. The implementation / comments / unit tests show that we are looking at the minimum write size. a. Could we refactor this to RTEMS_FLASHDEV_IOCTL_GET_MIN_WRITE_SIZE? b. Especially regarding the ECC features of some flashes. The addresses need to be aligned to

RTEMS_FLASHDEV_IOCTL_GET_MIN_WRITE_SIZE. I think we should test the adress alignment on writes.

7. Wrt. the erase operations. The erase operations work on sectors! a. I need an API extension to get the erase size b. We should test that the address passed to the erase function is aligned to the erase size. c. The erase size puts constraints on the regions / partions. Their addresses need to be aligned with the erase size and their length must be a multiple of the erase size

8. Some unit tests (testsuite flashdev01) fail as expected, but not due to expected reason. Take for example line 148 in testsuites/libtests/flashdev01/init.c and change

read_data = fgets(buff, 2048, file);

to

read_data = fgets(buff, 1, file);

Actually, the test case is expected to fail as the sector size is only 512 bytes and we try to read 2048 bytes. Unfortunatelly, reading a single byte doesnt work either. This is due to the fact that by default buffered IO is used. On my side, each fgets translates to one or more read operations of 1024 bytes length. I.e. this testcase will always succeed as we expect the test to fail. a. I like to propose that we initialise flashdev to operate in buffered mode using RTEMS_FLASHDEV_IOCTL_GET_MIN_WRITE_SIZE. b. I think we should add a raw_read and raw_write to be able to transfer larger junks of data.

I can work on this and start providing patches for review.

Author: Trac Migrate 2023-12-28T16:03:10.000Z

Original author: blofeld80

- **Owner** set to blofeld80
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-12-28T16:11:14.000Z

Original author: blofeld80

6b / 8a) Of course I thought of using the return values of RTEMS_FLASHDEV_IOCTL_GET_MIN_WRITE_SIZE for alignment / size checks

Author: Trac Migrate 2024-01-16T16:58:26.000Z

Original author: blofeld80

In [changeset:"a43163d058bd8d9da901e7a7e48591e2ff6aaabe/rtems" a43163d0/rtems]:

```
flashdev.h: Add missing C++ include guards

Updates #4981
```

Author: Trac Migrate 2024-01-16T16:58:29.000Z

Original author: blofeld80

In [changeset:"bd898b503fd0d250b11cbffddc041e1e29e3fc7e/rtems" bd898b50/rtems]:

```
flashdev: Add missing default case

Updates #4981
```

Author: Trac Migrate 2024-01-16T16:58:32.000Z

Original author: blofeld80

In [changeset:"a73b52d6a469c330d21e02ea8f82a05edce9fb73/rtems" a73b52d/rtems]:

```
flashdev.c: return error if both buffers are NULL

Updates #4981
```

Author: Chris Johns 2025-09-19T01:42:04.817Z

changed the description

Author: Chris Johns 2026-07-31T00:08:19.769Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-31T00:08:30.107Z

set status to **Done**

1.8.1.18 4919 - QEMU CGEM Priority Queue Bug

Id	4919
State	closed
Type	ISSUE
Author	Kinsey Moore
Closed by	Chris Johns
Created	2023-06-14T18:41:44.000Z
Closed	2026-07-31T00:00:42.804Z
Updated	2026-07-31T00:00:42.809Z
Milestone	6.3
Labels	old-indefinite, priority::normal, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4919
Merges	0

There is a bug in QEMU's implementation of the CGEM priority queueing. This issue exists to track its inclusion in upstream QEMU.

- 0001-hw-arm-xlnx-Connect-secondary-CGEM-IRQs-xlnx.patch
- 0001-hw-arm-xlnx-Connect-secondary-CGEM-IRQs.patch
- cgem_zynqmp_versal.patch

Author: Kinsey Moore 2023-06-14T18:42:04.000Z

- **Attachment** cgem_zynqmp_versal.patch added

Patch to fix priority queue interrupt issues

Author: Trac Migrate 2023-06-16T13:16:39.000Z

In [changeset:"ac1fee4f04fe5619cca52f960b8ec858adaab7d8/rtems-source-builder" ac1fee4/rtems-source-builder]:

```
qemu-5-1: Add patch for ZynqMP/Versal CGEMs

This temporarily adds a patch to fix badly behaving CGEM peripherals
under QEMU. The referenced patch has been submitted for inclusion in
the upstream QEMU repository.

Updates #4919
```

Author: Joel Sherrill 2023-06-22T20:59:32.000Z

- **Milestone** changed from %"6.1" to %"Indefinite"

Changing milestone because this is tracking upstream qemu merging this and us using it in the RSB.

Author: Kinsey Moore 2023-06-26T17:45:04.000Z

- **Attachment** 0001-hw-arm-xlnx-Connect-secondary-CGEM-IRQs.patch added

Add v2 of the cgem fix

Author: Kinsey Moore 2023-10-06T19:18:18.000Z

- **Attachment** 0001-hw-arm-xlnx-Connect-secondary-CGEM-IRQs-xlnx.patch added

A version of this patch that cleanly applies to the Xilinx QEMU tree

Author: Trac Migrate 2023-10-07T19:22:46.000Z

In [changeset:"deba39fea4483754784458fb23337b1d5736834c/rtems-source-builder" deba39f/rtems-source-builder]:

```
qemu: Adjust cgem interrupt patch

This patch is being moved to the 5.2.0-1 QEMU configuration because the
Xilinx QEMU build uses the 5-1 configuration and this patch does not
apply to Xilinx's modified tree. This also adds a new patch that applies
correctly to Xilinx's modified QEMU tree.

Updates #4919
```

Author: Kinsey Moore 2024-10-04T00:43:06.661Z

This patch has finally made it on to the QEMU upstream master branch, but is not yet on a release branch: https://github.com/qemu/qemu/commit/604b72dd3c393bf6a7cac59c3a74a2bec4673a80

Author: Amar Takhar 2025-09-05T02:55:32.489Z

changed the description

Author: Kinsey Moore 2026-05-15T14:42:45.355Z

These changes are now present in QEMU 10.x upstream releases

Author: Chris Johns 2026-07-31T00:00:39.677Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-31T00:00:42.839Z

set status to **Done**

1.8.1.19 4883 - GDB cannot see TLS variables

Id	4883
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Kinsey Moore
Closed by	Chris Johns
Created	2023-03-21T22:40:16.000Z
Closed	2026-07-30T23:56:21.991Z
Updated	2026-07-30T23:56:21.996Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, tool::gdb, version::6, version::7
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4883
Merges	0

GDB does not know how to handle TLS variables on RTEMS. This make debugging newlib hard because newlib now uses TLS for it's reent data.

Author: Chris Johns 2024-02-16T00:36:24.000Z

- **Milestone** changed from %"6.1" to %"Indefinite"
- **Version** changed from ~"6" to ~"7"

We need to understand what GDB needs to have done to it support TLS variables. At the moment it is not possible to determine the scale of effort needed.

We will move this to 7 and when solved we can make a dot release for 6 and release a working GDB.

Author: Kinsey Moore 2025-06-18T18:59:43.193Z

mentioned in merge request !518

Author: Kinsey Moore 2025-06-18T18:59:57.611Z

mentioned in merge request !517

Author: Kinsey Moore 2025-06-19T20:34:52.499Z

The base functionality in RTEMS is added by !517 and !518. There is a piece to this puzzle that still needs to be added to GDB.

Author: Kinsey Moore 2025-06-19T20:34:51.922Z

Attached is the GDB patch that I used to test the TLS functionality.`gdb-tls.patch <https://gitlab.rtems.org/-/project/uploads/2f72fc89002e9a1652c3c943e10be8b0/gdb-tls.patch>`_

While this patch is obviously not suitable for upstream consumption, it does work. It could theoretically be pulled in to the GDB build by RSB in the short term and used to enable TLS functionality for RTEMS until a more polished version of the patch can be incorporated upstream.

Author: Chris Johns 2025-06-19T20:47:35.889Z

Does this mean GDB needs RTEMS support per arch?

Author: Kinsey Moore 2025-06-19T20:50:08.129Z

Unfortunately, I think the answer is yes.

Author: Kinsey Moore 2025-06-19T20:50:47.456Z

And that patch only adds it for AArch64 because that's what I was testing.

Author: Kinsey Moore 2025-06-19T21:41:04.600Z

~~There *is* a section that provides a place to hook in OS-targeted objects instead of architecture-targeted objects, so I'll look into that to see if that can be made to work.~~

This still needs a per-arch stub to point at it, but it will be good for sharing RTEMS details that apply to all architectures.

Author: Kinsey Moore 2025-06-20T20:43:39.076Z

Attached is a more polished version of the GDB patch which should be far more acceptable upstream.`0001-gdb-Add-support-for-TLS-under-RTEMS.patch <https://gitlab.rtems.org/-/project/uploads/ac8467cb05964de8569d62798681d5fd/0001-gdb-Add-support-for-TLS-under-RTEMS.patch>`_

I managed to get all the RTEMS-related support in one place so we don't have to proliferate files throughout GDB just to support RTEMS. This was built by adding it to the 15.2 GDB recipe in RSB on 6 branch and it was tested with libbsd 6-freebsd-12 with the patch support the vGetTLSAddr query. The version of libbsd should be irrelevant. This is the patch for RSB main GDB recipe (16.2) which has also been tested against the 6-freebsd-12 build: 0001-gdb-Add-support-for-TLS-under-RTEMSv16.2.patch

Author: Kinsey Moore 2026-05-08T19:37:15.226Z

Attached is an even more polished version with feedback from the GDB mailing list that targets 17.1/main.`0001-gdb-Add-support-for-TLS-under-RTEMSv17.1.patch <https://gitlab.rtems.org/-/project/uploads/f4a37404615b82ab9cb8400ecc64e500/0001-gdb-Add-support-for-TLS-under-RTEMSv17.1.patch>`_

Author: Amar Takhar 2025-09-05T02:55:31.997Z

changed the description

Author: Chris Johns 2026-07-30T23:55:53.899Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:56:00.428Z

assigned to @opticron

Author: Chris Johns 2026-07-30T23:56:22.028Z

set status to **Done**

1.8.1.20 4852 - Deprecated Functions

Id	4852
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2023-02-13T14:13:41.000Z
Closed	2026-07-30T23:55:07.913Z
Updated	2026-07-30T23:55:07.919Z
Milestone	6.3
Labels	old-indefinite, priority::normal, qualification, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4852
Merges	1

Original author: dppinto

It is stated in the comments that these functions are deprecated: * cpukitincludertemsfatal.h: RTEMS_NO_RETURN void rtems_fatal_error_occurred(uint32_t fatal_code); * cpukitincludertemsscorethread.h: void rtems_iterate_over_all_threads( );

Can these be removed now or are there still portability reasons to still keep these?

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). The original ISVV reference for this issue is RTEMS-SMP-CODE-VER-018.

Author: Trac Migrate 2023-03-23T16:22:37.000Z

Original author: dppinto

- **Milestone** set to %"Indefinite"
- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*

Author: Amar Takhar 2024-04-25T20:50:35.916Z

changed the description

Author: Samuel Viegas 2026-02-25T12:04:16.774Z

mentioned in merge request !1081

Author: Chris Johns 2026-07-30T23:55:02.956Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:55:07.950Z

set status to **Obsolete**

1.8.1.21 4849 - "Timer Server" Cannot be Used in Systems with Static Memory Allocation

Id	4849
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2023-02-10T12:57:39.000Z
Closed	2026-07-30T23:54:51.877Z
Updated	2026-07-30T23:54:51.882Z
Milestone	6.3
Labels	old-indefinite, priority::normal, qualification, tickettype::defect, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4849
Merges	0

Original author: dppinto

For the current pre-qualified feature set of RTEMS, one wants to use rtems_timer_initiate_server(), then it has to provide a custom stack allocator. This makes it inconvenient to use. One option would be to provide a new directive to construct the timer server, for example rtems_timer_server_construct().

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). The original ISVV reference for this issue is RTEMS-SMP-VAL-001.

Author: Joel Sherrill 2023-02-10T14:02:28.000Z

Original author: dppinto

- **Summary** changed from *"Timer Server" is not directly usable* to *"Timer Server" Cannot be Used in Systems with Static Memory Allocation*

Author: Trac Migrate 2023-03-23T16:23:36.000Z

Original author: dppinto

- **Milestone** set to %"Indefinite"
- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*

Author: Amar Takhar 2024-04-25T20:50:34.593Z

changed the description

Author: Chris Johns 2026-07-30T23:54:44.760Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:54:51.911Z

set status to **Obsolete**

1.8.1.22 4570 - devel/qemu is not buildable on Mac OS X.

Id	4570
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Chris Johns
Created	2021-12-12T16:04:20.000Z
Closed	2026-07-30T23:45:34.529Z
Updated	2026-07-30T23:45:34.589Z
Milestone	6.3
Labels	old-indefinite, priority::normal, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4570
Merges	0

Original author: kgardas

Hi,

using recent (as of 2021-12-11) rsb source code from git, I'm not able to build devel/qemu on Mac OS X. It fails on glib compilation which fails on configure step in two ways: missing `__int64` type and missing gettext library – looks like `DYLD_LIBRARY_PATH=$SYSROOT/lib` is not working as expected.

Steps to reproduce:

```
cd bare
../source-builder/sb-set-builder --prefix=/tmp devel/qemu
```

anyway, I'm attaching both report and glib's config.log here which contain all the clues.

- config-3.log
- rsb-report-glib-2.48.2-x86_64-apple-darwin19.6.0-1.txt.xz

Author: Trac Migrate	2021-12-12T16:08:01.000Z

Original author: kgardas

- **Attachment** rsb-report-glib-2.48.2-x86_64-apple-darwin19.6.0-1.txt.xz added

rsb report

Author: Trac Migrate	2021-12-12T16:08:24.000Z

Original author: kgardas

- **Attachment** config-3.log added

config log

Author: Chris Johns 2022-11-29T23:50:19.000Z

Original author: kgardas

Status update?

Author: Joel Sherrill 2023-06-22T20:49:31.000Z

Original author: kgardas

Any updates? We'd like to know it works or not and close this ticket.

Author: Joel Sherrill 2023-06-22T21:47:51.000Z

Original author: kgardas

- **Milestone** changed from %"6.1" to %"Indefinite"
- **Version** ~"6" deleted

Author: Joel Sherrill 2023-06-22T21:48:14.000Z

Original author: kgardas

- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*

Just kicking it down the road.

Author: Trac Migrate 2023-07-10T09:11:56.000Z

Original author: kgardas

Tested today, it fails even more sooner on configuration of autoconf:

```
karel@mini rtems % ../source-builder/sb-set-builder --prefix=/tmp/test␣
↪devel/qemu
RTEMS Source Builder - Set Builder, 6 (8e568b2ca348)
warning: exe: absolute exe found in path: (__install_info) /usr/bin/
↪install-info
warning: exe: absolute exe found in path: (__makeinfo) /usr/bin/makeinfo
Build Set: devel/qemu
Build Set: devel/autotools-internal.bset
config: devel/autoconf-2.69-1.cfg
package: autoconf-2.69-arm64-apple-darwin22.5.0-1
building: autoconf-2.69-arm64-apple-darwin22.5.0-1
error: building autoconf-2.69-arm64-apple-darwin22.5.0-1
Build FAILED
See error report: rsb-report-autoconf-2.69-arm64-apple-darwin22.5.0-1.
```

(continues on next page)

(continued from previous page)

```
↪txt
Note: In some cases the error appears only in
the complete build log (see --log option)
error: building autoconf-2.69-arm64-apple-darwin22.5.0-1
Build Set: Time 0:00:01.562289
error: building autoconf-2.69-arm64-apple-darwin22.5.0-1
Build Set: Time 0:00:01.566968
Build FAILED
```

and autoconf fails on classical issue with unrecognized `arm64-apple` name:

```
+ cd autoconf-2.69
+ test yes = yes
+ ac_prefix=/Users/karel/git/rtems-source-builder-ref/rtems/build/tmp/
↪sb-502/tmp/test
+ test arm64-apple-darwin22.5.0 '!=' arm64-apple-darwin22.5.0
+ export CFLAGS CFLAGS_FOR_BUILD CC
+ CFLAGS='-O2 -pipe -fbracket-depth=1024 -I/Users/karel/git/rtems-
↪source-builder-ref/rtems/build/tmp/sb-502/devel/autotools-internal/
↪tmp/test/include '
+ ./configure --build=arm64-apple-darwin22.5.0 --host=arm64-apple-
↪darwin22.5.0 --verbose --disable-nls --without-included-gettext --
↪prefix=/Users/karel/git/rtems-source-builder-ref/rtems/build/tmp/sb-
↪502/tmp/test
configure: WARNING: unrecognized options: --disable-nls, --without-
↪included-gettext
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... build-aux/install-sh -c -d
checking for gawk... no
checking for mawk... no
checking for nawk... no
checking for awk... awk
checking whether make sets $(MAKE)... yes
Invalid configuration `arm64-apple-darwin22.5.0': machine `arm64-apple'␣
↪not recognized
configure: error: /bin/sh build-aux/config.sub arm64-apple-darwin22.5.0␣
↪failed
checking build system type...
checking build system type...
shell cmd failed: /bin/sh -ex  /Users/karel/git/rtems-source-builder-
↪ref/rtems/build/autoconf-2.69-arm64-apple-darwin22.5.0-1/do-build
error: building autoconf-2.69-arm64-apple-darwin22.5.0-1
```

Author: Amar Takhar 2025-09-05T02:57:51.741Z

changed the description

Author: Kinsey Moore 2026-05-15T16:32:35.716Z

Looks like there is currently an error during build likely due to a newer GCC version: https://lists.rtems.org/pipermail/build/2026-May/073276.html

Author: Joel Sherrill 2026-05-15T16:32:35.667Z

@chris' addition of std=support should make it easy to fix. Whatever package that is will likely be fixed with gnu17 for C and gnu++17 for C++.

If this is on the 6 branch, the milestone shouldn't have been removed. It should have been moved to 6.5 if we aren't fixing it for 6.4. but we should fix it.

Author: Kinsey Moore 2026-05-15T16:36:43.602Z

%6.3 hasn't even been released yet and it still has that milestone on it.

Author: Chris Johns 2026-07-30T23:45:34.562Z

set status to **Obsolete**

1.8.1.23 4498 - libelftc_dem_gnu3.c: Resource leak spotted by Coverity

Id	4498
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2021-08-17T15:02:12.000Z
Closed	2026-07-30T23:45:18.806Z
Updated	2026-07-30T23:45:18.862Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4498
Merges	0

Original author: rlong

Upstream issue [https://sourceforge.net/p/elftoolchain/tickets/607/]

CID 1305425: Resource leak

```
2913                if (!vector_str_push(&v.ext_name, ddata->cur, len))
CID 1305425 (#1 of 1): Resource leak (RESOURCE_LEAK)48. leaked_storage: Variable␣
↪exp_str going out of scope leaks the storage it points to.
2914                        return (0);
```

Author: Joel Sherrill 2021-12-16T15:56:11.000Z

Original author: rlong

- **Milestone** changed from %”6.1” to %”7.1”

Author: Joel Sherrill 2025-09-19T00:14:28.063Z

changed the description

Author: Joel Sherrill 2025-09-19T00:14:28.109Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:45:18.838Z

set status to **Done**

1.8.1.24 4497 - libelftc_dem_gnu2.c: Resource leak spotted by Coverity

Id	4497
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2021-08-17T14:57:46.000Z
Closed	2026-07-30T23:45:03.274Z
Updated	2026-07-30T23:45:03.350Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4497
Merges	0

Original author: rlong

Upstream ticket [https://sourceforge.net/p/elftoolchain/tickets/607/]

CID 1262520: Resource leak

```
244
CID 1262520 (#1 of 1): Resource leak (RESOURCE_LEAK)39. leaked_storage: Variable␣
↪arg going out of scope leaks the storage it points to.
245         return (rtn);
246}
```

Author: Trac Migrate 2021-08-17T15:04:07.000Z

Original author: rlong

- **Version** set to ~"6"

Author: Joel Sherrill	2021-12-16T15:55:49.000Z

Original author: rlong

- **Milestone** changed from %"6.1" to %"7.1"

Author: Joel Sherrill	2025-09-19T00:14:17.140Z

changed the description

Author: Joel Sherrill	2025-09-19T00:14:17.179Z

unassigned @tracmigrate

Author: Chris Johns	2026-07-30T23:45:03.314Z

set status to **Done**

1.8.1.25 4496 - libelftc_dem_arm.c: Resource leak spotted by Coverity

Id	4496
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2021-08-17T14:51:04.000Z
Closed	2026-07-30T23:44:50.944Z
Updated	2026-07-30T23:44:51.004Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4496
Merges	0

Original author: rlong

Upstream ticket [https://sourceforge.net/p/elftoolchain/tickets/607]

CID 1262518: Resource leak

```
229
CID 1262518 (#1 of 1): Resource leak (RESOURCE_LEAK)56. leaked_storage: Variable␣
↪arg going out of scope leaks the storage it points to.
230         return (rtn);
231}
```

CID 1262519: Resource leak

```
958         if (VEC_PUSH_STR(&d->vec, "::operator ") == false)
CID 1262529: Resource leak (RESOURCE_LEAK) [select issue]
CID 1262519 (#1 of 1): Resource leak (RESOURCE_LEAK)18. leaked_storage: Variable to_str going out of scope leaks the storage it points to.
959                 return (false);
```

CID 1262529: Resource leak

```
958         if (VEC_PUSH_STR(&d->vec, "::operator ") == false)
CID 1262519: Resource leak (RESOURCE_LEAK) [select issue]
CID 1262529 (#1 of 1): Resource leak (RESOURCE_LEAK)19. leaked_storage: Variable from_str going out of scope leaks the storage it points to.
959                 return (false);
```

Author: Trac Migrate 2021-08-17T15:03:11.000Z

Original author: rlong

- **Version** set to ~"6"

Author: Joel Sherrill 2021-12-16T15:55:24.000Z

Original author: rlong

- **Milestone** changed from %"6.1" to %"7.1"

Author: Joel Sherrill 2025-09-19T00:13:38.366Z

changed the description

Author: Joel Sherrill 2025-09-19T00:13:38.432Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:44:50.979Z

set status to **Done**

1.8.1.26 4447 - rtems-source-builder undefined reference to `BCryptGenRandom'

Id	4447
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2021-06-01T12:55:05.000Z
Closed	2026-07-30T23:44:32.318Z
Updated	2026-07-30T23:44:32.322Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4447
Merges	0

Original author: tai.burakdeniz

When trying to build RTEMS by RSB with below instruction I get following error;

"../source-builder/sb-set-builder –prefix=$HOME/quick-start/rtems/6 6/rtems-sparc"

Error; " C:/msys64/mingw64/bin/../lib/gcc/x86_64-w64-mingw32/10.3.0/../../../../x86_64-w64-mingw32/bin/ld.exe: ../gnulib/import/libgnu.a(getrandom.o): in function `getrandom':

C:msys64homew7quick-startsrcrsbrtemsbuildsrg7xwm1buildgnulibimport/../../../sourceware-mirror-binutils-gdb-7ab567f/gnulib/import/getrandom.c:129: undefined reference to `BCrypt-GenRandom'

collect2.exe: error: ld returned 1 exit status

make[2]: *** [Makefile:1866: gdb.exe] Error 1

make[2]: Leaving directory '/c/msys64/home/w7/quick-start/src/rsb/rtems/build/srg7xwm1/build/gdb'

make[1]: *** [Makefile:9410: all-gdb] Error 2

make[1]: Leaving directory '/c/msys64/home/w7/quick-start/src/rsb/rtems/build/srg7xwm1/build'

make: *** [Makefile:866: all] Error 2

shell cmd failed: sh -ex /c/msys64/home/w7/quick-start/src/rsb/rtems/build/srg7xwm1/do-build

error: building srg7xwm1 "

OS: Windows 7 64 bit, Rtems Version: 6 using MSYS2

Author: Joel Sherrill 2021-06-01T12:59:36.000Z

Original author: tai.burakdeniz

This looks like gdb on msys2 is not being linked against a random number library.

https://docs.microsoft.com/en-us/windows/win32/api/bcrypt/nf-bcrypt-bcryptgenrandom

Also looks like that may be deprecated.

Author: Trac Migrate 2021-06-01T13:47:37.000Z

Original author: tai.burakdeniz

Replying to Joel Sherrill:

> This looks like gdb on msys2 is not being linked against a random number library. https://docs.microsoft.com/en-us/windows/win32/api/bcrypt/nf-bcrypt-bcryptgenrandom Also looks like that may be deprecated.
>
> Hello Joel, thank you for your comment. I check the file on this path ;"/mingw64/x86_64-w64-mingw32/include" by grep and the file is exist but not exist in "/mingw64/include". I will try to copy or install. $find . | grep "bcrypt.h" ./bcrypt.h

Author: Joel Sherrill 2021-06-01T16:47:11.000Z

Original author: tai.burakdeniz

I found this thread which I read as you might be missing a DLL:

http://sourceware-org.1504.n7.nabble.com/Unable-to-build-GDB-on-Windows-td649748.html

It is also possible based on that thread that gdb is missing some configure magic still.

Author: Chris Johns 2025-09-19T01:42:00.553Z

changed the description

Author: Chris Johns 2026-07-30T23:44:20.880Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:44:32.350Z

set status to **Obsolete**

1.8.1.27 4431 - record-filter-zlib.cc: Unchecked return value from library error spotted by Coverity

Id	4431
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2021-05-19T14:45:26.000Z
Closed	2026-07-30T23:44:05.071Z
Updated	2026-07-30T23:44:05.076Z
Milestone	6.3
Labels	old-indefinite, priority::normal, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4431
Merges	0

Original author: rlong

CID 1503013: Unchecked return value from library in ZlibFilter().

```
CID 1503013 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)1.␣
↪check_return: Calling inflateInit_(&this->stream_, "1.2.7", 112) without␣
↪checking return value. This library function may fail and return an error code.
38  inflateInit(&stream_);
```

Author: Trac Migrate 2021-12-16T21:19:31.000Z

Original author: rlong

- **Milestone** changed from %"6.1" to %"Indefinite"

Author: Amar Takhar 2024-04-25T20:49:03.287Z

changed the description

Author: Chris Johns 2026-07-30T23:43:19.919Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:44:05.105Z

set status to **Done**

1.8.1.28 4381 - crypt-sha256.c: Constant variable guards dead code

Id	4381
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2021-04-07T13:01:01.000Z
Closed	2026-07-30T23:43:08.901Z
Updated	2026-07-30T23:43:08.907Z
Milestone	6.3
Labels	library, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4381
Merges	0

Original author: rlong

CID 1018089: Constant variable guards dead code in crypt_sha256_r().

```
assignment: Assigning: copied_salt = NULL.
77        copied_salt = NULL;
.
.
.
null: At condition copied_salt != NULL, the value of copied_salt must be NULL.
dead_error_condition: The condition copied_salt != NULL cannot be true.
265        if (copied_salt != NULL)
CID 1018089 (#1 of 1): 'Constant' variable guards dead code (DEADCODE)dead_error_
↪line: Execution cannot reach this statement: memset(copied_salt, 0, salt....
```

CID 1018090: Constant variable guards dead code in crypt_sha256_r().

```
assignment: Assigning: copied_key = NULL.
76        copied_key = NULL;
.
.
.
null: At condition copied_key != NULL, the value of copied_key must be NULL.
dead_error_condition: The condition copied_key != NULL cannot be true.
263        if (copied_key != NULL)
CID 1018090 (#1 of 1): 'Constant' variable guards dead code (DEADCODE)dead_error_
↪line: Execution cannot reach this statement: memset(copied_key, 0, key_l....
```

Author: Trac Migrate 2021-04-07T13:02:48.000Z

Original author: rlong

These variables are no longer in the code according to the latest stable version of freeBSD. https://cgit.freebsd.org/src/tree/lib/libcrypt/crypt-sha256.c?h=stable/13#n71

Author: Trac Migrate 2021-12-16T16:42:18.000Z

Original author: rlong

- **Milestone** changed from %”6.1” to %”Indefinite”

Author: Amar Takhar 2025-09-05T02:57:50.268Z

changed the description

Author: Chris Johns 2026-07-30T23:43:04.715Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:43:08.938Z

set status to **Done**

1.8.1.29 4379 - crypt-sha512.c: Constant variable guards dead code

Id	4379
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2021-04-06T21:03:29.000Z
Closed	2026-07-30T23:42:55.898Z
Updated	2026-07-30T23:42:55.902Z
Milestone	6.3
Labels	library, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4379
Merges	0

Original author: rlong

CID 1018087: Constant variable guards dead code in crypt_sha512_r().

```
assignment: Assigning: copied_salt = NULL.
77        copied_salt = NULL;
.
.
.
276                memset(copied_key, '\\0', key_len);
null: At condition copied_salt != NULL, the value of copied_salt must be NULL.
dead_error_condition: The condition copied_salt != NULL cannot be true.
277        if (copied_salt != NULL)
```

CID 1018088: Constant variable guards dead code in crypt_sha512_r().

```
75
assignment: Assigning: copied_key = NULL.
76        copied_key = NULL;
.
.
.
274        memset(&alt_ctx, '\\0', sizeof(alt_ctx));
null: At condition copied_key != NULL, the value of copied_key must be NULL.
dead_error_condition: The condition copied_key != NULL cannot be true.
275        if (copied_key != NULL)
```

Author: Trac Migrate 2021-04-07T13:05:48.000Z

Original author: rlong

These variables/checks are no longer in this code according to the source code of the latest stable release https://cgit.freebsd.org/src/tree/lib/libcrypt/crypt-sha512.c?h=stable/13#n71.

Author: Trac Migrate 2021-12-16T20:48:15.000Z

Original author: rlong

- **Milestone** changed from %"6.1" to %"Indefinite"

Author: Amar Takhar 2025-09-05T02:57:50.056Z

changed the description

Author: Chris Johns 2026-07-30T23:42:28.449Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:42:55.930Z

set status to **Done**

1.8.1.30 4373 - qemu: qemu-system-arm hangs during cron'ed test runs with rtems-test

Id	4373
State	closed
Type	ISSUE
Author	Joel Sherrill
Closed by	Chris Johns
Created	2021-04-03T19:22:41.000Z
Closed	2026-07-30T23:42:14.385Z
Updated	2026-07-30T23:42:14.397Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4373
Merges	0

When I run the automated build sweep on the CentOS server, I see some qemu hang but only on arm. I thought it might be the qemu BSP but I noticed this time it is xilinx_zynq_zc706 which might be a clue.

Anyway, I login and check on things and this only happens on this machine. The same script should be running on FreeBSD and Ubuntu but I don't see this behavior on those servers.

```
[joel@devel ~]$ ps -ef | grep " qemu-system"
joel      6457  6408 91 Apr02 ?        18:29:20 qemu-system-arm -no-reboot -
↪nographic -net none -serial null -serial mon:stdio -M xilinx-zynq-a9 -m 1024M -
↪kernel ./arm-rtems6/c/xilinx_zynq_zc706/testsuites/fstests/fsdosfsname02.exe
joel      8429  6408 91 Apr02 ?        18:15:06 qemu-system-arm -no-reboot -
↪nographic -net none -serial null -serial mon:stdio -M xilinx-zynq-a9 -m 1024M -
↪kernel ./arm-rtems6/c/xilinx_zynq_zc706/testsuites/fstests/mimfs_fspatheval.exe
joel     12157  6408 91 Apr02 ?        17:55:49 qemu-system-arm -no-reboot -
↪nographic -net none -serial null -serial mon:stdio -M xilinx-zynq-a9 -m 1024M -
↪kernel ./arm-rtems6/c/xilinx_zynq_zc706/testsuites/libtests/mathf.exe
joel     15393  6408 91 Apr02 ?        17:38:08 qemu-system-arm -no-reboot -
↪nographic -net none -serial null -serial mon:stdio -M xilinx-zynq-a9 -m 1024M -
↪kernel ./arm-rtems6/c/xilinx_zynq_zc706/testsuites/psxtests/psxautoinit02.exe
joel     19015  6408 92 Apr02 ?        17:20:36 qemu-system-arm -no-reboot -
↪nographic -net none -serial null -serial mon:stdio -M xilinx-zynq-a9 -m 1024M -
↪kernel ./arm-rtems6/c/xilinx_zynq_zc706/testsuites/psxtests/psxsignal07.exe
joel     19815  6408 92 Apr02 ?        17:16:48 qemu-system-arm -no-reboot -
↪nographic -net none -serial null -serial mon:stdio -M xilinx-zynq-a9 -m 1024M -
↪kernel ./arm-rtems6/c/xilinx_zynq_zc706/testsuites/psxtests/psxusleep.exe
joel     25821 25724  0 14:17 pts/1    00:00:00 grep --color=auto  qemu-system
joel     28277  6408 95 Apr02 ?        16:41:27 qemu-system-arm -no-reboot -
↪nographic -net none -serial null -serial mon:stdio -M xilinx-zynq-a9 -m 1024M -
↪kernel ./arm-rtems6/c/xilinx_zynq_zc706/testsuites/sptests/spedfsched03.exe
joel     31545  6408 95 Apr02 ?        16:28:14 qemu-system-arm -no-reboot -
↪nographic -net none -serial null -serial mon:stdio -M xilinx-zynq-a9 -m 1024M -
↪kernel ./arm-rtems6/c/xilinx_zynq_zc706/testsuites/sptests/spnsext01.exe
```

Author: Chris Johns 2021-04-08T01:36:29.000Z

- **Summary** changed from *rtems-test: qemu-system-arm hangs during cron'ed test runs* to *qemu: qemu-system-arm hangs during cron'ed test runs with rtems-test*

I am sorry but you are going to have to debug this to resolve it because it is not been seen else where and/or we do not have a suitable set up to duplicate it.

At the core of the bug is qemu stopping and it should not unless our test code or the BSP has a problem you have exposed. I agree there is a secondary bug where `rtems-test` is not killing the process but I am reluctant to look at that until the reason qemu hangs is found. A fixed `rtems-test` only results in more tests being (maybe) incorrectly tag as `indeterminate` and I prefer we look to get better qemu test results.

A few suggestions...

1. Is console output still being generated?
2. See if you can find out where in an RTEMS test executable things are hanging. This means adding the gdb server flag to each qemu however I am not sure if this breaks when a number of qemu sessions are run in parallel, ie port binding.
3. Can you connect a python debugger to an active process based on pid? If you could debug what is happening that would help the `rtems-test` of things but as stated IMO that is secondary to the real issue.
4. Hack `rtems-test` to add some trace around the job handling. Again only `rtems-test` related.

Author: Joel Sherrill 2021-12-17T20:35:44.000Z

- **Milestone** changed from %"6.1" to %"Indefinite"

Changing the milestone because this is hard to reproduce and could randomly go away with a different qemu version.

Author: Amar Takhar 2025-09-05T02:57:49.787Z

changed the description

Author: Chris Johns 2026-07-30T23:41:23.263Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:42:14.445Z

set status to **Done**

Author: Chris Johns 2026-07-30T23:42:15.690Z

The fix is project input from `/dev/null` to QEMU or it hangs.

1.8.1.31 4333 - rtl-allocator.c: Dereference null return value error spotted by Coverity

Id	4333
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2021-03-10T19:48:17.000Z
Closed	2026-07-30T23:39:03.959Z
Updated	2026-07-30T23:39:03.964Z
Milestone	6.3
Labels	old-indefinite, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4333
Merges	0

Original author: rlong

CID 1444139: Dereference null return value in rtems_rtl_alloc_hook().

```
1. returned_null: rtems_rtl_lock returns NULL (checked 23 out of 28 times). [show details]
2. var_assigned: Assigning: rtl = NULL return value from rtems_rtl_lock.
164  rtems_rtl_data*     rtl = rtems_rtl_lock ();
CID 1444139 (#1 of 1): Dereference null return value (NULL_RETURNS)3. dereference: Dereferencing rtl, which is known to be NULL.
165  rtems_rtl_allocator previous = rtl->allocator.allocator;
```

Author: Trac Migrate 2021-12-16T20:47:12.000Z

Original author: rlong

- **Milestone** changed from %"6.1" to %"Indefinite"

Author: Amar Takhar 2025-09-05T02:57:49.230Z

changed the description

Author: Chris Johns 2026-07-30T23:38:58.675Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:39:03.992Z

set status to **Done**

1.8.1.32 4332 - rtl-obj.c: Derefernce null return value error spotted by Coverity

Id	4332
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2021-03-10T19:45:42.000Z
Closed	2026-07-30T23:38:44.274Z
Updated	2026-07-30T23:38:44.279Z
Milestone	6.3
Labels	old-indefinite, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4332
Merges	0

Original author: rlong

CID 1444138: Derference null return value in rtems_rtl_obj_find_file().

```
4. returned_null: rtems_rtl_lock returns NULL (checked 23 out of 28 times). [hide details]
5. var_assigned: Assigning: rtl = NULL return value from rtems_rtl_lock.
410  rtl = rtems_rtl_lock ();
411
CID 1444138 (#1 of 1): Dereference null return value (NULL_RETURNS)6. dereference: Dereferencing rtl, which is known to be NULL.
412  if (!rtems_rtl_find_file (pname, rtl->paths, &obj->fname, &obj->fsize))
```

Author: Trac Migrate 2021-12-16T20:45:25.000Z

Original author: rlong

- **Milestone** changed from %”6.1” to %”Indefinite”

Author: Amar Takhar 2025-09-05T02:57:49.030Z

changed the description

Author: Chris Johns 2026-07-30T23:38:39.334Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:38:44.309Z

set status to **Done**

1.8.1.33 4327 - shell.c: Dereference after null check error spotted by Coverity

Id	4327
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2021-03-10T14:59:32.000Z
Closed	2026-07-30T23:38:19.535Z
Updated	2026-07-30T23:38:19.539Z
Milestone	6.3
Labels	library, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4327
Merges	0

Original author: rlong

CID 26083: Dereference after null check in rtems_shell_login().

```
791
CID 26083 (#1 of 1): Dereference after null check (FORWARD_NULL)3. var_deref_
↪model: Passing null pointer out to rtems_shell_login_prompt, which dereferences␣
↪it. [show details]
792  return rtems_shell_login_prompt(in, out, env->devname, env->login_check);
```

Author: Trac Migrate 2021-12-16T20:43:43.000Z

Original author: rlong

- **Milestone** changed from %"6.1" to %"Indefinite"

Author: Amar Takhar 2025-09-05T02:57:48.834Z

changed the description

Author: Chris Johns 2026-07-30T23:38:09.332Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:38:19.567Z

set status to **Done**

1.8.1.34 4292 - rtems-rfs-bitmaps.c: Useless call (CID 1399749)

Id	4292
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2021-03-03T21:04:09.000Z
Closed	2026-07-30T23:37:58.294Z
Updated	2026-07-30T23:37:58.359Z
Milestone	6.3
Labels	filesystem::rfs, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4292
Merges	0

Coverity Scan spotted this in rtems-rfs-bitmaps.c as CID 1399749). On the face of it, Scan appears to be correct but this issue should be reviewed by the original author of this code.

```
}
623     else
624     {
625       bits      = *map;
626       available = rtems_rfs_bitmap_element_bits ();
627     }
628
629     if (rtems_rfs_bitmap_match (bits, RTEMS_RFS_BITMAP_ELEMENT_SET))

CID 1399749 (#1 of 1): Useless call (USELESS_CALL)
side_effect_free: Calling rtems_rfs_bitmap_set(*search_map, bit) is only useful
↪for its return value, which is ignored. [show details]
630       rtems_rfs_bitmap_set (*search_map, bit);
631     else
632     {
```

Author: Joel Sherrill 2021-03-03T21:04:21.000Z

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Chris Johns 2024-05-16T23:08:01.788Z

changed the description

Author: Chris Johns 2024-05-16T23:08:05.781Z

Please create merge request.

Author: Gedare Bloom 2024-12-04T21:40:37.082Z

Author: Chris Johns 2025-10-02T22:39:56.306Z

added rtems#15 as parent epic

Author: Chris Johns 2026-07-30T23:37:58.332Z

set status to **Done**

1.8.1.35 4300 - rtl-shell.c: Resource leak error spotted by Coverity

Id	4300
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Chris Johns
Created	2021-03-04T17:06:29.000Z
Closed	2026-07-30T23:37:12.217Z
Updated	2026-07-30T23:37:12.278Z
Milestone	6.3
Labels	old-indefinite, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4300
Merges	0

Original author: rlong

CID 1444140: Resource leak in rtems_rtl_shell_object().

Author: Trac Migrate 2021-03-04T17:07:35.000Z

Original author: rlong

```
739     if (unresolved != 0)
740     {
741       rtems_printf (printer, "warning: unresolved symbols present\\n
↪");
CID 1444140 (#3 of 3): Resource leak (RESOURCE_LEAK)24. leaked_storage:␣
↪Variable handle going out of scope leaks the storage it points to.
742       return 1;
743     }
```

Author: Trac Migrate 2021-12-16T20:41:14.000Z

Original author: rlong

- **Milestone** changed from %"6.1" to %"Indefinite"

Author: Amar Takhar 2025-09-05T02:57:48.048Z

changed the description

Author: Chris Johns 2026-07-30T23:37:12.251Z

set status to **Done**

1.8.1.36 4296 - hexdump-parse.c: Resource leak error spotted by Coverity

Id	4296
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2021-03-04T15:51:02.000Z
Closed	2026-07-30T23:33:50.523Z
Updated	2026-07-30T23:33:50.528Z
Milestone	6.3
Labels	library, old-indefinite, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4296
Merges	0

Original author: rlong

CID 26032: Resource leak in rtems_shell_hexdump_rewrite().

```
457#ifdef DEBUG
458        for (fu = fs->nextfu; fu; fu = fu->nextfu) {
459                (void)printf("fmt:");
460                for (pr = fu->nextpr; pr; pr = pr->nextpr)
461                        (void)printf(" {%s}", pr->fmt);
462                (void)printf("\\n");
463        }
464#endif
CID 26032 (#2 of 2): Resource leak (RESOURCE_LEAK)57. leaked_storage: Variable␣
↪nextpr going out of scope leaks the storage it points to.
465}
```

Author: Trac Migrate 2021-12-16T17:13:06.000Z

Original author: rlong

- **Milestone** changed from %"6.1" to %"Indefinite"

I don't see that anything was done to fix this issue, but I also don't see it in the list of Resource leak issues in Coverity.

Author: Amar Takhar 2025-09-05T02:57:47.436Z

changed the description

Author: Chris Johns 2026-07-30T23:33:40.580Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:33:50.558Z

set status to **Done**

1.8.1.37 4208 - RSB: GMP not configured correctly in MSYS in newlib build step

Id	4208
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Chris Johns
Created	2021-01-01T14:34:30.000Z
Closed	2026-07-30T23:29:26.688Z
Updated	2026-07-30T23:29:26.693Z
Milestone	6.3
Labels	old-indefinite, priority::normal, tickettype::defect, version::6, version::7
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4208
Merges	0

Original author: rmueller

I had issues with a Cxc cross-compiled toolchain (ARM) on Windows so I tried to recompile it natively (there were some updates, GMP is built now).

However, there are issues building newlib related to GMP. The build is configured with the following options:

configure: summary of build options:

Version: GNU MP 6.1.0 Host type: none-w64-mingw32 ABI: standard Install prefix: /c/Users/Robin/Documents/RTEMS/rtems-tools/rtems/6 Compiler: x86_64-w64-mingw32-gcc -O2 -g -pipe -I/c/Users/Robin/Documents/RTEMS/rtems-tools/src/rsb/rtems/build/tmp/sb-197609/6a/c/Users/Robin/Documents/RTEMS/rtems-tools/rtems/6/include Static libraries: yes Shared libraries: no

And the build fails with the following error:

In file included from ../../../gnu-mirror-gcc-03e2d83/gmp/gmp-impl.h:146,

from fib_table.c:4:

../fib_table.h:4:1: warning: data definition has no type or storage class

4 | Error, error, this data is for 32 bits

^~~~~

../fib_table.h:4:1: warning: type defaults to ‘int’ in declaration of ‘Error’ [-Wimplicit-int]

I tried to compile GMP separately, using the following commands:

./configure –prefix=/c/Users/Robin/Documents/RTEMS/rtems-tools/rtems/6 –disable-shared –enable-static make make install

And this appeared to work.

configure: summary of build options:

Version: GNU MP 6.1.0 Host type: x86_64-w64-mingw32 ABI: 64 Install prefix: /c/Users/Robin/Documents/RTEMS/rtems-tools/rtems/6 Compiler: gcc Static libraries: yes Shared libraries: no

Maybe ABI is not set properly? Also, GMP was alreay (successfully) built so I am confused that it is built again as part of the newlib build with these settings.

I am also a bit confused that Host was set to none-w64-mingw32 because the sb program recognized that the systemis a x86_64 system as well (I printed out the value which is assigned to _build to test this in the sb program).

I attached the error report as well

Kind Regards Robin

Author: Trac Migrate 2021-01-01T14:39:18.000Z

Original author: rmueller

- **Summary** changed from *GMP not configured correctly in MSYS in newlib build step* to *RSB: GMP not configured correctly in MSYS in newlib build step*

Author: Trac Migrate 2021-01-01T14:41:37.000Z

Original author: rmueller

Could not attach file. Find it here: https://drive.google.com/file/d/1zKp7IWn9hW_5QvE92UA2oNz24TKs6uMc/view?usp=sharing

To reproduce the issue, run the following RSB set-builder command on Windows 10 on a x86_64 system:

../source-builder/sb-set-builder –prefix=$RTEMS_TOOLS 6/rtems-arm

Author: Trac Migrate 2022-05-17T05:41:02.000Z

Original author: rmueller

edit the Makefile.in in gcc source directory, change GMP configure line “–host=none-${host_vendor}-${host_os} –target=none-${host_vendor}-${host_os}” to “–host=${host_alias} –target=${host_alias}”, the build will be success.

Author: Chris Johns 2022-11-29T23:28:05.000Z

Original author: rmueller

- **Milestone** changed from %”6.1” to %”Indefinite”
- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*
- **Version** changed from ~”6” to ~”7”

Author: Amar Takhar 2025-09-05T02:57:46.420Z

changed the description

Author: Chris Johns 2026-07-30T23:29:18.242Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:29:26.724Z

set status to **Obsolete**

1.8.1.38 4199 - MSYS2: Building newlib appears to be stuck

Id	4199
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Chris Johns
Created	2020-12-03T17:05:20.000Z
Closed	2026-07-30T23:28:14.941Z
Updated	2026-07-30T23:28:15.004Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4199
Merges	0

Original author: rmueller

Just reporting this with the hope that I am not the only one with the issue when building the tool suite on Windows with MSYS2

I had another issues where the the building the tool suite failed when configuring expat. That issue went away (although I can’t reasonably explain why and how, maybe it was an update), but now the build process appears to be problematic somewhere else.

When building the newlib, the process appears to be stuck. This is the output from the command line:

downloading: sources/mpc-1.0.3.tar.gz - 654.2kB of 654.2kB (100%) download: https://ftp.gnu.org/gnu/gmp/gmp-6.1.0.tar.bz2 -> sources/gmp-6.1.0.tar.bz2 downloading: sources/gmp-6.1.0.tar.bz2 - 2.3MB of 2.3MB (100%) building: sparc-rtems5-gcc-7.5.0-newlib-7947581-x86_64-w64-mingw32-1

And this is the last output in the log file:

x86_64-w64-mingw32-g++ -O2 -g -pipe -I/c/Users/Robin/Documents/RTEMS/rtems-demo/toolchain/src/rsb/rtems/build/tmp/sb-197609/5s/c/Users/Robin/Documents/RTEMS/rtems-demo/toolchain/rtems/5/include -I../../gcc-7.5.0/libcpp -I. -I../../gcc-7.5.0/libcpp/../include -I../../gcc-7.5.0/libcpp/include -g -O2 -W -Wall -Wno-narrowing -Wwrite-strings -Wmissing-format-attribute -pedantic -Wno-long-long -fno-exceptions -fno-rtti -I../../gcc-7.5.0/libcpp -I. -I../../gcc-7.5.0/libcpp/../include -I../../gcc-7.5.0/libcpp/include -c -o init.o -MT init.o -MMD -MP -MF .deps/init.Tpo ../../gcc-7.5.0/libcpp/init.c

rm -f libcpp.a

ar cru libcpp.a charset.o directives.o directives-only.o errors.o expr.o files.o identifiers.o init.o lex.o line-map.o macro.o mkdeps.o pch.o symtab.o traditional.o

ranlib libcpp.a

make[2]: Leaving directory '/c/Users/Robin/Documents/RTEMS/rtems-demo/toolchain/src/rsb/rtems/build/srg7n7xwm1/build/libcpp'

Kind Regards Robin

Author: Trac Migrate 2020-12-03T17:07:13.000Z

Original author: rmueller

I built with the git clone of the RTEMS Source builder. This happens for master as well as branch RTEMS version 5. The build command for RTEMS5:

../source-builder/sb-set-builder –prefix=$RTEMS_INST 5/rtems-sparc

and for RTEMS6:

../source-builder/sb-set-builder –prefix=$RTEMS_INST 6/rtems-sparc

Author: Chris Johns 2025-09-19T01:41:58.754Z

changed the description

Author: Chris Johns 2026-07-30T23:28:14.977Z

set status to **Obsolete**

1.8.1.39 4183 - MinGW64 RSB build fails with encoding error

Id	4183
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Chris Johns
Created	2020-11-22T16:39:59.000Z
Closed	2026-07-30T23:24:29.779Z
Updated	2026-07-30T23:24:29.854Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4183
Merges	0

Original author: rmueller

Hi,

I followed the quick start guide to install the RSB ([https://docs.rtems.org/branches/master/user/start/tools.html]) and encountered following error:

```
$ ../source-builder/sb-set-builder --prefix=/c/Users/Robin/Documents/RTEMS/quick-start/rtems/5 5/rtems-sparc
RTEMS Source Builder - Set Builder, 5.1
Build Set: 5/rtems-sparc
Build Set: Time 0:00:00.009008
Traceback (most recent call last):
File "../source-builder/sb/cmd-set-builder.py", line 26, in <module>
setbuilder.run()
File "../source-builder/sb/setbuilder.py", line 736, in run
b.build(deps, mail = mail)
File "../source-builder/sb/setbuilder.py", line 452, in build
bs.build(deps, nesting_count, mail)
File "../source-builder/sb/setbuilder.py", line 390, in build
log.notice('Build Set: %s' % (self.bset))
File "../source-builder/sb/log.py", line 88, in notice
print(l)
LookupError: unknown encoding: cp65001
```

I solved this by typing in the command line:

```
export PYTHONIOENCODING=UTF-8
```

I just though I report this, maybe it helps other people who have the same issue or maybe this is a problem related to more recent python installations.

- python-quick-guide.patch

Author: Trac Migrate 2020-11-22T16:41:49.000Z

Original author: rmueller

- **Summary** changed from *MinGW64 RSM build fails* to *MinGW64 RSB build fails with encoding error*

Author: Trac Migrate 2020-12-02T10:53:34.000Z

Original author: rmueller

I submitted a patch which mentions this issue and how to fix it.

Author: Trac Migrate 2020-12-18T10:25:30.000Z

Original author: rmueller

- **Attachment** python-quick-guide.patch added

Author: Trac Migrate 2020-12-18T10:26:31.000Z

Original author: rmueller

- **Version** set to ~"6"

Author: Chris Johns 2025-09-19T01:41:58.240Z

changed the description

Author: Chris Johns 2026-07-30T23:24:29.818Z

set status to **Won't do**

1.8.1.40 4091 - tester: BlockingIOError: [Errno 11] write could not complete without blocking

Id	4091
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Chris Johns
Created	2020-09-23T07:54:16.000Z
Closed	2026-07-30T23:24:13.417Z
Updated	2026-07-30T23:24:13.475Z
Milestone	6.3
Labels	old-indefinite, priority::normal, tickettype::defect, tool, version::6, version::7
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4091
Merges	0

Original author: sebastian.huber

The RTEMS Tester seems to have an issue with tests that produce a lot of output. This seems to be a sporadic error which depends also on the system load. For example (BSP: arm/realview_pbx_a9_qemu):

```
[628/628] p:602 f:5   u:6   e:0   I:0   B:3   t:0   L:0   i:0   W:0   | arm/realview_pbx_a9_qemu: ts-validation-0.exe
Result: failed     Time: 0:00:02.515008 ts-validation-0.exe
=>  exe: qemu-system-arm -no-reboot -nographic -net none -M realview-pbx-a9 -m 256M -kernel build/arm/realview_pbx_a9_qemu/testsuites/validation/ts-validation-0.exe
]
]
=>  test start: Validation0
] *** BEGIN OF TEST Validation0 ***
] *** TEST VERSION: 6.0.0.2ac9a2de76966dc4501a5c098e265cd85a2d58b1
] *** TEST STATE: EXPECTED_PASS
] *** TEST BUILD: RTEMS_SMP
] *** TEST TOOLS: 10.2.1 20200918 (RTEMS 6, RSB 7595c3a42b388c26436f7a61d1c23f3cf437bb46, Newlib 749cbcc)
] A:Validation0
] S:Platform:RTEMS
] S:Compiler:10.2.1 20200918 (RTEMS 6, RSB 7595c3a42b388c26436f7a61d1c23f3cf437bb46, Newlib 749cbcc)
] S:Version:6.0.0.2ac9a2de76966dc4501a5c098e265cd85a2d58b1
] S:BSP:realview_pbx_a9_qemu
] S:RTEMS_DEBUG:0
] S:RTEMS_MULTIPROCESSING:0
] S:RTEMS_POSIX_API:0
] S:RTEMS_PROFILING:0
] S:RTEMS_SMP:1
] B:RtemsUserextValIdent
] P:0:0:RUN:tc-userext-ident.c:88
] P:1.0:0:RUN/Invalid/NullPtr:tr-object-ident-local.c:171
] P:1.1:0:RUN/Invalid/NullPtr:tr-object-ident-local.c:198
] P:1.2:0:RUN/Invalid/Valid:tr-object-ident-local.c:176
] P:1.3:0:RUN/Invalid/Valid:tr-object-ident-local.c:192
] P:1.4:0:RUN/Invalid/Valid:tr-object-ident-local.c:193
] P:1.5:0:RUN/Valid/NullPtr:tr-object-ident-local.c:171
] P:1.6:0:RUN/Valid/NullPtr:tr-object-ident-local.c:198
] P:1.7:0:RUN/Valid/Valid:tr-object-ident-local.c:166
] P:1.8:0:RUN/Valid/Valid:tr-object-ident-local.c:203
] P:1.9:0:RUN/Valid/Valid:tr-object-ident-local.c:204
] P:1:0:RUN:tc-userext-ident.c:96
] E:RtemsUserextValIdent:N:12:F:0:D:0.014274
] B:RtemsTimerValIdent
] P:0:0:RUN:tc-timer-ident.c:86
] P:1.0:0:RUN/Invalid/NullPtr:tr-object-ident-local.c:171
] P:1.1:0:RUN/Invalid/NullPtr:tr-object-ident-local.c:198
] P:1.2:0:RUN/Invalid/Valid:tr-object-ident-local.c:176
```

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] P:1.3:0:RUN/Invalid/Valid:tr-object-ident-local.c:192
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] P:1.6:0:RUN/Valid/NullPtr:tr-object-ident-local.c:198
] P:1.7:0:RUN/Valid/Valid:tr-object-ident-local.c:166
] P:1.8:0:RUN/Valid/Valid:tr-object-ident-local.c:203
] P:1.9:0:RUN/Valid/Valid:tr-object-ident-local.c:204
] P:1:0:RUN:tc-timer-ident.c:94
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] P:1:0:RUN/Self:tc-task-ident.c:170
] P:2:0:RUN/Self:tc-task-ident.c:171
] P:3:0:RUN/Self:tc-task-ident.c:172
] P:4.0:0:RUN/Generic/Invalid/Local/NullPtr:tr-object-ident.c:227
] P:4.1:0:RUN/Generic/Invalid/Local/NullPtr:tr-object-ident.c:259
] P:4.2:0:RUN/Generic/Invalid/Local/Valid:tr-object-ident.c:232
] P:4.3:0:RUN/Generic/Invalid/Local/Valid:tr-object-ident.c:253
] P:4.4:0:RUN/Generic/Invalid/Local/Valid:tr-object-ident.c:254
] P:4.5:0:RUN/Generic/Invalid/Remote/NullPtr:tr-object-ident.c:227
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] P:4.7:0:RUN/Generic/Invalid/Remote/Valid:tr-object-ident.c:232
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] P:4.23:0:RUN/Generic/Invalid/SearchOther/Valid:tr-object-ident.c:253
] P:4.24:0:RUN/Generic/Invalid/SearchOther/Valid:tr-object-ident.c:254
] P:4.25:0:RUN/Generic/Invalid/SearchLocal/NullPtr:tr-object-ident.c:227
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] P:4.27:0:RUN/Generic/Invalid/SearchLocal/Valid:tr-object-ident.c:232
] P:4.28:0:RUN/Generic/Invalid/SearchLocal/Valid:tr-object-ident.c:253
] P:4.29:0:RUN/Generic/Invalid/SearchLocal/Valid:tr-object-ident.c:254
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] P:4.34:0:RUN/Generic/Valid/Local/Valid:tr-object-ident.c:265
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```
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] P:55:0:RUN/Id/Valid/Valid/None/Small/Enough/Err/Yes:tc-task-construct-errors.
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] P:61:0:RUN/Id/Valid/Valid/None/Small/Small/Ok/No:tc-task-construct-errors.c:497
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```
] P:65:0:RUN/Id/Valid/Valid/None/Small/Small/Err/No:tc-task-construct-errors.c:497
] P:66:0:RUN/Id/Valid/Valid/None/Small/Small/Err/No:tc-task-construct-errors.c:498
] P:67:0:RUN/Id/Valid/Zero/Avail/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:485
] P:68:0:RUN/Id/Valid/Zero/Avail/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:486
] P:69:0:RUN/Id/Valid/Zero/Avail/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:485
] P:70:0:RUN/Id/Valid/Zero/Avail/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:486
] P:71:0:RUN/Id/Valid/Zero/Avail/Enough/Enough/Err/Yes:tc-task-construct-errors.
↪c:485
] P:72:0:RUN/Id/Valid/Zero/Avail/Enough/Enough/Err/Yes:tc-task-construct-errors.
↪c:486
] P:73:0:RUN/Id/Valid/Zero/Avail/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:485
] P:74:0:RUN/Id/Valid/Zero/Avail/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:486
] P:75:0:RUN/Id/Valid/Zero/Avail/Enough/Small/Ok/Yes:tc-task-construct-errors.
↪c:485
] P:76:0:RUN/Id/Valid/Zero/Avail/Enough/Small/Ok/Yes:tc-task-construct-errors.
↪c:486
] P:77:0:RUN/Id/Valid/Zero/Avail/Enough/Small/Ok/No:tc-task-construct-errors.c:485
] P:78:0:RUN/Id/Valid/Zero/Avail/Enough/Small/Ok/No:tc-task-construct-errors.c:486
] P:79:0:RUN/Id/Valid/Zero/Avail/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:485
] P:80:0:RUN/Id/Valid/Zero/Avail/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:486
] P:81:0:RUN/Id/Valid/Zero/Avail/Enough/Small/Err/No:tc-task-construct-errors.
↪c:485
] P:82:0:RUN/Id/Valid/Zero/Avail/Enough/Small/Err/No:tc-task-construct-errors.
↪c:486
] P:83:0:RUN/Id/Valid/Zero/Avail/Small/Enough/Ok/Yes:tc-task-construct-errors.
↪c:485
] P:84:0:RUN/Id/Valid/Zero/Avail/Small/Enough/Ok/Yes:tc-task-construct-errors.
↪c:486
] P:85:0:RUN/Id/Valid/Zero/Avail/Small/Enough/Ok/No:tc-task-construct-errors.c:485
] P:86:0:RUN/Id/Valid/Zero/Avail/Small/Enough/Ok/No:tc-task-construct-errors.c:486
] P:87:0:RUN/Id/Valid/Zero/Avail/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:485
] P:88:0:RUN/Id/Valid/Zero/Avail/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:486
] P:89:0:RUN/Id/Valid/Zero/Avail/Small/Enough/Err/No:tc-task-construct-errors.
↪c:485
] P:90:0:RUN/Id/Valid/Zero/Avail/Small/Enough/Err/No:tc-task-construct-errors.
↪c:486
] P:91:0:RUN/Id/Valid/Zero/Avail/Small/Small/Ok/Yes:tc-task-construct-errors.c:485
] P:92:0:RUN/Id/Valid/Zero/Avail/Small/Small/Ok/Yes:tc-task-construct-errors.c:486
] P:93:0:RUN/Id/Valid/Zero/Avail/Small/Small/Ok/No:tc-task-construct-errors.c:485
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] P:94:0:RUN/Id/Valid/Zero/Avail/Small/Small/Ok/No:tc-task-construct-errors.c:486
] P:95:0:RUN/Id/Valid/Zero/Avail/Small/Small/Err/Yes:tc-task-construct-errors.
↪c:485
] P:96:0:RUN/Id/Valid/Zero/Avail/Small/Small/Err/Yes:tc-task-construct-errors.
↪c:486
] P:97:0:RUN/Id/Valid/Zero/Avail/Small/Small/Err/No:tc-task-construct-errors.c:485
] P:98:0:RUN/Id/Valid/Zero/Avail/Small/Small/Err/No:tc-task-construct-errors.c:486
] P:99:0:RUN/Id/Valid/Zero/None/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:485
] P:100:0:RUN/Id/Valid/Zero/None/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:486
] P:101:0:RUN/Id/Valid/Zero/None/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:485
] P:102:0:RUN/Id/Valid/Zero/None/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:486
] P:103:0:RUN/Id/Valid/Zero/None/Enough/Enough/Err/Yes:tc-task-construct-errors.
↪c:485
] P:104:0:RUN/Id/Valid/Zero/None/Enough/Enough/Err/Yes:tc-task-construct-errors.
↪c:486
] P:105:0:RUN/Id/Valid/Zero/None/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:485
] P:106:0:RUN/Id/Valid/Zero/None/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:486
] P:107:0:RUN/Id/Valid/Zero/None/Enough/Small/Ok/Yes:tc-task-construct-errors.
↪c:485
] P:108:0:RUN/Id/Valid/Zero/None/Enough/Small/Ok/Yes:tc-task-construct-errors.
↪c:486
] P:109:0:RUN/Id/Valid/Zero/None/Enough/Small/Ok/No:tc-task-construct-errors.c:485
] P:110:0:RUN/Id/Valid/Zero/None/Enough/Small/Ok/No:tc-task-construct-errors.c:486
] P:111:0:RUN/Id/Valid/Zero/None/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:485
] P:112:0:RUN/Id/Valid/Zero/None/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:486
] P:113:0:RUN/Id/Valid/Zero/None/Enough/Small/Err/No:tc-task-construct-errors.
↪c:485
] P:114:0:RUN/Id/Valid/Zero/None/Enough/Small/Err/No:tc-task-construct-errors.
↪c:486
] P:115:0:RUN/Id/Valid/Zero/None/Small/Enough/Ok/Yes:tc-task-construct-errors.
↪c:485
] P:116:0:RUN/Id/Valid/Zero/None/Small/Enough/Ok/Yes:tc-task-construct-errors.
↪c:486
] P:117:0:RUN/Id/Valid/Zero/None/Small/Enough/Ok/No:tc-task-construct-errors.c:485
] P:118:0:RUN/Id/Valid/Zero/None/Small/Enough/Ok/No:tc-task-construct-errors.c:486
] P:119:0:RUN/Id/Valid/Zero/None/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:485
] P:120:0:RUN/Id/Valid/Zero/None/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:486
] P:121:0:RUN/Id/Valid/Zero/None/Small/Enough/Err/No:tc-task-construct-errors.
↪c:485
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] P:122:0:RUN/Id/Valid/Zero/None/Small/Enough/Err/No:tc-task-construct-errors.
↪c:486
] P:123:0:RUN/Id/Valid/Zero/None/Small/Small/Ok/Yes:tc-task-construct-errors.c:485
] P:124:0:RUN/Id/Valid/Zero/None/Small/Small/Ok/Yes:tc-task-construct-errors.c:486
] P:125:0:RUN/Id/Valid/Zero/None/Small/Small/Ok/No:tc-task-construct-errors.c:485
] P:126:0:RUN/Id/Valid/Zero/None/Small/Small/Ok/No:tc-task-construct-errors.c:486
] P:127:0:RUN/Id/Valid/Zero/None/Small/Small/Err/Yes:tc-task-construct-errors.
↪c:485
] P:128:0:RUN/Id/Valid/Zero/None/Small/Small/Err/Yes:tc-task-construct-errors.
↪c:486
] P:129:0:RUN/Id/Valid/Zero/None/Small/Small/Err/No:tc-task-construct-errors.c:485
] P:130:0:RUN/Id/Valid/Zero/None/Small/Small/Err/No:tc-task-construct-errors.c:486
] P:131:0:RUN/Id/Valid/Inv/Avail/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:485
] P:132:0:RUN/Id/Valid/Inv/Avail/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:486
] P:133:0:RUN/Id/Valid/Inv/Avail/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:485
] P:134:0:RUN/Id/Valid/Inv/Avail/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:486
] P:135:0:RUN/Id/Valid/Inv/Avail/Enough/Enough/Err/Yes:tc-task-construct-errors.
↪c:485
] P:136:0:RUN/Id/Valid/Inv/Avail/Enough/Enough/Err/Yes:tc-task-construct-errors.
↪c:486
] P:137:0:RUN/Id/Valid/Inv/Avail/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:485
] P:138:0:RUN/Id/Valid/Inv/Avail/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:486
] P:139:0:RUN/Id/Valid/Inv/Avail/Enough/Small/Ok/Yes:tc-task-construct-errors.
↪c:485
] P:140:0:RUN/Id/Valid/Inv/Avail/Enough/Small/Ok/Yes:tc-task-construct-errors.
↪c:486
] P:141:0:RUN/Id/Valid/Inv/Avail/Enough/Small/Ok/No:tc-task-construct-errors.c:485
] P:142:0:RUN/Id/Valid/Inv/Avail/Enough/Small/Ok/No:tc-task-construct-errors.c:486
] P:143:0:RUN/Id/Valid/Inv/Avail/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:485
] P:144:0:RUN/Id/Valid/Inv/Avail/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:486
] P:145:0:RUN/Id/Valid/Inv/Avail/Enough/Small/Err/No:tc-task-construct-errors.
↪c:485
] P:146:0:RUN/Id/Valid/Inv/Avail/Enough/Small/Err/No:tc-task-construct-errors.
↪c:486
] P:147:0:RUN/Id/Valid/Inv/Avail/Small/Enough/Ok/Yes:tc-task-construct-errors.
↪c:485
] P:148:0:RUN/Id/Valid/Inv/Avail/Small/Enough/Ok/Yes:tc-task-construct-errors.
↪c:486
] P:149:0:RUN/Id/Valid/Inv/Avail/Small/Enough/Ok/No:tc-task-construct-errors.c:485
] P:150:0:RUN/Id/Valid/Inv/Avail/Small/Enough/Ok/No:tc-task-construct-errors.c:486
] P:151:0:RUN/Id/Valid/Inv/Avail/Small/Enough/Err/Yes:tc-task-construct-errors.
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↪c:485
] P:152:0:RUN/Id/Valid/Inv/Avail/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:486
] P:153:0:RUN/Id/Valid/Inv/Avail/Small/Enough/Err/No:tc-task-construct-errors.
↪c:485
] P:154:0:RUN/Id/Valid/Inv/Avail/Small/Enough/Err/No:tc-task-construct-errors.
↪c:486
] P:155:0:RUN/Id/Valid/Inv/Avail/Small/Small/Ok/Yes:tc-task-construct-errors.c:485
] P:156:0:RUN/Id/Valid/Inv/Avail/Small/Small/Ok/Yes:tc-task-construct-errors.c:486
] P:157:0:RUN/Id/Valid/Inv/Avail/Small/Small/Ok/No:tc-task-construct-errors.c:485
] P:158:0:RUN/Id/Valid/Inv/Avail/Small/Small/Ok/No:tc-task-construct-errors.c:486
] P:159:0:RUN/Id/Valid/Inv/Avail/Small/Small/Err/Yes:tc-task-construct-errors.
↪c:485
] P:160:0:RUN/Id/Valid/Inv/Avail/Small/Small/Err/Yes:tc-task-construct-errors.
↪c:486
] P:161:0:RUN/Id/Valid/Inv/Avail/Small/Small/Err/No:tc-task-construct-errors.c:485
] P:162:0:RUN/Id/Valid/Inv/Avail/Small/Small/Err/No:tc-task-construct-errors.c:486
] P:163:0:RUN/Id/Valid/Inv/None/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:485
] P:164:0:RUN/Id/Valid/Inv/None/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:486
] P:165:0:RUN/Id/Valid/Inv/None/Enough/Enough/Ok/No:tc-task-construct-errors.c:485
] P:166:0:RUN/Id/Valid/Inv/None/Enough/Enough/Ok/No:tc-task-construct-errors.c:486
] P:167:0:RUN/Id/Valid/Inv/None/Enough/Enough/Err/Yes:tc-task-construct-errors.
↪c:485
] P:168:0:RUN/Id/Valid/Inv/None/Enough/Enough/Err/Yes:tc-task-construct-errors.
↪c:486
] P:169:0:RUN/Id/Valid/Inv/None/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:485
] P:170:0:RUN/Id/Valid/Inv/None/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:486
] P:171:0:RUN/Id/Valid/Inv/None/Enough/Small/Ok/Yes:tc-task-construct-errors.c:485
] P:172:0:RUN/Id/Valid/Inv/None/Enough/Small/Ok/Yes:tc-task-construct-errors.c:486
] P:173:0:RUN/Id/Valid/Inv/None/Enough/Small/Ok/No:tc-task-construct-errors.c:485
] P:174:0:RUN/Id/Valid/Inv/None/Enough/Small/Ok/No:tc-task-construct-errors.c:486
] P:175:0:RUN/Id/Valid/Inv/None/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:485
] P:176:0:RUN/Id/Valid/Inv/None/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:486
] P:177:0:RUN/Id/Valid/Inv/None/Enough/Small/Err/No:tc-task-construct-errors.c:485
] P:178:0:RUN/Id/Valid/Inv/None/Enough/Small/Err/No:tc-task-construct-errors.c:486
] P:179:0:RUN/Id/Valid/Inv/None/Small/Enough/Ok/Yes:tc-task-construct-errors.c:485
] P:180:0:RUN/Id/Valid/Inv/None/Small/Enough/Ok/Yes:tc-task-construct-errors.c:486
] P:181:0:RUN/Id/Valid/Inv/None/Small/Enough/Ok/No:tc-task-construct-errors.c:485
] P:182:0:RUN/Id/Valid/Inv/None/Small/Enough/Ok/No:tc-task-construct-errors.c:486
] P:183:0:RUN/Id/Valid/Inv/None/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:485
] P:184:0:RUN/Id/Valid/Inv/None/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:486
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] P:185:0:RUN/Id/Valid/Inv/None/Small/Enough/Err/No:tc-task-construct-errors.c:485
] P:186:0:RUN/Id/Valid/Inv/None/Small/Enough/Err/No:tc-task-construct-errors.c:486
] P:187:0:RUN/Id/Valid/Inv/None/Small/Small/Ok/Yes:tc-task-construct-errors.c:485
] P:188:0:RUN/Id/Valid/Inv/None/Small/Small/Ok/Yes:tc-task-construct-errors.c:486
] P:189:0:RUN/Id/Valid/Inv/None/Small/Small/Ok/No:tc-task-construct-errors.c:485
] P:190:0:RUN/Id/Valid/Inv/None/Small/Small/Ok/No:tc-task-construct-errors.c:486
] P:191:0:RUN/Id/Valid/Inv/None/Small/Small/Err/Yes:tc-task-construct-errors.c:485
] P:192:0:RUN/Id/Valid/Inv/None/Small/Small/Err/Yes:tc-task-construct-errors.c:486
] P:193:0:RUN/Id/Valid/Inv/None/Small/Small/Err/No:tc-task-construct-errors.c:485
] P:194:0:RUN/Id/Valid/Inv/None/Small/Small/Err/No:tc-task-construct-errors.c:486
] P:195:0:RUN/Id/Inv/Valid/Avail/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:479
] P:196:0:RUN/Id/Inv/Valid/Avail/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:480
] P:197:0:RUN/Id/Inv/Valid/Avail/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:479
] P:198:0:RUN/Id/Inv/Valid/Avail/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:480
] P:199:0:RUN/Id/Inv/Valid/Avail/Enough/Enough/Err/Yes:tc-task-construct-errors.
↪c:479
] P:200:0:RUN/Id/Inv/Valid/Avail/Enough/Enough/Err/Yes:tc-task-construct-errors.
↪c:480
] P:201:0:RUN/Id/Inv/Valid/Avail/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:479
] P:202:0:RUN/Id/Inv/Valid/Avail/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:480
] P:203:0:RUN/Id/Inv/Valid/Avail/Enough/Small/Ok/Yes:tc-task-construct-errors.
↪c:479
] P:204:0:RUN/Id/Inv/Valid/Avail/Enough/Small/Ok/Yes:tc-task-construct-errors.
↪c:480
] P:205:0:RUN/Id/Inv/Valid/Avail/Enough/Small/Ok/No:tc-task-construct-errors.c:479
] P:206:0:RUN/Id/Inv/Valid/Avail/Enough/Small/Ok/No:tc-task-construct-errors.c:480
] P:207:0:RUN/Id/Inv/Valid/Avail/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:479
] P:208:0:RUN/Id/Inv/Valid/Avail/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:480
] P:209:0:RUN/Id/Inv/Valid/Avail/Enough/Small/Err/No:tc-task-construct-errors.
↪c:479
] P:210:0:RUN/Id/Inv/Valid/Avail/Enough/Small/Err/No:tc-task-construct-errors.
↪c:480
] P:211:0:RUN/Id/Inv/Valid/Avail/Small/Enough/Ok/Yes:tc-task-construct-errors.
↪c:479
] P:212:0:RUN/Id/Inv/Valid/Avail/Small/Enough/Ok/Yes:tc-task-construct-errors.
↪c:480
] P:213:0:RUN/Id/Inv/Valid/Avail/Small/Enough/Ok/No:tc-task-construct-errors.c:479
] P:214:0:RUN/Id/Inv/Valid/Avail/Small/Enough/Ok/No:tc-task-construct-errors.c:480
] P:215:0:RUN/Id/Inv/Valid/Avail/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:479
] P:216:0:RUN/Id/Inv/Valid/Avail/Small/Enough/Err/Yes:tc-task-construct-errors.
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```
↪c:480
] P:217:0:RUN/Id/Inv/Valid/Avail/Small/Enough/Err/No:tc-task-construct-errors.
↪c:479
] P:218:0:RUN/Id/Inv/Valid/Avail/Small/Enough/Err/No:tc-task-construct-errors.
↪c:480
] P:219:0:RUN/Id/Inv/Valid/Avail/Small/Small/Ok/Yes:tc-task-construct-errors.c:479
] P:220:0:RUN/Id/Inv/Valid/Avail/Small/Small/Ok/Yes:tc-task-construct-errors.c:480
] P:221:0:RUN/Id/Inv/Valid/Avail/Small/Small/Ok/No:tc-task-construct-errors.c:479
] P:222:0:RUN/Id/Inv/Valid/Avail/Small/Small/Ok/No:tc-task-construct-errors.c:480
] P:223:0:RUN/Id/Inv/Valid/Avail/Small/Small/Err/Yes:tc-task-construct-errors.
↪c:479
] P:224:0:RUN/Id/Inv/Valid/Avail/Small/Small/Err/Yes:tc-task-construct-errors.
↪c:480
] P:225:0:RUN/Id/Inv/Valid/Avail/Small/Small/Err/No:tc-task-construct-errors.c:479
] P:226:0:RUN/Id/Inv/Valid/Avail/Small/Small/Err/No:tc-task-construct-errors.c:480
] P:227:0:RUN/Id/Inv/Valid/None/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:479
] P:228:0:RUN/Id/Inv/Valid/None/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:480
] P:229:0:RUN/Id/Inv/Valid/None/Enough/Enough/Ok/No:tc-task-construct-errors.c:479
] P:230:0:RUN/Id/Inv/Valid/None/Enough/Enough/Ok/No:tc-task-construct-errors.c:480
] P:231:0:RUN/Id/Inv/Valid/None/Enough/Enough/Err/Yes:tc-task-construct-errors.
↪c:479
] P:232:0:RUN/Id/Inv/Valid/None/Enough/Enough/Err/Yes:tc-task-construct-errors.
↪c:480
] P:233:0:RUN/Id/Inv/Valid/None/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:479
] P:234:0:RUN/Id/Inv/Valid/None/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:480
] P:235:0:RUN/Id/Inv/Valid/None/Enough/Small/Ok/Yes:tc-task-construct-errors.c:479
] P:236:0:RUN/Id/Inv/Valid/None/Enough/Small/Ok/Yes:tc-task-construct-errors.c:480
] P:237:0:RUN/Id/Inv/Valid/None/Enough/Small/Ok/No:tc-task-construct-errors.c:479
] P:238:0:RUN/Id/Inv/Valid/None/Enough/Small/Ok/No:tc-task-construct-errors.c:480
] P:239:0:RUN/Id/Inv/Valid/None/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:479
] P:240:0:RUN/Id/Inv/Valid/None/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:480
] P:241:0:RUN/Id/Inv/Valid/None/Enough/Small/Err/No:tc-task-construct-errors.c:479
] P:242:0:RUN/Id/Inv/Valid/None/Enough/Small/Err/No:tc-task-construct-errors.c:480
] P:243:0:RUN/Id/Inv/Valid/None/Small/Enough/Ok/Yes:tc-task-construct-errors.c:479
] P:244:0:RUN/Id/Inv/Valid/None/Small/Enough/Ok/Yes:tc-task-construct-errors.c:480
] P:245:0:RUN/Id/Inv/Valid/None/Small/Enough/Ok/No:tc-task-construct-errors.c:479
] P:246:0:RUN/Id/Inv/Valid/None/Small/Enough/Ok/No:tc-task-construct-errors.c:480
] P:247:0:RUN/Id/Inv/Valid/None/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:479
] P:248:0:RUN/Id/Inv/Valid/None/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:480
] P:249:0:RUN/Id/Inv/Valid/None/Small/Enough/Err/No:tc-task-construct-errors.c:479
] P:250:0:RUN/Id/Inv/Valid/None/Small/Enough/Err/No:tc-task-construct-errors.c:480
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```
] P:251:0:RUN/Id/Inv/Valid/None/Small/Small/Ok/Yes:tc-task-construct-errors.c:479
] P:252:0:RUN/Id/Inv/Valid/None/Small/Small/Ok/Yes:tc-task-construct-errors.c:480
] P:253:0:RUN/Id/Inv/Valid/None/Small/Small/Ok/No:tc-task-construct-errors.c:479
] P:254:0:RUN/Id/Inv/Valid/None/Small/Small/Ok/No:tc-task-construct-errors.c:480
] P:255:0:RUN/Id/Inv/Valid/None/Small/Small/Err/Yes:tc-task-construct-errors.c:479
] P:256:0:RUN/Id/Inv/Valid/None/Small/Small/Err/Yes:tc-task-construct-errors.c:480
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↪c:480
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↪c:480
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↪c:479
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↪c:480
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↪c:480
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↪c:480
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] P:289:0:RUN/Id/Inv/Zero/Avail/Small/Small/Err/No:tc-task-construct-errors.c:479
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↪c:479
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↪c:480
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] P:319:0:RUN/Id/Inv/Zero/None/Small/Small/Err/Yes:tc-task-construct-errors.c:479
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↪c:479
] P:328:0:RUN/Id/Inv/Inv/Avail/Enough/Enough/Err/Yes:tc-task-construct-errors.
↪c:480
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] P:334:0:RUN/Id/Inv/Inv/Avail/Enough/Small/Ok/No:tc-task-construct-errors.c:480
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] P:384:0:RUN/Id/Inv/Inv/None/Small/Small/Err/Yes:tc-task-construct-errors.c:480
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] P:388:0:RUN/Null/Valid/Valid/Avail/Enough/Enough/Ok/Yes:tc-task-construct-
↪errors.c:473
] P:389:0:RUN/Null/Valid/Valid/Avail/Enough/Enough/Ok/Yes:tc-task-construct-
↪errors.c:474
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↪c:472
] P:391:0:RUN/Null/Valid/Valid/Avail/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:473
] P:392:0:RUN/Null/Valid/Valid/Avail/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:474
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↪errors.c:473
] P:395:0:RUN/Null/Valid/Valid/Avail/Enough/Enough/Err/Yes:tc-task-construct-
↪errors.c:474
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↪errors.c:472
] P:397:0:RUN/Null/Valid/Valid/Avail/Enough/Enough/Err/No:tc-task-construct-
↪errors.c:473
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↪c:472
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↪c:473
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↪c:474
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↪c:472
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↪c:473
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↪c:474
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↪errors.c:474
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↪c:472
] P:409:0:RUN/Null/Valid/Valid/Avail/Enough/Small/Err/No:tc-task-construct-errors.
↪c:473
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↪c:474
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↪c:472
] P:415:0:RUN/Null/Valid/Valid/Avail/Small/Enough/Ok/No:tc-task-construct-errors.
↪c:473
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↪c:474
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] P:418:0:RUN/Null/Valid/Valid/Avail/Small/Enough/Err/Yes:tc-task-construct-
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↪errors.c:474
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↪c:472
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↪c:473
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↪c:474
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↪c:472
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↪c:473
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↪c:474
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↪c:472
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↪c:473
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↪c:474
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↪c:472
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↪c:473
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↪c:474
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↪c:472
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↪c:473
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↪c:473
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↪c:474
] P:438:0:RUN/Null/Valid/Valid/None/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:472
] P:439:0:RUN/Null/Valid/Valid/None/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:473
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↪c:474
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↪errors.c:474
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↪c:472
] P:445:0:RUN/Null/Valid/Valid/None/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:473
] P:446:0:RUN/Null/Valid/Valid/None/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:474
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↪c:473
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↪c:474
] P:450:0:RUN/Null/Valid/Valid/None/Enough/Small/Ok/No:tc-task-construct-errors.
↪c:472
] P:451:0:RUN/Null/Valid/Valid/None/Enough/Small/Ok/No:tc-task-construct-errors.
↪c:473
] P:452:0:RUN/Null/Valid/Valid/None/Enough/Small/Ok/No:tc-task-construct-errors.
↪c:474
] P:453:0:RUN/Null/Valid/Valid/None/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:472
] P:454:0:RUN/Null/Valid/Valid/None/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:473
] P:455:0:RUN/Null/Valid/Valid/None/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:474
] P:456:0:RUN/Null/Valid/Valid/None/Enough/Small/Err/No:tc-task-construct-errors.
↪c:472
] P:457:0:RUN/Null/Valid/Valid/None/Enough/Small/Err/No:tc-task-construct-errors.
↪c:473
] P:458:0:RUN/Null/Valid/Valid/None/Enough/Small/Err/No:tc-task-construct-errors.
↪c:474
] P:459:0:RUN/Null/Valid/Valid/None/Small/Enough/Ok/Yes:tc-task-construct-errors.
```

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```
↪c:472
] P:460:0:RUN/Null/Valid/Valid/None/Small/Enough/Ok/Yes:tc-task-construct-errors.
↪c:473
] P:461:0:RUN/Null/Valid/Valid/None/Small/Enough/Ok/Yes:tc-task-construct-errors.
↪c:474
] P:462:0:RUN/Null/Valid/Valid/None/Small/Enough/Ok/No:tc-task-construct-errors.
↪c:472
] P:463:0:RUN/Null/Valid/Valid/None/Small/Enough/Ok/No:tc-task-construct-errors.
↪c:473
] P:464:0:RUN/Null/Valid/Valid/None/Small/Enough/Ok/No:tc-task-construct-errors.
↪c:474
] P:465:0:RUN/Null/Valid/Valid/None/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:472
] P:466:0:RUN/Null/Valid/Valid/None/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:473
] P:467:0:RUN/Null/Valid/Valid/None/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:474
] P:468:0:RUN/Null/Valid/Valid/None/Small/Enough/Err/No:tc-task-construct-errors.
↪c:472
] P:469:0:RUN/Null/Valid/Valid/None/Small/Enough/Err/No:tc-task-construct-errors.
↪c:473
] P:470:0:RUN/Null/Valid/Valid/None/Small/Enough/Err/No:tc-task-construct-errors.
↪c:474
] P:471:0:RUN/Null/Valid/Valid/None/Small/Small/Ok/Yes:tc-task-construct-errors.
↪c:472
] P:472:0:RUN/Null/Valid/Valid/None/Small/Small/Ok/Yes:tc-task-construct-errors.
↪c:473
] P:473:0:RUN/Null/Valid/Valid/None/Small/Small/Ok/Yes:tc-task-construct-errors.
↪c:474
] P:474:0:RUN/Null/Valid/Valid/None/Small/Small/Ok/No:tc-task-construct-errors.
↪c:472
] P:475:0:RUN/Null/Valid/Valid/None/Small/Small/Ok/No:tc-task-construct-errors.
↪c:473
] P:476:0:RUN/Null/Valid/Valid/None/Small/Small/Ok/No:tc-task-construct-errors.
↪c:474
] P:477:0:RUN/Null/Valid/Valid/None/Small/Small/Err/Yes:tc-task-construct-errors.
↪c:472
] P:478:0:RUN/Null/Valid/Valid/None/Small/Small/Err/Yes:tc-task-construct-errors.
↪c:473
] P:479:0:RUN/Null/Valid/Valid/None/Small/Small/Err/Yes:tc-task-construct-errors.
↪c:474
] P:480:0:RUN/Null/Valid/Valid/None/Small/Small/Err/No:tc-task-construct-errors.
↪c:472
] P:481:0:RUN/Null/Valid/Valid/None/Small/Small/Err/No:tc-task-construct-errors.
↪c:473
] P:482:0:RUN/Null/Valid/Valid/None/Small/Small/Err/No:tc-task-construct-errors.
↪c:474
] P:483:0:RUN/Null/Valid/Zero/Avail/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:472
```

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```
] P:484:0:RUN/Null/Valid/Zero/Avail/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:473
] P:485:0:RUN/Null/Valid/Zero/Avail/Enough/Enough/Ok/Yes:tc-task-construct-errors.
↪c:474
] P:486:0:RUN/Null/Valid/Zero/Avail/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:472
] P:487:0:RUN/Null/Valid/Zero/Avail/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:473
] P:488:0:RUN/Null/Valid/Zero/Avail/Enough/Enough/Ok/No:tc-task-construct-errors.
↪c:474
] P:489:0:RUN/Null/Valid/Zero/Avail/Enough/Enough/Err/Yes:tc-task-construct-
↪errors.c:472
] P:490:0:RUN/Null/Valid/Zero/Avail/Enough/Enough/Err/Yes:tc-task-construct-
↪errors.c:473
] P:491:0:RUN/Null/Valid/Zero/Avail/Enough/Enough/Err/Yes:tc-task-construct-
↪errors.c:474
] P:492:0:RUN/Null/Valid/Zero/Avail/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:472
] P:493:0:RUN/Null/Valid/Zero/Avail/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:473
] P:494:0:RUN/Null/Valid/Zero/Avail/Enough/Enough/Err/No:tc-task-construct-errors.
↪c:474
] P:495:0:RUN/Null/Valid/Zero/Avail/Enough/Small/Ok/Yes:tc-task-construct-errors.
↪c:472
] P:496:0:RUN/Null/Valid/Zero/Avail/Enough/Small/Ok/Yes:tc-task-construct-errors.
↪c:473
] P:497:0:RUN/Null/Valid/Zero/Avail/Enough/Small/Ok/Yes:tc-task-construct-errors.
↪c:474
] P:498:0:RUN/Null/Valid/Zero/Avail/Enough/Small/Ok/No:tc-task-construct-errors.
↪c:472
] P:499:0:RUN/Null/Valid/Zero/Avail/Enough/Small/Ok/No:tc-task-construct-errors.
↪c:473
] P:500:0:RUN/Null/Valid/Zero/Avail/Enough/Small/Ok/No:tc-task-construct-errors.
↪c:474
] P:501:0:RUN/Null/Valid/Zero/Avail/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:472
] P:502:0:RUN/Null/Valid/Zero/Avail/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:473
] P:503:0:RUN/Null/Valid/Zero/Avail/Enough/Small/Err/Yes:tc-task-construct-errors.
↪c:474
] P:504:0:RUN/Null/Valid/Zero/Avail/Enough/Small/Err/No:tc-task-construct-errors.
↪c:472
] P:505:0:RUN/Null/Valid/Zero/Avail/Enough/Small/Err/No:tc-task-construct-errors.
↪c:473
] P:506:0:RUN/Null/Valid/Zero/Avail/Enough/Small/Err/No:tc-task-construct-errors.
↪c:474
] P:507:0:RUN/Null/Valid/Zero/Avail/Small/Enough/Ok/Yes:tc-task-construct-errors.
↪c:472
] P:508:0:RUN/Null/Valid/Zero/Avail/Small/Enough/Ok/Yes:tc-task-construct-errors.
```

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```
↪c:473
] P:509:0:RUN/Null/Valid/Zero/Avail/Small/Enough/Ok/Yes:tc-task-construct-errors.
↪c:474
] P:510:0:RUN/Null/Valid/Zero/Avail/Small/Enough/Ok/No:tc-task-construct-errors.
↪c:472
] P:511:0:RUN/Null/Valid/Zero/Avail/Small/Enough/Ok/No:tc-task-construct-errors.
↪c:473
] P:512:0:RUN/Null/Valid/Zero/Avail/Small/Enough/Ok/No:tc-task-construct-errors.
↪c:474
] P:513:0:RUN/Null/Valid/Zero/Avail/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:472
] P:514:0:RUN/Null/Valid/Zero/Avail/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:473
] P:515:0:RUN/Null/Valid/Zero/Avail/Small/Enough/Err/Yes:tc-task-construct-errors.
↪c:474
] P:516:0:RUN/Null/Valid/Zero/Avail/Small/Enough/Err/No:tc-task-construct-errors.
↪c:472
] P:517:0:RUN/Null/Valid/Zero/Avail/Small/Enough/Err/No:tc-task-coTraceback (most␣
↪recent call last):
File "/build/rtems/6/share/rtems/tester/rt/cmd-test.py", line 42, in <module>
test.run(sys.argv[1:], command_path = base)
File "/build/rtems/6/share/rtems/tester/rt/test.py", line 498, in run
job_trace)
File "/build/rtems/6/share/rtems/tester/rt/test.py", line 195, in report_finished
reports.log(tst.executable, log_mode)
File "/build/rtems/6/share/rtems/tester/rt/report.py", line 281, in log
log.output(output)
File "/build/rtems/6/share/rtems/rtemstoolkit/log.py", line 112, in output
_output(text, log)
File "/build/rtems/6/share/rtems/rtemstoolkit/log.py", line 93, in _output
default.output(text)
File "/build/rtems/6/share/rtems/rtemstoolkit/log.py", line 193, in output
self.fhs[f].write(out)
BlockingIOError: [Errno 11] write could not complete without blocking
```

Author: Chris Johns 2020-09-24T00:45:28.000Z

Original author: sebastian.huber

Is `ts-validation-0.exe` available on `master`?

Author: Trac Migrate 2020-09-24T04:41:12.000Z

Original author: sebastian.huber

Yes, it is available on the master, however, with a bit less output. You can increase the output with:

```
diff --git a/testsuites/validation/ts-validation-0.c b/testsuites/
↪validation/ts-validation-0.c
index 3e60fb6ab8..5c10ca6d71 100644
--- a/testsuites/validation/ts-validation-0.c
+++ b/testsuites/validation/ts-validation-0.c
@@ -102,7 +102,9 @@ static void runner_task( rtems_task_argument arg )

rtems_test_begin( rtems_test_name, TEST_STATE );
T_register();
+  for (int i = 0; i < 100; ++i) {
exit_code = T_main( &test_config );
+  }

if ( exit_code == 0 ) {
rtems_test_end( rtems_test_name );
```

It is a sporadic error. I can't reproduce it reliably, but I observed this BlockingIOError error on several machines.

Author: Chris Johns 2020-09-24T05:45:53.000Z

Original author: sebastian.huber

Thanks. Which host OS?

Author: Trac Migrate 2020-09-24T08:23:48.000Z

Original author: sebastian.huber

Yes, on Linux (OpenSUSE).

I found this:

https://github.com/travis-ci/travis-ci/issues/8920

They suggest to add something like this:

```
python -c "import fcntl; fcntl.fcntl(1, fcntl.F_SETFL, 0)"
```

Author: Trac Migrate 2020-09-24T09:16:28.000Z

Original author: sebastian.huber

I added some debug output to log.py. Someone sets f = 0 which is fhs = <_io.TextIOWrapper name='<stdout>' mode='w' encoding='UTF-8'> to non-blocking. In log.__init__ stdout is set to blocking.

Author: Trac Migrate 2020-09-24T12:47:16.000Z

Original author: sebastian.huber

It is a bit weird. The stdout suddenly changes to non-blocking.

```
diff --git a/rtemstoolkit/log.py b/rtemstoolkit/log.py
index 00fdb05..65d487e 100755
--- a/rtemstoolkit/log.py
+++ b/rtemstoolkit/log.py
@@ -37,6 +37,7 @@ from __future__ import print_function
import os
import sys
import threading
+import fcntl

from rtemstoolkit import error

@@ -135,6 +136,19 @@ def flush(log = None):
elif default is not None:
default.flush()

+def get_status(fileno):
+    fl = fcntl.fcntl(fileno, fcntl.F_GETFL)
+    if (fl & os.O_NONBLOCK) == os.O_NONBLOCK:
+        print(fileno, "nonblocking")
+    else:
+        print(fileno, "blocking")
+
+def check(fd, ctx):
+    print("check", ctx, fd)
+    fl = fcntl.fcntl(fd.fileno(), fcntl.F_GETFL)
+    if (fl & os.O_NONBLOCK) == os.O_NONBLOCK:
+        raise IOError
+
class log:
"""Log output to stdout or a file."""
def __init__(self, streams = None, tail_size = 100):
@@ -145,12 +159,20 @@ class log:
if streams:
for s in streams:
if s == 'stdout':
+                    get_status(sys.stdout.fileno())
self.fhs[0] = sys.stdout
+                    fcntl.fcntl(self.fhs[0], fcntl.F_SETFL, 0)
+                    check(self.fhs[0], "init stdout")
elif s == 'stderr':
+                    get_status(sys.stderr.fileno())
self.fhs[1] = sys.stderr
+                    fcntl.fcntl(self.fhs[1], fcntl.F_SETFL, 0)
+                    check(self.fhs[1], "init stderr")
else:
try:
self.fhs.append(open(s, 'w'))
+                        fcntl.fcntl(self.fhs[-1], fcntl.F_SETFL, 0)
```

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```
+                        check(self.fhs[-1], "init file")
except IOError as ioe:
raise error.general("creating log file '" + s + \\
"': " + str(ioe))
@@ -173,9 +195,11 @@ class log:
self.tail = self.tail[-self.tail_size:]

def has_stdout(self):
+        check(self.fhs[0], "has_stdout")
return self.fhs[0] is not None

def has_stderr(self):
+        check(self.fhs[1], "has_stderr")
return self.fhs[1] is not None

def output(self, text):
@@ -190,7 +214,13 @@ class log:
try:
for f in range(0, len(self.fhs)):
if self.fhs[f] is not None:
-                    self.fhs[f].write(out)
+                    check(self.fhs[f], "output")
+                    try:
+                        self.fhs[f].write(out)
+                    except BlockingIOError:
+                        print("f =", f, "fhs =", self.fhs[f])
+                        get_status(self.fhs[f].fileno())
+                        raise
self.flush()
except:
raise
@@ -201,6 +231,7 @@ class log:
"""Flush the output."""
for f in range(0, len(self.fhs)):
if self.fhs[f] is not None:
+                check(self.fhs[f], "flush")
self.fhs[f].flush()

if __name__ == "__main__":
```

With this patch I get this output:

```
rtems-test --rtems-bsp=realview_pbx_a9_qemu build/arm/realview_pbx_a9_
↪qemu
1 blocking
check init stdout <_io.TextIOWrapper name='<stdout>' mode='w' encoding=
↪'UTF-8'>
check has_stdout <_io.TextIOWrapper name='<stdout>' mode='w' encoding=
↪'UTF-8'>
```

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```
check output <_io.TextIOWrapper name='<stdout>' mode='w' encoding='UTF-8
↪'>
RTEMS Testing - Tester, 6.0.not_released
check flush <_io.TextIOWrapper name='<stdout>' mode='w' encoding='UTF-8
↪'>
check output <_io.TextIOWrapper name='<stdout>' mode='w' encoding='UTF-8
↪'>
Command Line: /build/rtems/6/bin/rtems-test --rtems-bsp=realview_pbx_a9_
↪qemu build/arm/realview_pbx_a9_qemu
Host: Linux huber-nb-linux.suse 4.12.14-lp151.28.59-default #1 SMP Wed␣
↪Aug 5 10:58:34 UTC 2020 (337e42e) x86_64
Python: 3.6.10 (default, Jan 16 2020, 09:12:04) [GCC]
check flush <_io.TextIOWrapper name='<stdout>' mode='w' encoding='UTF-8
↪'>
check output <_io.TextIOWrapper name='<stdout>' mode='w' encoding='UTF-8
↪'>
Host: Linux-4.12.14-lp151.28.59-default-x86_64-with-glibc2.3.4 (Linux␣
↪huber-nb-linux.suse 4.12.14-lp151.28.59-default #1 SMP Wed Aug 5␣
↪10:58:34 UTC 2020 (337e42e) x86_64 x86_64)
check flush <_io.TextIOWrapper name='<stdout>' mode='w' encoding='UTF-8
↪'>
check has_stdout <_io.TextIOWrapper name='<stdout>' mode='w' encoding=
↪'UTF-8'>
check has_stdout <_io.TextIOWrapper name='<stdout>' mode='w' encoding=
↪'UTF-8'>
[  2/598] p:0   f:0   u:0   e:0   I:0   B:0   t:0   L:0   i:0   W:0   |␣
↪arm/realview_pbx_a9_qemu: linpack.exe
[  4/598] p:0   f:0   u:0   e:0   I:0   B:0   t:0   L:0   i:0   W:0   |␣
↪arm/realview_pbx_a9_qemu: fsbdpart01.exe
check has_stdout <_io.TextIOWrapper name='<stdout>' mode='w' encoding=
↪'UTF-8'>
check has_stdout <_io.TextIOWrapper name='<stdout>' mode='w' encoding=
↪'UTF-8'>
check has_stdout <_io.TextIOWrapper name='<stdout>' mode='w' encoding=
↪'UTF-8'>
check has_stdout <_io.TextIOWrapper name='<stdout>' mode='w' encoding=
↪'UTF-8'>
check has_stdout <_io.TextIOWrapper name='<stdout>' mode='w' encoding=
↪'UTF-8'>
check has_stdout <_io.TextIOWrapper name='<stdout>' mode='w' encoding=
↪'UTF-8'>
check has_stdout <_io.TextIOWrapper name='<stdout>' mode='w' encoding=
↪'UTF-8'>
check has_stdout <_io.TextIOWrapper name='<stdout>' mode='w' encoding=
↪'UTF-8'>
check has_stdout <_io.TextIOWrapper name='<stdout>' mode='w' encoding=
↪'UTF-8'>
```

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```
Traceback (most recent call last):
File "/build/rtems/6/share/rtems/tester/rt/cmd-test.py", line 42, in
↪<module>
test.run(sys.argv[1:], command_path = base)
File "/build/rtems/6/share/rtems/tester/rt/test.py", line 489, in run
tst.reraise()
File "/build/rtems/6/share/rtems/tester/rt/test.py", line 161, in␣
↪reraise
reraise.reraise(*self.result)
File "/build/rtems/6/share/rtems/rtemstoolkit/reraise.py", line 63, in␣
↪reraise
raise value.with_traceback(tb)
File "/build/rtems/6/share/rtems/tester/rt/test.py", line 143, in runner
self.test.run()
File "/build/rtems/6/share/rtems/tester/rt/test.py", line 115, in run
self.config.run()
File "/build/rtems/6/share/rtems/tester/rt/config.py", line 370, in run
self.load(self.name)
File "/build/rtems/6/share/rtems/rtemstoolkit/config.py", line 772, in␣
↪load
dir, info, data = self._process_directive(r, dir, info, data)
File "/build/rtems/6/share/rtems/rtemstoolkit/config.py", line 638, in _
↪process_directive
directive, into, data = self._directive_filter(results, directive, info,
↪ data)
File "/build/rtems/6/share/rtems/tester/rt/config.py", line 320, in _
↪directive_filter
bsp_arch, bsp, self.show_header)
File "/build/rtems/6/share/rtems/tester/rt/report.py", line 124, in␣
↪start
log.notice(header, stdout_only = True)
File "/build/rtems/6/share/rtems/rtemstoolkit/log.py", line 117, in␣
↪notice
(default is not None and not default.has_stdout() or stdout_only):
File "/build/rtems/6/share/rtems/rtemstoolkit/log.py", line 199, in has_
↪stdout
check(self.fhs[0], "has_stdout")
File "/build/rtems/6/share/rtems/rtemstoolkit/log.py", line 150, in␣
↪check
raise IOError
OSError
```

So, stdout is blocking for a while and then changes to non-blocking.

Author: Chris Johns 2020-09-26T01:30:23.000Z

Original author: sebastian.huber

I suggest you print the id of the thread being checked? The original trace shows the exception in the original thread for the process and this last exception is in the

worker thread for the test. Are the thread's picking up the original state and not the modified state?

Also I wonder if `print(l)` should be `sys.stdout.write(l)`? That is, maybe the low level layer of `log.py` should work at the handle level only and not mix things up.

Author: Joel Sherrill 2021-12-17T17:01:20.000Z

Original author: sebastian.huber

Did you resolve this?

Author: Chris Johns 2022-11-29T23:22:26.000Z

Original author: sebastian.huber

- **Milestone** changed from %"6.1" to %"Indefinite"
- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*
- **Version** changed from ~"6" to ~"7"

Author: Amar Takhar 2025-09-05T02:57:44.701Z

changed the description

Author: Chris Johns 2026-07-30T23:24:13.450Z

set status to **Won't do**

1.8.1.41 4147 - rtems-bsp-builder: Attempts all even when tools are not in PATH

Id	4147
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Closed by	Chris Johns
Created	2020-10-14T19:02:48.000Z
Closed	2026-07-30T23:23:51.201Z
Updated	2026-07-30T23:23:51.265Z
Milestone	6.3
Labels	old-indefinite, priority::normal, tickettype::defect, tool, version::6, version::7
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4147
Merges	0

Apparently you have to have RTEMS tools in your PATH before running the bsp builder. I just finished a run that took 2 hours to basically tell me to add RTEMS tools to my PATH. Could this be error checked and bail out early?

```
Average BSP Build Time: 0:00:04.463226
Total Time 2:06:09.632269
Passes: 0   Failures: 1696

real    126m11.106s
user    32m0.580s
sys     31m3.187s
```

Author: Chris Johns 2022-11-29T23:23:49.000Z

- **Milestone** changed from %"6.1" to %"Indefinite"
- **Version** changed from ~"6" to ~"7"

Author: Amar Takhar 2025-09-05T02:57:45.797Z

changed the description

Author: Chris Johns 2026-07-30T23:23:51.238Z

set status to **Won't do**

1.8.1.42 3963 - Add build specification item verification

Id	3963
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Sebastian Huber
Closed by	Chris Johns
Created	2020-04-22T05:12:17.000Z
Closed	2026-07-30T23:22:42.026Z
Updated	2026-07-30T23:22:42.103Z
Milestone	6.3
Labels	priority::normal, qualification, rtems::build, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3963
Merges	0

Original author: sebastian.huber

The new build system uses build specification items to define what is built and how it is built. Add a ./waf –rtems-verify-spec option to verify that the build specification items are sane. For

example, check that there are no cycles in the graph, all required attributes are present, the attribute values have the proper type, no additional attributes are present, all UIDs are resolvable, etc.

Author: Trac Migrate 2020-05-28T11:03:17.000Z

Original author: sebastian.huber

The basic functionality for a verification of build items is implemented in the RTEMS Qualification Tools repository:

https://git.rtems.org/sebh/rtems-qual.git/tree/specverify.py

To make use of it, one option would be to install the RTEMS Qualification Tools Python modules under ${prefix}/share/rtems parallel to the rtemstoolkit modules. Only if the wscript should do the verification, then the module is loaded.

Missing features are:

- verify that the directed graph of specification items has no cycles (depending on the link role)
- specify and verify required links, roles, and target types for item types
- detect isolated items
- add warning conditions
- improve the output of failed assertions

Author: Trac Migrate 2022-09-08T07:37:09.000Z

Original author: sebastian.huber

- **Milestone** changed from %”6.1” to %”7.1”

Author: Amar Takhar 2024-04-25T20:48:07.114Z

changed the description

Author: Joel Sherrill 2025-09-19T00:02:51.907Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:20:49.532Z

assigned to @sebhub

Author: Chris Johns 2026-07-30T23:21:07.473Z

Please update the Status.

Author: Chris Johns	2026-07-30T23:22:42.078Z

set status to **Done**

Author: Chris Johns	2026-07-30T23:22:42.867Z

Duplicate of #5296

1.8.1.43 4087 - libbsd: sh architecture build is broken

Id	4087
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Chris Johns
Created	2020-09-23T05:45:35.000Z
Closed	2026-07-30T23:22:01.005Z
Updated	2026-07-30T23:22:01.064Z
Milestone	6.3
Labels	arch:sh, old-indefinite, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4087
Merges	0

Original author: sebastian.huber

```
/build/rtems/6/lib/gcc/sh-rtems6/10.2.1/../../../../sh-rtems6/bin/ld: ./libbsd.a(af_nd6.c.11.o):/ramdisk/git-rtems-libbsd/build/sh-rtems6-simsh4-default/../../freebsd/sbin/ifconfig/af_nd6.c:181: more undefined references to `warn' follow
/build/rtems/6/lib/gcc/sh-rtems6/10.2.1/../../../../sh-rtems6/bin/ld: ./libbsd.a(ifbridge.c.11.o): in function `bridge_addresses':
/ramdisk/git-rtems-libbsd/build/sh-rtems6-simsh4-default/../../freebsd/sbin/ifconfig/ifbridge.c:246: undefined reference to `err'
/build/rtems/6/lib/gcc/sh-rtems6/10.2.1/../../../../sh-rtems6/bin/ld: ./libbsd.a(ifbridge.c.11.o): in function `setbridge_flushall':
/ramdisk/git-rtems-libbsd/build/sh-rtems6-simsh4-default/../../freebsd/sbin/ifconfig/ifbridge.c:475: undefined reference to `err'
/build/rtems/6/lib/gcc/sh-rtems6/10.2.1/../../../../sh-rtems6/bin/ld: /ramdisk/git-rtems-libbsd/build/sh-rtems6-simsh4-default/../../freebsd/sbin/ifconfig/ifbridge.c:475: undefined reference to `err'
/build/rtems/6/lib/gcc/sh-rtems6/10.2.1/../../../../sh-rtems6/bin/ld: ./libbsd.a(ifbridge.c.11.o): in function `setbridge_delete':
/ramdisk/git-rtems-libbsd/build/sh-rtems6-simsh4-default/../../freebsd/sbin/ifconfig/ifbridge.c:327: undefined reference to `err'
/build/rtems/6/lib/gcc/sh-rtems6/10.2.1/../../../../sh-rtems6/bin/ld: ./libbsd.a(ifbridge.c.11.o): in function `unsetbridge_span':
/ramdisk/git-rtems-libbsd/build/sh-rtems6-simsh4-default/../../freebsd/sbin/
```

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```
↪ifconfig/ifbridge.c:391: undefined reference to `err'
/build/rtems/6/lib/gcc/sh-rtems6/10.2.1/../../../../sh-rtems6/bin/ld: ./libbsd.
↪a(ifbridge.c.11.o):/ramdisk/git-rtems-libbsd/build/sh-rtems6-simsh4-default/../.
↪./freebsd/sbin/ifconfig/ifbridge.c:380: more undefined references to `err'␣
↪follow
```

Author: Amar Takhar 2025-09-05T02:57:44.323Z

changed the description

Author: Chris Johns 2026-07-30T23:22:01.039Z

set status to **Won't do**

1.8.1.44 4085 - libbsd: x86_64 architecture build is broken

Id	4085
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Chris Johns
Created	2020-09-23T05:42:44.000Z
Closed	2026-07-30T23:21:46.598Z
Updated	2026-07-30T23:21:46.661Z
Milestone	6.3
Labels	arch:i386, old-indefinite, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4085
Merges	0

Original author: sebastian.huber

```
../../freebsd/sbin/sysctl/sysctl.c:67:10: fatal error: sys/efi.h: No such file or␣
↪directory
67 | #include <sys/efi.h>
|          ^~~~~~~~~~~
```

Author: Amar Takhar 2025-09-05T02:57:44.128Z

changed the description

Author: Chris Johns 2026-07-30T23:21:46.631Z

set status to **Won't do**

1.8.1.45 3738 - Refactor the Software Engineering Manual

Id	3738
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Joel Sherrill
Closed by	Chris Johns
Created	2019-04-23T16:51:04.000Z
Closed	2026-07-30T23:17:52.731Z
Updated	2026-07-30T23:17:52.789Z
Milestone	6.3
Labels	old-indefinite, priority::normal, tickettype::project, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3738
Merges	0

The newest RTEMS Manual is the [Software Engineering (SwE)](https://docs.rtems.org/branches/master/eng/index.html) Manual, which is intended to document the software engineering practices of RTEMS development. This project will improve the completeness and consistency of the SwE Manual with respect to primary sources and our intentions for this manual's use.

One of the main sources of content for the SwE book is our wiki. We would like to have the content of the SwE manual cross-checked with the respective wiki pages, and have those wiki pages be replaced with a link to the SwE book as the authoritative source for the information moving forward. This check should ensure the content is correctly reproduced, and identify any re-formatting that should be done in the manual to improve typesetting etc.

- The primary remaining task is to review sections taken from the wiki, ensure the conversion looks correct, delete the wiki page, and correct all references from the web to the delete page.

In addition, the flow and organization of the SwE Manual likely could be greatly improved. We created the manual by filling in an outline with large dumps of text. A balanced and thoughtful approach to the manual's organization would likely provide great benefits to its usability and maintenance.

Author: Joel Sherrill 2020-01-14T21:16:19.000Z

- **Description** changed

```
1 The newest [RTEMS Manual](https://docs.rtems.org/) is the [Software␣
  ↪Engineering (SwE)](https://docs.rtems.org/branches/master/eng/index.
  ↪html) Manual, which is intended to document the software engineering␣
  ↪practices of RTEMS development. This project will improve the␣
  ↪completeness and consistency of the SwE Manual with respect to␣
  ↪primary sources and our intentions for this manual's use.
2
3 One of the main sources of content for the SwE book is our wiki. We␣
  ↪would like to have the content of the SwE manual cross-checked with␣
  ↪the respective wiki pages, and have those wiki pages be replaced with␣
```

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```
↪a link to the SwE book as the authoritative source for the␣
↪information moving forward. This check should ensure the content is␣
↪correctly reproduced, and identify any re-formatting that should be␣
↪done in the manual to improve typesetting etc.

+ * The primary remaining task is to review sections taken from the␣
↪wiki, ensure the conversion looks correct, delete the wiki page, and␣
↪correct all references from the web to the delete page.
+
In addition, the flow and organization of the SwE Manual likely could␣
↪be greatly improved. We created the manual by filling in an outline␣
↪with large dumps of text. A balanced and thoughtful approach to the␣
↪manual's organization would likely provide great benefits to its␣
↪usability and maintenance.
```

Author: Amar Takhar 2025-09-05T03:01:14.761Z

changed the description

Author: Chris Johns 2026-07-30T23:17:52.764Z

set status to **Done**

1.8.1.46 3597 - Variable tmp_dirent not initialized CID 1440356

Id	3597
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Closed by	Chris Johns
Created	2018-11-07T17:09:53.000Z
Closed	2026-07-30T23:09:00.187Z
Updated	2026-07-30T23:09:00.192Z
Milestone	6.3
Labels	filesystem, old-indefinite, priority::normal, scan::coverity, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3597
Merges	0

Original author: zehata

From rtems root directory, cd cpukit/libfs/src/dosfs/msdos_dir.c tmp.dirent was used 18 times but isn't initialized anywhere in the file. In line 325, memcpy was used, with the second parameter, a constant, being tmp_dirent, however, before this, it was not initialized at all, leading to the usage of an uninitialized variable (in memcpy)

```
64 msdos_dir_read(rtems_libio_t *iop, void *buffer, size_t count)
65 {

...

73 struct dirent tmp_dirent;

...

154 if ((*MSDOS_DIR_ATTR(entry) & MSDOS_ATTR_LFN_MASK) == MSDOS_ATTR_LFN)
155 {

...

324 if ( cmpltd >= 0 ) {
```

Uninitialized scalar variable (UNINIT) uninit_use_in_call: Using uninitialized value tmp_dirent. Field tmp_dirent.d_type is uninitialized when calling memcpy.

```
325 memcpy(buffer + cmpltd, &tmp_dirent, sizeof(struct dirent));
326
327 iop->offset = iop->offset + sizeof(struct dirent);
328 cmpltd += (sizeof(struct dirent));
329 count -= (sizeof(struct dirent));
330
331 /* inode number extracted, close fat-file */
332 rc = fat_file_close(&fs_info->fat, tmp_fat_fd);
333 if (rc != RC_OK)
334 {
335 msdos_fs_unlock(fs_info);
336 return rc;
337 }
338 }
339 }

...

349 }
```

Author: Trac Migrate 2018-11-07T17:16:12.000Z

Original author: zehata

- **Milestone** set to %”Indefinite”
- **Version** set to ~”6”

Per Coverity scan CID 1440356, the file at cpukit/libfs/src/dosfs/msdos_dir.c uses uninitialized variable tmp_dirent multiple times in the file.

Author: Trac Migrate 2018-11-07T19:03:05.000Z

Original author: zehata

- **Summary** changed from *Variable tmp_dirent not initialized* to *Variable tmp_dirent not initialized CID 1440356*

Author: Joel Sherrill 2018-11-10T13:26:50.000Z

Original author: zehata

- **Description** changed

```
From rtems root directory, cd cpukit/libfs/src/dosfs/msdos_dir.c
tmp.dirent was used 18 times but isn't initialized anywhere in the file.
+ In line 325, memcpy was used, with the second parameter, a constant, being tmp_dirent, however, before this, it was not initialized at all, leading to the usage of an uninitialized variable (in memcpy)
+
+ {{{
+ 64 msdos_dir_read(rtems_libio_t *iop, void *buffer, size_t count)
+ 65 {
+
+ ...
+
+ 73 struct dirent tmp_dirent;
+
+ ...
+
+ 154 if ((*MSDOS_DIR_ATTR(entry) & MSDOS_ATTR_LFN_MASK) == MSDOS_ATTR_LFN)
+ 155 {
+
+ ...
+
+ 324 if ( cmpltd >= 0 ) {
+ }}}
+ Uninitialized scalar variable (UNINIT)
+ uninit_use_in_call: Using uninitialized value tmp_dirent. Field tmp_dirent.d_type is uninitialized when calling memcpy.
+
+ {{{
+ 325 memcpy(buffer + cmpltd, &tmp_dirent, sizeof(struct dirent));
+ 326
+ 327 iop->offset = iop->offset + sizeof(struct dirent);
+ 328 cmpltd += (sizeof(struct dirent));
+ 329 count -= (sizeof(struct dirent));
+ 330
+ 331 /* inode number extracted, close fat-file */
+ 332 rc = fat_file_close(&fs_info->fat, tmp_fat_fd);
+ 333 if (rc != RC_OK)
+ 334 {
+ 335 msdos_fs_unlock(fs_info);
```

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```
+ 336 return rc;
+ 337 }
+ 338 }
+ 339 }
+
+ ...
+
+ 349 }
+ }}}
```

Author: Amar Takhar 2024-04-25T20:46:41.816Z

changed the description

Author: Chris Johns 2026-07-30T23:05:08.762Z

assigned to @joel

Author: Chris Johns 2026-07-30T23:05:13.306Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:08:57.673Z

Not showing up in Coverity any more.

Author: Chris Johns 2026-07-30T23:09:00.223Z

set status to **Done**

1.8.1.47 3230 - RSB does not report –rsb-file for patches correctly.

Id	3230
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2017-11-12T04:45:41.000Z
Closed	2026-07-30T22:59:36.392Z
Updated	2026-07-30T22:59:36.464Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, tool::rtems-source-builder, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3230
Merges	0

The reports from the RSB do not report the `--rsb-file` option correctly.

Author: Chris Johns 2017-11-12T04:46:01.000Z

- **Status** changed from *assigned* to *accepted*

Author: Chris Johns 2019-12-12T23:32:22.000Z

- **Milestone** changed from %"5.1" to %"6.1"

Author: Amar Takhar 2024-05-17T01:59:37.817Z

changed the description

Author: Amar Takhar 2024-05-17T02:00:00.357Z

Moving to %6.2 since it's been bumped once already.

Author: Gedare Bloom 2024-12-04T21:40:35.716Z

Author: Chris Johns 2025-10-02T23:12:55.779Z

added rtems#15 as parent epic

Author: Chris Johns 2026-07-30T22:59:36.433Z

set status to **Won't do**

1.8.1.48 2960 - RSB: Reports modified Git version in case RSB is a Git submodule

Id	2960
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2017-03-30T11:50:10.000Z
Closed	2026-07-30T22:59:20.618Z
Updated	2026-07-30T22:59:20.680Z
Milestone	6.3
Labels	old-indefinite, priority::normal, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2960
Merges	0

Original author: sebastian.huber

In case the RSB is used as a Git submodules the git status yields

```
git status
# HEAD detached at b64b38e
nothing to commit, working directory clean
```

leading to

```
RTEMS Source Builder - Set Builder, 4.12 (b64b38ef076c modified)
```

Author: Chris Johns 2017-03-30T20:44:03.000Z

Original author: sebastian.huber

Is the bug you would like fixed the `modified` being added to the git hash?

Author: Trac Migrate 2017-03-31T04:55:34.000Z

Original author: sebastian.huber

Replying to Chris Johns:

> Is the bug you would like fixed the `modified` being added to the git hash?
>
> Yes I think so, nothing is modified. I had some problems to understand the git.status() function in git.py.

Author: Chris Johns 2017-03-31T04:59:40.000Z

Original author: sebastian.huber

The status function should return a dict of discovered states. I wonder if the last `elif` should be an `if`?

Author: Trac Migrate 2017-06-08T09:09:54.000Z

Original author: sebastian.huber

I tried to fix this, but I have no idea what repo.status() is supposed to do (especially the last elif part).

Author: Chris Johns 2017-09-22T01:27:03.000Z

Original author: sebastian.huber

Replying to Sebastian Huber:

> I have no idea what repo.status() is supposed to do (especially the last elif part).

The last `elif` part when there is a valid state picks of the content of a section of the `status` output. For example:

```
Untracked files:
(use "git add <file>..." to include in what will be committed)

x
```

The `_state` is selected and then the contents of the state are parsed and added to the state or a new state is selected.

Author: Chris Johns 2017-09-22T01:45:26.000Z

Original author: sebastian.huber

I can ignore a detached HEAD as condition for being dirty. That seems reasonable.

I will also ignore untracked files. They should be ignored in a build if nothing is modified. It does assume the build is not modified by untracked files. Untracked cannot be easily handled as I cannot look into the files or make assumptions. This is a change to the initial implementation but I am seeing tool builds with up to date repos that have untracked files like logs, or patches and that is not a true indication of the state. Needing a completely clean directory does seem a little onerous.

Is a modified submodule considered dirty? I think so. For example:

```
$ git st
On branch master
Your branch is up-to-date with 'origin/master'.
Changes not staged for commit:
(use "git add <file>..." to update what will be committed)
(use "git checkout -- <file>..." to discard changes in working␣
↪directory)
(commit or discard the untracked or modified content in submodules)

modified:   freebsd-org (new commits, untracked content)
```

Author: Trac Migrate 2017-11-09T06:27:14.000Z

Original author: sebastian.huber

- **Milestone** changed from %”4.12.0” to %”5.1”

Milestone renamed

Author: Chris Johns 2018-10-14T00:54:02.000Z

Original author: sebastian.huber

- **Status** changed from *new* to *accepted*

Author: Chris Johns 2018-10-19T00:10:54.000Z

Original author: sebastian.huber

- **Milestone** changed from %”5.1” to %”Indefinite”
- **Version** set to ~”6”

Author: Amar Takhar 2025-09-05T03:01:05.166Z

changed the description

Author: Chris Johns 2026-07-30T22:59:20.653Z

set status to **Won’t do**

1.8.1.49 2780 - Capture engine accesses ‘capture_per_cpu’ without first checking.

Id	2780
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Closed by	Chris Johns
Created	2016-08-26T03:45:35.000Z
Closed	2026-07-30T22:58:55.874Z
Updated	2026-07-30T22:58:55.938Z
Milestone	6.3
Labels	old-indefinite, priority::normal, tickettype::defect, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2780
Merges	0

The capture does not check if an open has created the capture_per_cpu data which holds the lock used to check the flags.

Author: Trac Migrate 2017-05-11T07:31:02.000Z

- **Milestone** changed from %”4.12” to %”4.12.0”

Author: Trac Migrate 2017-11-09T06:27:14.000Z

- **Milestone** changed from %”4.12.0” to %”5.1”

Milestone renamed

Author: Chris Johns 2018-10-14T00:51:27.000Z

- **Milestone** changed from %”5.1” to %”Indefinite”
- **Status** changed from *new* to *assigned*
- **Version** changed from ~”5” to ~”6”

Author: Amar Takhar 2025-09-05T03:01:02.834Z

changed the description

Author: Chris Johns 2026-07-30T22:58:55.911Z

set status to **Won’t do**

1.8.1.50 5310 - Remove Mongoose Web Server from RTEMS 6.3

Id	5310
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-07-24T22:55:06.577Z
Closed	2026-07-29T03:20:46.303Z
Updated	2026-07-29T03:20:46.369Z
Milestone	6.3
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5310
Merges	0

Summary

The Mongoose webserver (mghttpd) in RTEMS is old and pre-dates the change to GPL. The project forked and the permissive licensed code lives on as Civitweb. The mghttpd code in RTEMS is from before the split and is unmaintained upstream.

Civitweb can be built using the RSB. It is an active project.

It is recommended that users migrate to Civitweb.

The mghttd code is deprecated in RTEMS 6 and will be removed before RTEMS 7 branches.

It is being removed from 6 as of 6.3 because it is not actively maintained and have CVEs which are addressed in Civitweb.

Related ticket is #5303 for 7

1.8.1.50.1.1 Pre-set options

Author: Joel Sherrill 2025-07-24T22:55:06.698Z

set status to **To do**

Author: Kinsey Moore 2026-05-15T14:31:56.515Z

mentioned in issue #5367

Author: Chris Johns 2026-07-27T02:30:10.972Z

mentioned in merge request !1372

Author: Chris Johns 2026-07-27T02:30:48.248Z

assigned to @chris

Author: Chris Johns 2026-07-27T02:31:00.843Z

set status to **In progress**

Author: Chris Johns 2026-07-29T03:20:46.339Z

set status to **Done**

1.8.1.51 5638 - Fix thread names in top to show classic and POSIX names

Id	5638
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-07-08T22:37:35.518Z
Closed	2026-07-29T03:20:09.492Z
Updated	2026-07-29T03:20:09.559Z
Milestone	6.3
Labels	cpukit::shell
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5638
Merges	0

Summary

RTEMS currently has an inconsistent and sort of broken thread name management. Update `top` to work around the issue of an Object name and a POSIX non-portable name being set on threads.

Author: Chris Johns 2026-07-08T22:37:35.620Z

cloned from #5637

Author: Chris Johns 2026-07-27T02:52:49.937Z

mentioned in merge request !1374

Author: Chris Johns 2026-07-29T03:20:09.530Z

set status to **Done**

1.8.1.52 5640 - Add TCB pointer to libdebugger's extra thread info

Id	5640
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-07-08T22:45:09.545Z
Closed	2026-07-29T03:19:13.501Z
Updated	2026-07-29T03:19:13.561Z
Milestone	6.3
Labels	cpukit::debugger
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5640
Merges	0

Summary

Print the TCB or `Thread_Control` pointer in the thread extra info query output. This is shown when you enter `info thread` at a GDB prompt.

The TCB is useful then inspecting objects that contain the TCB pointer. For example:

```
(gdb) p *__mutex
$4 = {
_Queue = {
_Lock = {
_next_ticket = 7632,
_now_serving = 7632
},
_heads = 0x7f49308,
_owner = 0x7f44668,
_name = 0x0
}
}
(gdb) p __mutex->_Queue._owner
$5 = (_Thread_Control *) 0x7f44668
```

The `__mutex->_Queue._owner` field is the TCB and if the `info thread` command shows the TCB for a thread you can see which it is without the need to dump other thread specific details.

Author: Chris Johns 2026-07-08T22:45:09.639Z

cloned from #5639

Author: Chris Johns 2026-07-27T03:34:03.943Z

mentioned in merge request !1376

Author: Chris Johns 2026-07-29T03:19:13.536Z

set status to **Done**

1.8.1.53 5666 - Set environment variables from PPCBug GEV data on MVME2700

Id	5666
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-07-28T05:13:10.709Z
Closed	2026-07-29T03:18:52.343Z
Updated	2026-07-29T03:18:52.410Z
Milestone	6.3
Labels	arch:powerpc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5666
Merges	0

Summary

Set environment variables using the MOTLoad Global Environment Variables (GEV) the boot loader maintains. GEV variables are available on some PowerPC BSPs.

This work is part of the `EPICS RTEMS Support Project <https://github.com/epics-base/epics-base/discussions/851>`_to improve the RTEMS initialization in EPCIS. Currently EPICS has very specific code to extract these GEV variables and to use them to initialize the network. Moving the code to RTEMS and using environment variables expands the number of BSPs EPICS could support.

The initial work is for the `power/motorola_powerpc` BSP.

Author: Chris Johns 2026-07-28T05:13:10.806Z

cloned from #5621

Author: Chris Johns 2026-07-28T05:13:27.967Z

set status to **In progress**

Author: Chris Johns 2026-07-28T05:15:13.574Z

Backport the fix to 6

Author: Chris Johns 2026-07-28T05:16:47.502Z

mentioned in merge request !1380

Author: Chris Johns 2026-07-29T03:18:52.381Z

set status to **Done**

1.8.1.54 5664 - Print all environment variables with the shell getenv command

Id	5664
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-07-28T04:13:28.546Z
Closed	2026-07-29T03:17:44.017Z
Updated	2026-07-29T03:17:44.081Z
Milestone	6.3
Labels	cpukit::shell
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5664
Merges	0

Summary

The `getenv` command only prints the requested environment variable and that makes painful to see all the variables in the table.

Add `-a` support to print all the environment variables.

Author: Chris Johns 2026-07-28T04:13:28.633Z

cloned from #5572

Author: Chris Johns 2026-07-28T04:13:41.856Z

added rtems#15 as parent item

Author: Chris Johns 2026-07-28T04:13:44.448Z

assigned to @chris

Author: Chris Johns 2026-07-28T04:13:46.945Z

set status to **In progress**

Author: Chris Johns 2026-07-28T04:14:10.109Z

This command is useful when working with EPICS and environment tables.

Author: Chris Johns 2026-07-28T04:22:20.382Z

mentioned in merge request !1378

Author: Chris Johns 2026-07-29T03:17:44.052Z

set status to **Done**

1.8.1.55 5665 - Backport powerpc/beatnik converting MOTLoad GEV variables into env variables

Id	5665
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-07-28T04:27:43.732Z
Closed	2026-07-29T03:17:09.929Z
Updated	2026-07-29T03:17:09.934Z
Milestone	6.3
Labels	arch:powerpc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5665
Merges	0

Summary

Backport converting the MOTLoad GEV variables into environment variables.

Author: Chris Johns 2026-07-28T04:27:43.899Z

added rtems#15 as parent item

Author: Chris Johns	2026-07-28T04:27:43.984Z

set status to **In progress**

Author: Chris Johns	2026-07-28T04:27:44.130Z

assigned to @chris

Author: Chris Johns	2026-07-28T04:33:51.474Z

mentioned in merge request !1379

Author: Chris Johns	2026-07-29T03:17:09.972Z

set status to **Done**

1.8.1.56 5652 - Backport to 6 branch "cpukit/flashdev: Clarify interface and update consumers"

Id	5652
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Chris Johns
Created	2026-07-16T21:47:30.709Z
Closed	2026-07-28T01:36:24.917Z
Updated	2026-07-28T01:36:24.988Z
Milestone	6.3
Labels	device::flash
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5652
Merges	0

The following discussion from !1353 should be addressed:

- [] @opticron started a discussion:

  This needs a backport to 6 branch.

Author: Kinsey Moore	2026-07-16T21:47:30.924Z

added rtems#15 as parent item

Author: Kinsey Moore	2026-07-16T21:47:31.020Z

set status to **To do**

Author: Kinsey Moore 2026-07-16T21:50:56.503Z

mentioned in merge request !1354

Author: Chris Johns 2026-07-27T02:38:20.461Z

mentioned in merge request !1373

Author: Chris Johns 2026-07-27T03:07:38.525Z

set status to **In progress**

Author: Chris Johns 2026-07-27T03:07:48.615Z

assigned to @opticron

Author: Chris Johns 2026-07-28T01:36:24.960Z

set status to **Done**

1.8.1.57 5661 - Backport PowerPC ASM warning fixes

Id	5661
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-07-27T01:23:17.447Z
Closed	2026-07-28T01:35:49.395Z
Updated	2026-07-28T01:35:49.466Z
Milestone	6.3
Labels	arch:powerpc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5661
Merges	0

Backport:

1. e74e5e1644ae9cc8fb95d8f457cab06c8b3e21a6
2. 16faa870a571dc6e7b89ef53d1fa385fa672112d
3. db19f09a21e76827188e5c12dc2b5c39730211c2

Author: Chris Johns 2026-07-27T01:23:17.678Z

added rtems#15 as parent item

Author: Chris Johns 2026-07-27T01:23:17.793Z

set status to **In progress**

Author: Chris Johns 2026-07-27T01:23:18.001Z

assigned to @chris

Author: Chris Johns 2026-07-27T01:36:10.811Z

changed the description

Author: Chris Johns 2026-07-27T02:10:51.965Z

mentioned in merge request !1371

Author: Chris Johns 2026-07-28T01:35:49.435Z

set status to **Done**

1.8.1.58 5662 - Libdebugger register block corruption

Id	5662
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-07-27T03:17:28.253Z
Closed	2026-07-28T01:35:38.189Z
Updated	2026-07-28T01:35:38.259Z
Milestone	6.3
Labels	cpukit::debugger
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5662
Merges	0

Summary

If more than 32 threads are active the `thread->register` pointer may end up referencing an old block pointer depending on the value returned by a `realloc` call. This has not been a problem on ARM or AARCH64 builds but is a problem on PowerPC although it is a definite issue on all architectures.

I suspect a key difference is PowerPC has a 412 byte register buffer per thread, significantly more than ARM and AARCH64, so a block resize using `realloc` is more likely to results in the pointer returned having a different address. The corruption is each thread has taken a pointer to the registers from the original block for each thread and it is not re-based after the `realloc` moves the pointer.

Solution

Add a rebase handler to the block code that is called if the base pointer of a block moves so the pointer can be remapped.

Note, only the `registers` is effected as all other blocks do not have references taken.

Steps to reproduce

Run a simple EPICS IOC application on PowerPC, connect then list the threads and then print thread's registers. The values are garbage.

Author: Chris Johns 2026-07-27T03:17:28.357Z

cloned from #5635

Author: Chris Johns 2026-07-27T03:18:37.524Z

set status to **In progress**

Author: Chris Johns 2026-07-27T03:27:15.048Z

mentioned in merge request !1375

Author: Chris Johns 2026-07-27T03:38:44.621Z

added rtems#15 as parent item

Author: Chris Johns 2026-07-28T01:35:38.229Z

set status to **Done**

1.8.1.59 4922 - QEMU delivers back-to-back timer ticks after task switches

Id	4922
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Closed by	Gedare Bloom
Created	2023-07-06T17:01:01.000Z
Closed	2026-07-02T18:43:34.482Z
Updated	2026-07-02T18:43:34.487Z
Milestone	6.3
Labels	old-indefinite, priority::normal, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4922
Merges	0

A selection of tests in the RTEMS testsuite will fail consistently or intermittently when running under QEMU while they pass consistently on real hardware or more accurate simulators. This is due to QEMU getting context-switched out on the host system and when it gets more run time it delivers all outstanding clock ticks as quickly as possible according to the wall clock. Naturally, this is more severe on heavily loaded systems. The tests that fail in this manner are heavily dependent on timing and inter-tick processing to verify their correct operation.

The tests known to fail in this manner on ARM and AArch64 BSPs are at least: psx12 psxclock psxtimes01 psxualarm rtmonuse rtmonusxtimes01 smpclock01 smpfatal01 smpfatal03 smpmrsp01 smpmutex01 smppsxmutex01 smpschedaffinity01 smpschedaffinity02 smpschededf01 smpschededf03 smpscheduler04 smpthreadpin01 sp04 sp20 sp68 sp69 sp71 spcpucounter01 spedfsched02 spedfsched04 spintrcritical01 spintrcritical02 spintrcritical03 spintrcritical04 spintrcritical05 spintrcritical06 spintrcritical07 spintrcritical08 spintrcritical09 spintrcritical10 spintrcritical11 spintrcritical12 spintrcritical13 spintrcritical14 spintrcritical15 spintrcritical16 spintrcritical17 spintrcritical18 spintrcritical19 spintrcritical20 spintrcritical21 spintrcritical22 spintrcritical23 spintrcritical24 sprmsched01 sptimecounter01 sptimecounter02 sptimecounter04 ttest02

This issue does not exist to rectify the situation with QEMU so much as to document the issue so that it can be referenced from non-pass expected test outcomes for those affected BSPs that are dedicated to the QEMU platform.

Author: Kinsey Moore 2023-07-06T17:22:16.000Z

I mistakenly left out these tests: validation-0 validation-smp-only-0

Author: Joel Sherrill 2023-07-06T17:46:25.000Z

One of the challenges we have had on issues like this where a BSP runs fine on hardware but not on the simulator is that if the same variant name is used in both cases, there is no way to distinguish HW vs simulator expectation. On the aarch64, I don't think this applies but at least for sparc and i386, the same BSP variant runs on HW and simulator. Our test annotations apply to a BSP – not BSP plus "hw/sim".

Intermittent failures are worse because you can't mark them as expected failures either.

Author: Kinsey Moore 2023-07-06T18:14:00.000Z

Yes, those reasons and differing peripheral support are exactly why I've made sure to have separate QEMU BSPs for all the work I've done. I suspect that sparc and i386 should really have separate BSPs for at least QEMU and maybe also for other simulators that have similar problems.

Author: Trac Migrate 2023-07-10T13:49:21.000Z

In [changeset:"f46c15fd76a4c1904760360cd220a061d74edad4/rtems" f46c15f/rtems]:

```
spec: Add QEMU test annotations

QEMU is known to fail certain tests intermittently due to clock tick
delivery issues. This defines those tests as intermittent for BSPs
intended to run on QEMU alone.

Updates #4922
Updates #4072
```

Author: Amar Takhar 2025-09-05T02:57:54.725Z

changed the description

Author: Gedare Bloom 2026-05-15T15:15:44.609Z

mentioned in merge request rtems/tools/rtems-tools!87

Author: Gedare Bloom 2026-05-15T16:20:25.028Z

mentioned in commit gedare/rtems-tools@7a80eb79f50fa963875afd79c9d956f6bdc60459

Author: Gedare Bloom 2026-07-02T18:43:34.516Z

set status to **Done**

1.8.1.60 5589 - Move powerpc/beatnik BSP to generic interrupts

Id	5589
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-05-25T22:28:53.843Z
Closed	2026-06-01T22:21:08.191Z
Updated	2026-06-01T22:21:08.261Z
Milestone	6.3
Labels	arch:powerpc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5589
Merges	0

Move the `powerpc/beatnik` BSP to the generic interrupt support so it can be used LibBSD.

Author: Chris Johns 2026-05-25T22:28:53.973Z

cloned from #5567

Author: Chris Johns 2026-05-25T22:29:12.636Z

added rtems#15 as parent epic

Author: Chris Johns 2026-05-25T22:29:18.578Z

set status to **In progress**

Author: Chris Johns 2026-05-26T01:19:51.790Z

mentioned in merge request !1262

Author: Chris Johns 2026-06-01T22:21:08.231Z

set status to **Done**

1.8.1.61 4846 - Code for test software

Id	4846
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2023-02-09T14:54:34.000Z
Closed	2026-05-24T04:17:24.699Z
Updated	2026-05-24T04:17:24.790Z
Milestone	6.3
Labels	arch:sparc, old-indefinite, priority::normal, qualification, resolution::wontfix, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4846
Merges	1

Original author: dppinto

Within function bsp_interrupt_raise ther is code active despite described as being dangerous and only to be used for test purposes. It would be a good idea to insert a pragma in the code to present a warning when this is included/used. -> “#pragma GCC warning message”

Additional Notes: To raise an IRQ# from 0-15 there is a proper register that permits that, but to raise IRQ# from 31-16 it is needed to write on top of the pending associated IRQ bit, which can override an already IRQ pending in that line. That is why that code may be dangerous and in the case of forcing IRQ# from 31-16 can only be used for testing.

This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). Original ISVV reference for this issue is RTEMS-SMP-CODE-VER-044.

File list: bspssparcleon3starteirq.c (function bsp_interrupt_raise) (line 154-158)

Author: Trac Migrate 2023-02-10T15:08:06.000Z

Original author: dppinto

- **Milestone** set to %”6.1”
- **Resolution** set to ~”wontfix”
- **Status** changed from *new* to *closed*

This warning is pretty useless since it is invisible to the user. The hardware limitations are documented in the hardware manuals. We could introduce some sort of a test mode which guards this feature. To keep it simple I tend to not fix it.

Author: Trac Migrate 2023-02-13T08:23:31.000Z

Original author: dppinto

- **Milestone** changed from %”6.1” to %”Indefinite”

- **Resolution** ~"wontfix" deleted
- **Status** changed from *closed* to *reopened*

One option is to remove the raise implementation for extended interrupts and test the extended interrupts through BSP-specific code.

Author: Trac Migrate 2023-02-13T08:24:00.000Z

Original author: dppinto

- **Owner** set to Needs Funding
- **Status** changed from *reopened* to *assigned*

Author: Amar Takhar 2024-04-25T20:50:33.707Z

changed the description

Author: Samuel Viegas 2026-02-25T11:40:19.736Z

mentioned in merge request !1078

Author: Kinsey Moore 2026-05-24T04:17:26.424Z

set status to **Done**

1.8.1.62 5580 - Backport to 6 branch: "bsps/zynq-uart: fix parity configuration handling"

Id	5580
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2026-05-18T19:15:39.231Z
Closed	2026-05-18T22:25:59.960Z
Updated	2026-05-18T22:26:00.115Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5580
Merges	0

The following discussion from !1212 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to 6 branch at least.

Author: Kinsey Moore 2026-05-18T19:15:39.396Z

added rtems#15 as parent epic

Author: Kinsey Moore	2026-05-18T19:15:39.488Z

set status to **To do**

Author: Kinsey Moore	2026-05-18T19:15:39.596Z

assigned to @opticron

Author: Kinsey Moore	2026-05-18T19:16:02.079Z

mentioned in merge request !1212

Author: Kinsey Moore	2026-05-18T19:21:11.496Z

mentioned in merge request !1252

Author: Kinsey Moore	2026-05-18T22:26:00.018Z

set status to **Done**

1.8.1.63 4890 - Defect: devel/qemu does not build

Id	4890
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2023-03-24T04:03:34.000Z
Closed	2026-05-15T17:29:41.129Z
Updated	2026-05-15T17:29:41.285Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4890
Merges	0

Original author: jkillelea

The command `../source-builder/sb-set-builder --prefix=$HOME/projects/rtems/6 devel/qemu.bset` fails on Ubuntu 22.04.

The reported error is:

```
config: devel/qemu-5.2.0-1.cfg
package: qemu-5.2.0-rc1-x86_64-linux-gnu-1
building: qemu-5.2.0-rc1-x86_64-linux-gnu-1
error: building qemu-5.2.0-rc1-x86_64-linux-gnu-1
Build FAILED
See error report: rsb-report-qemu-5.2.0-rc1-x86_64-linux-gnu-1.txt
Note: In some cases the error appears only in
the complete build log (see --log option)
error: building qemu-5.2.0-rc1-x86_64-linux-gnu-1
Build Set: Time 0:04:25.439249
Build FAILED
```

The end of `rsb-report-qemu-5.2.0-rc1-x86_64-linux-gnu-1.txt` says:

```
NOTE: guest cross-compilers enabled: cc cc
The Meson build system
Version: 0.63.2
Source dir: /home/jacob/projects/rtems/src/rsb/rtems/build/qemu-5.2.0-rc1-x86_64-
↪linux-gnu-1/qemu-5.2.0-rc1
Build dir: /home/jacob/projects/rtems/src/rsb/rtems/build/qemu-5.2.0-rc1-x86_64-
↪linux-gnu-1/build
Build type: native build
WARNING: You should add the boolean check kwarg to the run_command call.
It currently defaults to false,
but it will default to true in future releases of meson.
See also: https://github.com/mesonbuild/meson/issues/9300
Project name: qemu
Project version: 5.1.91

../qemu-5.2.0-rc1/meson.build:1:0: ERROR: Compiler gcc -O2 -g -pipe -I/home/jacob/
↪projects/rtems/src/rsb/rtems/build/tmp/sb-1000/devel/qemu/home/jacob/projects/
↪rtems/6/include -I/home/jacob/projects/rtems/src/rsb/rtems/build/tmp/sb-1000/
↪devel/qemu/home/jacob/projects/rtems/6/include/glib-2.0 -I/home/jacob/projects/
↪rtems/src/rsb/rtems/build/tmp/sb-1000/devel/qemu/home/jacob/projects/rtems/6/
↪lib/glib-2.0/include -I/home/jacob/projects/rtems/src/rsb/rtems/build/tmp/sb-
↪1000/devel/qemu/home/jacob/projects/rtems/6/include/pixman-1 can not compile␣
↪programs.

A full log can be found at /home/jacob/projects/rtems/src/rsb/rtems/build/qemu-5.
↪2.0-rc1-x86_64-linux-gnu-1/build/meson-logs/meson-log.txt

ERROR: meson setup failed

shell cmd failed: /bin/sh -ex  /home/jacob/projects/rtems/src/rsb/rtems/build/
↪qemu-5.2.0-rc1-x86_64-linux-gnu-1/do-build
error: building qemu-5.2.0-rc1-x86_64-linux-gnu-1
```

`build/qemu-5.2.0-rc1-x86_64-linux-gnu-1/build/meson-logs/meson-log.txt` says:

```
linker stdout:
```

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```
GNU ld (GNU Binutils for Ubuntu) 2.39
Copyright (C) 2022 Free Software Foundation, Inc.
This program is free software; you may redistribute it under the terms of
the GNU General Public License version 3 or (at your option) a later version.
This program has absolutely no warranty.

linker stderr:
collect2 version 12.2.0
/usr/bin/ld -plugin /usr/lib/gcc/x86_64-linux-gnu/12/liblto_plugin.so -plugin-
↪opt=/usr/lib/gcc/x86_64-linux-gnu/12/lto-wrapper -plugin-opt=-fresolution=/tmp/
↪ccm0GBvx.res -plugin-opt=-pass-through=-lgcc -plugin-opt=-pass-through=-lgcc_s -
↪plugin-opt=-pass-through=-lc -plugin-opt=-pass-through=-lgcc -plugin-opt=-pass-
↪through=-lgcc_s --build-id --eh-frame-hdr -m elf_x86_64 --hash-style=gnu --as-
↪needed -dynamic-linker /lib64/ld-linux-x86-64.so.2 -pie -z now -z relro /usr/
↪lib/gcc/x86_64-linux-gnu/12/../../../x86_64-linux-gnu/Scrt1.o /usr/lib/gcc/x86_
↪64-linux-gnu/12/../../../x86_64-linux-gnu/crti.o /usr/lib/gcc/x86_64-linux-gnu/
↪12/crtbeginS.o -L/home/jacob/projects/rtems/src/rsb/rtems/build/tmp/sb-1000/
↪devel/qemu/home/jacob/projects/rtems/6/lib -L/usr/lib/gcc/x86_64-linux-gnu/12 -
↪L/usr/lib/gcc/x86_64-linux-gnu/12/../../../x86_64-linux-gnu -L/usr/lib/gcc/x86_
↪64-linux-gnu/12/../../../../lib -L/lib/x86_64-linux-gnu -L/lib/../lib -L/usr/
↪lib/x86_64-linux-gnu -L/usr/lib/../lib -L/usr/lib/gcc/x86_64-linux-gnu/12/../../
↪.. --version -rpath /home/jacob/projects/rtems/6/lib -lgcc --push-state --as-
↪needed -lgcc_s --pop-state -lc -lgcc --push-state --as-needed -lgcc_s --pop-
↪state /usr/lib/gcc/x86_64-linux-gnu/12/crtendS.o /usr/lib/gcc/x86_64-linux-gnu/
↪12/../../../x86_64-linux-gnu/crtn.o

Sanity testing C compiler: gcc -O2 -g -pipe -I/home/jacob/projects/rtems/src/rsb/
↪rtems/build/tmp/sb-1000/devel/qemu/home/jacob/projects/rtems/6/include -I/home/
↪jacob/projects/rtems/src/rsb/rtems/build/tmp/sb-1000/devel/qemu/home/jacob/
↪projects/rtems/6/include/glib-2.0 -I/home/jacob/projects/rtems/src/rsb/rtems/
↪build/tmp/sb-1000/devel/qemu/home/jacob/projects/rtems/6/lib/glib-2.0/include -
↪I/home/jacob/projects/rtems/src/rsb/rtems/build/tmp/sb-1000/devel/qemu/home/
↪jacob/projects/rtems/6/include/pixman-1
Is cross compiler: False.
Sanity check compiler command line: gcc -O2 -g -pipe -I/home/jacob/projects/rtems/
↪src/rsb/rtems/build/tmp/sb-1000/devel/qemu/home/jacob/projects/rtems/6/include -
↪I/home/jacob/projects/rtems/src/rsb/rtems/build/tmp/sb-1000/devel/qemu/home/
↪jacob/projects/rtems/6/include/glib-2.0 -I/home/jacob/projects/rtems/src/rsb/
↪rtems/build/tmp/sb-1000/devel/qemu/home/jacob/projects/rtems/6/lib/glib-2.0/
↪include -I/home/jacob/projects/rtems/src/rsb/rtems/build/tmp/sb-1000/devel/qemu/
↪home/jacob/projects/rtems/6/include/pixman-1 sanitycheckc.c -o sanitycheckc.exe␣
↪ -D_FILE_OFFSET_BITS=64 -Wl,-rpath -Wl,/home/jacob/projects/rtems/6/lib -L/home/
↪jacob/projects/rtems/src/rsb/rtems/build/tmp/sb-1000/devel/qemu/home/jacob/
↪projects/rtems/6/lib
Sanity check compile stdout:

-----
Sanity check compile stderr:
/usr/bin/ld: cannot find : No such file or directory
```

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```
collect2: error: ld returned 1 exit status

-----

../qemu-5.2.0-rc1/meson.build:1:0: ERROR: Compiler gcc -O2 -g -pipe -I/home/jacob/
↪projects/rtems/src/rsb/rtems/build/tmp/sb-1000/devel/qemu/home/jacob/projects/
↪rtems/6/include -I/home/jacob/projects/rtems/src/rsb/rtems/build/tmp/sb-1000/
↪devel/qemu/home/jacob/projects/rtems/6/include/glib-2.0 -I/home/jacob/projects/
↪rtems/src/rsb/rtems/build/tmp/sb-1000/devel/qemu/home/jacob/projects/rtems/6/
↪lib/glib-2.0/include -I/home/jacob/projects/rtems/src/rsb/rtems/build/tmp/sb-
↪1000/devel/qemu/home/jacob/projects/rtems/6/include/pixman-1 can not compile␣
↪programs.
```

It looks like there's an argument missing, since `ld cannot find <empty string here?>:`.

Author: Amar Takhar 2024-04-25T20:50:43.188Z

changed the description

Author: Kinsey Moore 2026-05-15T17:14:44.068Z

@jkillelea Is this still reproducible? We moved to the 5.2.0 non-RC release a while back and I think we've moved to a 9.x release more recently.

Author: Jacob Killelea 2026-05-15T17:14:44.012Z

Hey @opticron, with the latest `rsb` (`cadcd4195781ea8c5713d4a36e2e67ab681d4906`), it builds fine. You can close this ticket or I can.

Author: Kinsey Moore 2026-05-15T17:29:41.185Z

set status to **Done**

1.8.1.64 3431 - Eliminate use of __ppc_generic and other PowerPC model defines in BSP configure.ac

Id	3431
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2018-05-18T13:20:18.000Z
Closed	2026-05-15T15:37:19.687Z
Updated	2026-05-15T15:37:19.842Z
Milestone	6.3
Labels	arch:powerpc, old-indefinite, priority::normal, tickettype::defect, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3431
Merges	0

Reduce use of PowerPC CPU model defines now in various PowerPC BSP configure.ac required bsps/powerpc/include/rtems/powerpc/powerpc.h. Some may indicate that the set of predefined CPP macros set as a side-effect of -mcpu=XXX are incomplete.

Author: Joel Sherrill 2018-10-13T22:57:17.000Z

- **Milestone** changed from %"5.1" to %"5.2"

Author: Chris Johns 2018-10-14T00:22:12.000Z

- **Milestone** changed from %"5.2" to %"Indefinite"
- **Version** changed from ~"5" to ~"6"

Author: Amar Takhar 2025-09-05T03:01:11.475Z

changed the description

Author: Kinsey Moore 2026-05-15T15:37:19.743Z

set status to **Done**

Author: Kinsey Moore 2026-05-15T15:37:20.495Z

This is no longer relevant and _ppc_generic does not appear in the current repository.

1.8.1.65 4188 - Quick Start 2.6 Not working for me and some tests failing for sparc-rtems6

Id	4188
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2020-11-24T14:00:27.000Z
Closed	2026-05-15T15:26:20.236Z
Updated	2026-05-15T15:26:20.416Z
Milestone	6.3
Labels	old-indefinite, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4188
Merges	0

Original author: rmueller

The chapter to test the test the built BSP is not working for me in its current form. I had to use the following command to perform the tests:

rtems-test –rtems-bsp=erc32-sis ../../rtems/6/sparc-rtems6/erc32/tests

But maybe I also did something wrong? I took care to follow the guide exactly and the BSP was not installed in the src path like recommended. Maybe it would be a good idea to update the command specified in 2.6.

Also, some of the tests failed apparently:

Passed: 577 Failed: 3 User Input: 6 Expected Fail: 1 Indeterminate: 0 Benchmark: 3 Timeout: 0 Test too long: 0 Invalid: 0 Wrong Version: 0 Wrong Build: 0 Wrong Tools: 0 ———— Total: 590 Failures: User Input: capture.exe dl10.exe fileio.exe monitor.exe termios.exe top.exe Expected Fail: psxfenv01.exe Benchmark: dhrystone.exe linpack.exe whetstone.exe Average test time: 0:00:00.264940 Testing time : 0:02:36.314482

Kind Regards Robin

- mueller-quickstart-test-fix.patch

Author: Trac Migrate	2020-11-24T14:14:06.000Z

Original author: rmueller

I am correcting the used command:

cd $HOME/quick-start/rtems/6 bin/rtems-test –rtems-bsp=erc32-sis sparc-rtems6/erc32/tests

Author: Trac Migrate	2020-12-03T17:09:08.000Z

Original author: rmueller

Patch was sent to address this issue

Author: Trac Migrate 2020-12-18T10:44:30.000Z

Original author: rmueller

- **Version** set to ~"6"

Author: Trac Migrate 2020-12-18T11:33:17.000Z

Original author: rmueller

- **Attachment** mueller-quickstart-test-fix.patch added

Fixes for Quick Start commands to run tests

Author: Amar Takhar 2025-09-05T02:57:46.002Z

changed the description

Author: Kinsey Moore 2026-05-15T15:26:20.292Z

set status to **Done**

Author: Kinsey Moore 2026-05-15T15:26:21.103Z

The documentation is now clear about needing to adjust the path based on how you performed the build.

1.8.1.66 4187 - Update QuickStart 2.4 for git install

Id	4187
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2020-11-24T10:54:49.000Z
Closed	2026-05-15T15:11:03.971Z
Updated	2026-05-15T15:11:04.125Z
Milestone	6.3
Labels	doc, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4187
Merges	0

Original author: rmueller

When installing the tool suite for a git clone, the build set 5/rtems-sparc does not appear to be available anymore.

It would be a good idea to update to Quick Start guide accordingly.

Running ../source-builder/sb-set-builder –list-bsets yields the list of build sets and 5/rtems-sparc is not among them.

So installing 5/rtems-sparc is not possible.

Kind Regards Robin

- mueller-version-5-6-replacements.patch

Author: Chris Johns 2020-12-01T23:08:14.000Z

Original author: rmueller

Would you be able to provide a patch to the documentation to update the Quick Start guide?

Author: Trac Migrate 2020-12-02T10:10:24.000Z

Original author: rmueller

I can look into it. It's probably a better idea to adapt the getting the git sources section to checkout version 5 instead.

Author: Trac Migrate 2020-12-18T11:16:20.000Z

Original author: rmueller

- **Version** set to ~"6"

Author: Trac Migrate 2020-12-18T11:19:52.000Z

Original author: rmueller

- **Attachment** mueller-version-5-6-replacements.patch added

Version 5/6 fixes for QuickStart

Author: Amar Takhar 2024-04-25T20:48:30.149Z

changed the description

Author: Kinsey Moore 2026-05-15T15:11:04.026Z

set status to **Done**

Author: Kinsey Moore 2026-05-15T15:11:04.692Z

The documentation has been updated and it's a bit more clear that you'll need to adapt the versions to what you downloaded.

1.8.1.67 4825 - Issue building stack using RTEMS quick start guide

Id	4825
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2023-01-25T17:34:10.000Z
Closed	2026-05-15T14:57:26.567Z
Updated	2026-05-15T15:00:51.576Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4825
Merges	0

Original author: OneV_2

In section 2.3 of the quick start guide quick start, when using the curl command, it downloads the release version 5. `curl https://ftp.rtems.org/pub/rtems/releases/5/5.1/sources/rtems-source-builder-5.1.tar.xz | tar xJf -`

In section 2.4, the command `../source-builder/sb-set-builder --prefix=$HOME/quick-start/rtems/6 6/rtems-sparc` tries to install the suite by looking for version 6, but since the curl downloads version 5, the install suite fails with an error. `error: no build set file found`

Author: Chris Johns 2025-09-19T01:42:02.920Z

changed the description

Author: Kinsey Moore 2026-05-15T14:57:26.624Z

set status to **Done**

Author: Kinsey Moore 2026-05-15T14:57:27.319Z

The documentation surrounding that command in section 2.3 is clear that it is an example of how to obtain release sources (and that you should expect to adapt further commands for this situation) and the build command documentation in 2.4 is also clear that you should adapt the version specified to your downloaded sources.

Author: Amar Takhar 2026-05-15T15:00:51.551Z

set status to **Won't do**

1.8.1.68 4773 - Can't build ATSAM BSP

Id	4773
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2022-12-12T22:05:47.000Z
Closed	2026-05-15T15:00:32.361Z
Updated	2026-05-15T15:00:32.513Z
Milestone	6.3
Labels	bsp, priority::normal, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4773
Merges	0

Original author: novium.kyle

I have been trying to build the BSP for the ATSAM architecture following the Quick Start Guide and the RSB BSP Build. However, the build keeps failing.

RSB seems to be set up properly:

```
$ ../source-builder/sb-check
RTEMS Source Builder - Check, 6 (65f83cf973d6)
Environment is ok
```

And I can see the bset:

```
$ ../source-builder/sb-set-builder --list-bsets
RTEMS Source Builder - Set Builder, 6 (65f83cf973d6)
Examining: config
Examining: ../source-builder/config
Examining: ../bare/config
Examining: config
...
7/rtems-x86_64.bset
bsps/atsamv.bset
bsps/beagleboneblack.bset
...
```

This is the command I'm trying to use:

```
$ ../source-builder/sb-set-builder --prefix=$HOME/qs/rtems/6 --target=arm-rtems6 -
↪-with-rtems-bsp=atsamv --with-rtems-tests=yes 6/rtems-kernel
RTEMS Source Builder - Set Builder, 6 (65f83cf973d6)
Build Set: 6/rtems-kernel
config: tools/rtems-kernel-6.cfg
package: rtems-kernel-bsps-1
building: rtems-kernel-bsps-1
error: building rtems-kernel-bsps-1
```

(continues on next page)

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```
Build FAILED
See error report: rsb-report-rtems-kernel-bsps-1.txt
error: building rtems-kernel-bsps-1
Build Set: Time 0:00:00.301361
Build FAILED
```

I have also tried:

```
--with-rtems-bsp=atsam
```

and:

```
--with-rtems-bsp=arm
```

This is the error from the log file mentioned:

```
building: rtems-kernel-bsps-1
run: /bin/sh -ex  /home/kyle/qs/src/rsb/rtems/build/rtems-kernel-bsps-1/do-build
+ export SB_ORIG_PATH=/home/kyle/.vscode-server/bin/
↪5235c6bb189b60b01b1f49062f4ffa42384f8c91/bin/remote-cli:/usr/local/sbin:/usr/
↪local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/usr/lib/
↪wsl/lib:/mnt/c/Program Files (x86)/NVIDIA Corporation/PhysX/Common:/mnt/c/
↪windows/system32:/mnt/c/windows:/mnt/c/windows/System32/Wbem:/mnt/c/windows/
↪System32/WindowsPowerShell/v1.0/:/mnt/c/windows/System32/OpenSSH/:/mnt/c/
↪Program Files (x86)/Windows Kits/8.1/Windows Performance Toolkit/:/mnt/c/
↪Program Files/Microchip/xc32/v4.20/bin:/mnt/c/Program Files/Docker/Docker/
↪resources/bin:/mnt/c/ProgramData/chocolatey/bin:/mnt/c/Program Files/Microsoft␣
↪VS Code/bin:/mnt/c/Program Files/Git/cmd:/mnt/c/Program Files/TortoiseSVN/bin:/
↪mnt/c/Program Files/nodejs/:/mnt/c/Program Files/gs/gs9.56.1/bin:/mnt/c/Users/
↪kyle.williams/AppData/Local/Microsoft/WindowsApps:/mnt/c/tools/neovim/nvim-
↪win64/bin:/mnt/c/Users/kyle.williams/AppData/Roaming/npm:/snap/bin
/home/kyle/qs/src/rsb/rtems/build/rtems-kernel-bsps-1/do-build: 4: export: (x86)/
↪NVIDIA: bad variable name
shell cmd failed: /bin/sh -ex  /home/kyle/qs/src/rsb/rtems/build/rtems-kernel-
↪bsps-1/do-build
error: building rtems-kernel-bsps-1
```

What am I doing wrong here? And where in the manual is this explained?

Author: Joel Sherrill 2022-12-14T23:38:10.000Z

Original author: novium.kyle

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

I normally just use the RSB to build the tools and then waf to build the BSP. This procedure is covered in the Users Manual. This works well so I am not sure what happened here unless the kernel RSB bset has an issue.

In fact, today I posted results from the rtems-bsp-builder tool which builds every BSP in multiple configurations and there were no failures. The atsamv built fine per https://lists.rtems.org/pipermail/build/2022-December/038438.html.

My guess at this point is that your $PATH has a space in it based on this output from your post:

```
/home/kyle/qs/src/rsb/rtems/build/rtems-kernel-bsps-1/do-build: 4:␣
↪export: (x86)/NVIDIA: bad variable name
```

Beyond that, is there something in a log or rsb-* file which might indicate what went wrong?

Author: Trac Migrate 2022-12-21T03:17:30.000Z

Original author: novium.kyle

That $PATH problem was my mistake. I had started a new shell when I went to reproduce the problem and copy the output for this ticket. I forgot to do the export on my $PATH which typically is this:

```
/usr/lib/lightdm/lightdm:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/
↪bin:/sbin:/bin:/usr/games:/usr/local/games:/home/kyle/qs/rtems/6/bin
```

In which case the error is this:

```
+ ./waf configure --prefix=/home/kyle/qs/rtems/6 --rtems-config=config.
↪ini
Setting top to                           : /home/kyle/qs/src/rsb/rtems/
↪build/rtems-kernel-bsps-1/rtems-kernel-bsps-1-
↪d0b92735b0dfd509e1edb82c7145042b67714f43/rtems-
↪d0b92735b0dfd509e1edb82c7145042b67714f43
Setting out to                           : /home/kyle/qs/src/rsb/rtems/
↪build/rtems-kernel-bsps-1/rtems-kernel-bsps-1-
↪d0b92735b0dfd509e1edb82c7145042b67714f43/rtems-
↪d0b92735b0dfd509e1edb82c7145042b67714f43/build
Regenerate build specification cache (needs a couple of seconds)...
Section name 'atsamv' is a malformed 'arch/bsp' tuple
(complete log in /home/kyle/qs/src/rsb/rtems/build/rtems-kernel-bsps-1/
↪rtems-kernel-bsps-1-d0b92735b0dfd509e1edb82c7145042b67714f43/rtems-
↪d0b92735b0dfd509e1edb82c7145042b67714f43/build/config.log)
shell cmd failed: /bin/sh -ex  /home/kyle/qs/src/rsb/rtems/build/rtems-
↪kernel-bsps-1/do-build
error: building rtems-kernel-bsps-1
```

The line:

```
Section name 'atsamv' is a malformed 'arch/bsp' tuple
```

gave me a clue. So I used:

```
../source-builder/sb-set-builder --prefix=$HOME/qs/rtems/6 --target=arm-
↪rtems6 --with-rtems-bsp=arm/atsamv --with-rtems-tests=yes 6/rtems-
↪kernel
```

Which begs the question, why does the Quick Start Guide use:

```
--with-rtems-bsp=erc32
```

in Section 2.5.1 if its supposed to be 'arch/bsp'?

But that command seems to complete successfully:

```
$ ../source-builder/sb-set-builder --prefix=$HOME/qs/rtems/6 --
↪target=arm-rtems6 --with-rtems-bsp=arm/atsamv --with-rtems-tests=yes␣
↪6/rtems-kernel
RTEMS Source Builder - Set Builder, 6 (65f83cf973d6)
Build Set: 6/rtems-kernel
config: tools/rtems-kernel-6.cfg
package: rtems-kernel-bsps-1
building: rtems-kernel-bsps-1
sizes: rtems-kernel-bsps-1: 225.306MB (installed: 33.319MB)
cleaning: rtems-kernel-bsps-1
reporting: tools/rtems-kernel-6.cfg -> rtems-kernel-bsps-1.txt
reporting: tools/rtems-kernel-6.cfg -> rtems-kernel-bsps-1.xml
staging: rtems-kernel-bsps-1 -> /home/kyle/qs/src/rsb/rtems/build/tmp/
↪sb-1000-staging
installing: rtems-kernel-bsps-1 -> /home/kyle/qs/rtems/6
cleaning: rtems-kernel-bsps-1
installing: 6/rtems-kernel -> /home/kyle/qs/rtems/6
clean staging: 6/rtems-kernel
Staging Size: 33.323MB
Build Set: Time 0:00:15.271741
```

But then the test fails:

```
$ rtems-test --rtems-bsp=arm/atsamv build/arm/atsamv
RTEMS Testing - Tester, 6.0.not_released
Command Line: /home/kyle/qs/rtems/6/bin/rtems-test --rtems-bsp=arm/
↪atsamv build/arm/atsamv
Host: Linux DESKTOP-U0P8IUP 5.10.16.3-microsoft-standard-WSL2 #1 SMP␣
↪Fri Apr 2 22:23:49 UTC 2021 x86_64
Python: 3.10.6 (main, Nov 14 2022, 16:10:14) [GCC 11.3.0]
Host: Linux-5.10.16.3-microsoft-standard-WSL2-x86_64-with-glibc2.35␣
↪(Linux DESKTOP-U0P8IUP 5.10.16.3-microsoft-standard-WSL2 #1 SMP Fri␣
↪Apr 2 22:23:49 UTC 2021 x86_64 x86_64)
error: cannot find bsp configuration file: arm/atsamv.ini
```

Where am I going wrong? Am I malforming the command parameters again? Are the proper forms documented anywhere? I haven't seen anything in the manual yet.

Author: Trac Migrate 2023-05-19T04:04:25.000Z

Original author: novium.kyle

I can confirm this is an error in the documentation - it should be made with a *slash*, that is `../rsb/source-builder/sb-set-builder --prefix=$HOME/rtems/6/ --host=sparc-rtems6 --with-rtems-bsp=sparc/erc32 6/rtems-libbsd`, or `../rsb/source-builder/sb-set-builder --prefix=$HOME/rtems/6/ --target=aarch64-rtems6 --with-rtems-bsp=aarch64/raspberrypi4b --with-rtems-test=yes 6/rtems-kernel`

Author: Chris Johns 2025-09-19T01:42:02.538Z

changed the description

Author: Kinsey Moore 2026-05-15T15:00:32.416Z

set status to **Done**

Author: Kinsey Moore 2026-05-15T15:00:33.131Z

This has been fixed in the documentation.

1.8.1.69 5367 - Remove Mongoose Web Server

Id	5367
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Kinsey Moore
Created	2025-10-02T23:27:00.074Z
Closed	2026-05-15T14:38:37.517Z
Updated	2026-05-15T14:38:37.703Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5367
Merges	0

Summary

The Mongoose webserver (mghttpd) in RTEMS is old and pre-dates the change to GPL. The project forked and the permissive licensed code lives on as Civitweb. The mghttpd code in RTEMS is from before the split and is unmaintained upstream.

Civitweb can be built using the RSB. It is an active project.

It is recommended that users migrate to Civitweb.

The mghttd code is deprecated in RTEMS 6 and will be removed before RTEMS 7 branches.

1.8.1.69.1.1 Pre-set options

Author: Joel Sherrill 2025-07-18T13:44:44.807Z

changed the description

Author: Joel Sherrill 2025-07-18T13:45:29.487Z

mentioned in issue #5304

Author: Joel Sherrill 2025-07-24T22:55:11.149Z

mentioned in issue #5310

Author: Chris Johns 2025-10-02T23:24:55.117Z

added #10 as parent epic

Author: Chris Johns 2025-10-02T23:26:11.606Z

added #15 as parent epic

Author: Chris Johns 2025-10-02T23:26:36.234Z

added #10 as parent epic

Author: Chris Johns 2025-10-02T23:27:00.455Z

cloned from #5303

Author: Chris Johns 2025-10-02T23:27:23.196Z

added rtems#15 as parent epic

Author: Chris Johns 2025-10-02T23:27:31.723Z

changed title from

Deprecate and

Remove Mongoose Web Server

to

Remove Mongoose Web Server

Author: Kinsey Moore 2026-05-15T14:31:55.455Z

This is a duplicate of #5310

Author: Kinsey Moore 2026-05-15T14:38:37.583Z

set status to **Done**

1.8.1.70 5202 - Termios: cannot set all baud rates with *rtems_termios_set_best_baud()*

Id	5202
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Jan Sommer
Closed by	Kinsey Moore
Created	2025-02-03T19:00:52.672Z
Closed	2026-05-15T14:33:42.476Z
Updated	2026-05-15T14:33:42.674Z
Milestone	6.3
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5202
Merges	4

Summary

Steps to reproduce

https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/cpukit/libcsupport/src/termios_baudtable.c?ref_type=heads https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/cpukit/libcsupport/src/termios_setbestbaud.c?ref_type=heads#L43

The algorithm in `rtems_termios_set_best_baud()` successively iterates over the elements of the `rtems_termios_baud_table` and searches for a fitting baud rate (checking by "is element lower than the `baud` parameter, then checks the next element, ...).

The table of baud rates is not sorted correctly from a certain point on, therefore the algorithm for choosing the optimal baud rate does not work for every baud rate.

e.g. if the input is `7200` (which is in the table) the search terminates at `9600` as that is larger, the last entry was `4800`, so in the check it sets it to either of those, but not the `7200`.

We observed it when we entered `38401` (due to measurement errors on the hardware was a bit larger). We identified the search ending at `57600` and it ended using the `last = 28800`.

1.8.1.70.2.1 Pre-set options

Author: Gedare Bloom 2025-02-03T19:00:52.815Z

cloned from #5162

Author: Gedare Bloom 2025-02-03T19:00:52.746Z

assigned to @thesummer

Author: Gedare Bloom 2025-02-03T19:01:07.472Z

Author: Gedare Bloom 2025-02-03T19:05:34.225Z

mentioned in merge request !381

Author: Jan Sommer 2025-02-06T03:35:43.024Z

mentioned in commit 9641e1e97d8195d567a6218228ef0f0f2d7fdc25

Author: Chris Johns 2025-10-02T22:31:52.159Z

added rtems#15 as parent epic

Author: Kinsey Moore 2026-05-15T14:33:42.543Z

set status to **Done**

Author: Kinsey Moore 2026-05-15T14:33:43.296Z

This has been merged into 6 branch.

1.8.1.71 5236 - Runtime symbols loading is broken

Id	5236
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2025-04-01T00:58:33.568Z
Closed	2026-05-15T14:32:56.760Z
Updated	2026-05-15T14:32:56.961Z
Milestone	6.3
Labels	cpukit::dl, tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5236
Merges	0

Summary

Run time symbol loading from an object file is broken. The change to track dependencies added support to check the origin of a symbol to track dependencies. Runtime loading of symbols requires the symbol `rtems_rtl_base_sym_global_add` be in the symbol table. Loading an symbol object file causes a constrictor attribute function to be run and that calls `rtems_rtl_base_sym_global_add` adding the base image global symbols. Currently attempting to load a symbol object file results in an unresolved external to `rtems_rtl_base_sym_global_add` because the symbols is inserted into the global symbol table and not added to the base image's global symbols.

Also `rtems-syms` does not correctly export the needed TLS data.

Author: Chris Johns 2025-04-01T00:58:33.714Z

cloned from #5234

Author: Chris Johns 2025-04-01T00:58:33.637Z

assigned to @chris

Author: Chris Johns 2025-04-01T01:34:24.159Z

mentioned in merge request !461

Author: Kinsey Moore 2025-04-01T13:51:00.525Z

Author: Chris Johns 2025-12-03T04:17:13.243Z

added rtems#15 as parent epic

Author: Kinsey Moore 2026-05-15T14:32:56.821Z

set status to **Done**

Author: Kinsey Moore 2026-05-15T14:32:57.586Z

This has been merged into 6 branch.

1.8.1.72 5375 - Backport to 6 branch “bsps/qspi: Make flashdev control structure private”

Id	5375
State	closed
Type	ISSUE
Author	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-10-16T16:29:49.878Z
Closed	2026-05-15T14:31:15.089Z
Updated	2026-05-15T14:31:15.170Z
Milestone	6.3
Labels	device::spi
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5375
Merges	0

The following discussion from !805 should be addressed:

- [] @opticron started a discussion:

  This needs a backport to 6 branch.

  Author: Kinsey Moore 2025-10-16T16:29:49.966Z

  set status to **To do**

  Author: Kinsey Moore 2025-10-16T16:30:09.532Z

  added rtems#15 as parent epic

  Author: Kinsey Moore 2025-10-16T16:34:29.244Z

  mentioned in merge request !806

  Author: Kinsey Moore 2025-10-16T16:35:19.182Z

  mentioned in merge request !804

  Author: Chris Johns 2025-10-20T14:42:07.187Z

  mentioned in commit 36a3845d9cf896bb14ad9a9534b8f6acacba39b4

  Author: Kinsey Moore 2026-05-15T14:31:15.144Z

  set status to **Done**

Author: Kinsey Moore 2026-05-15T14:31:15.767Z

This has been merged into 6 branch.

1.8.1.73 5382 - Back port fix for flashdev JFFS2 double free of mount_data and instance to *6*

Id	5382
State	closed
Type	ISSUE
Author	Aaron Nyholm
Closed by	Kinsey Moore
Created	2025-10-28T03:32:31.556Z
Closed	2026-05-15T14:30:58.484Z
Updated	2026-05-15T14:30:58.560Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5382
Merges	0

Summary

Back port the fix for #5381 to 6 branch

Steps to reproduce

Author: Aaron Nyholm 2025-10-28T03:32:31.783Z

set status to **To do**

Author: Aaron Nyholm 2025-10-28T03:35:22.066Z

mentioned in merge request !816

Author: Kinsey Moore 2026-05-15T14:30:58.536Z

set status to **Done**

Author: Kinsey Moore 2026-05-15T14:30:59.134Z

This has been merged into 6 branch.

1.8.1.74 5435 - Add -D_LDBL_EQ_DBL=1 workaround to ABI_FLAGS on Coldfires

Id	5435
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Kinsey Moore
Created	2026-01-27T06:54:14.032Z
Closed	2026-05-15T14:30:39.929Z
Updated	2026-05-15T14:30:40.125Z
Milestone	6.3
Labels	arch:m68k, lang::c
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5435
Merges	0

Summary

Add a work around to issues in `newlib`.

Steps to reproduce

The following code:

```
#include <ieeefp.
```

Author: Chris Johns 2026-01-27T06:54:14.185Z

added rtems#15 as parent epic

Author: Chris Johns 2026-01-27T06:54:14.293Z

set status to **To do**

Author: Chris Johns 2026-01-27T06:56:45.357Z

mentioned in merge request !951

Author: Jeremy Lorelli 2026-01-27T07:05:35.148Z

Original MR: https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/937

Author: Kinsey Moore 2026-05-15T14:30:39.990Z

set status to **Done**

Author: Kinsey Moore 2026-05-15T14:30:40.636Z

This has been merged into 6 branch.

1.8.1.75 5212 - machine/_timecounter.h is missing _Timecounter_Getboottime(_tvp)

Id	5212
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-02-11T22:24:18.786Z
Closed	2025-10-02T23:17:28.281Z
Updated	2026-03-13T01:16:54.157Z
Milestone	6.3
Labels	qualification, rtems::kernel
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5212
Merges	2

The `machine/_kernel_time.h` header has:

```
#define         getboottime(_tvp) _Timecounter_Getboottime(_tvp)
#define         getboottimebin(_bt) _Timecounter_Getboottimebin(_bt)
```

however `machine/_timecounter.h` does not have a prototype for `_Timecounter_Getboottime` and GCC 14 now generates an error.

Author: Chris Johns 2025-02-11T22:24:18.920Z

cloned from #5211

Author: Chris Johns 2025-02-11T22:24:18.850Z

assigned to @chris

Author: Chris Johns 2025-02-11T22:24:31.498Z

Author: Chris Johns 2025-02-11T22:25:03.138Z

GCC 13 does not complain but the issue is still present.

Author: Chris Johns 2025-02-11T22:27:23.402Z

mentioned in merge request !416

Author: Chris Johns	2025-10-02T23:16:53.159Z

added rtems#15 as parent epic

Author: Chris Johns	2025-10-02T23:17:28.309Z

set status to **Won't do**

1.8.1.76 4736 - RISC-V - ISR_stack allocation and usage by harts > CONFIGURE_MAXIMUM_PROCESSORS

Id	4736
State	closed
Type	ISSUE
Author	Trac Migrate
Closed by	Gedare Bloom
Created	2022-10-05T15:38:19.000Z
Closed	2026-02-19T18:19:16.016Z
Updated	2026-02-19T18:19:16.029Z
Milestone	6.3
Labels	arch:riscv, priority::normal, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4736
Merges	0

Original author: lsilistr

When running SMP with CONFIGURE_MAXIMUM_PROCESSORS < total number of harts, the unused harts that start will allocate interrupt stacks from the sections following .rtemsstack. 16 bytes are used (written) while parking the core in _CPU_Thread_Idle_body.

Unallocated _Per_CPU_Information is also used but only for pointer math - this seems to work out fine.

It does seem like practically, with the default linkcmds, unless the cores are held/delayed by a debugger, they would never end up writing in memory before that memory is used -.rtemsstack is followed by .work.

Is this intended/known behaviour?

Author: Trac Migrate	2022-10-07T05:06:16.000Z

Original author: lsilistr

This is a bug. The arm start.S does not have this issue for example.

Author: Trac Migrate	2022-10-07T05:07:44.000Z

Original author: lsilistr

- **Milestone** set to %”6.1”

Author: Chris Johns 2022-11-30T00:03:38.000Z

Original author: lsilistr

Status update?

Author: Joel Sherrill 2023-06-22T21:00:39.000Z

Original author: lsilistr

- **Owner** set to hesham
- **Status** changed from *new* to *assigned*

Hesham.. can you please take a shot at this?

Author: Joel Sherrill 2023-06-22T21:07:55.000Z

Original author: lsilistr

- **Summary** changed from *ISR_stack allocation and usage by harts > CONFIGURE_MAXIMUM_PROCESSORS* to *RISC-V - ISR_stack allocation and usage by harts > CONFIGURE_MAXIMUM_PROCESSORS*

Author: Amar Takhar 2024-05-17T02:09:03.268Z

changed the description

Author: Amar Takhar 2024-05-17T02:09:23.582Z

@joel can this be bumped to %6.2 hesham is not on GitLab.

Author: Joel Sherrill 2025-09-19T00:21:53.492Z

unassigned @tracmigrate

Author: Gedare Bloom 2026-02-19T18:19:16.074Z

set status to **Done**

Author: Gedare Bloom 2026-02-19T18:19:16.699Z

This was fixed in e5233057be3396e9cd75ffd3a92d2048df316a4b

1.8.1.77 5490 - Backport “cpukit/libio: Fix race condition in iop free”

Id	5490
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Gedare Bloom
Created	2026-02-12T21:05:54.747Z
Closed	2026-02-12T21:36:06.400Z
Updated	2026-02-12T21:36:06.614Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5490
Merges	0

The following discussion from !1048 should be addressed:

- [] @opticron started a discussion:

  This needs a backport to 6 branch as well.

  Author: Kinsey Moore 2026-02-12T21:05:54.941Z

  added rtems#15 as parent epic

  Author: Kinsey Moore 2026-02-12T21:05:55.038Z

  set status to **To do**

  Author: Kinsey Moore 2026-02-12T21:05:55.183Z

  assigned to @opticron

  Author: Kinsey Moore 2026-02-12T21:09:33.536Z

  mentioned in merge request !1060

  Author: Gedare Bloom 2026-02-12T21:36:06.468Z

  set status to **Done**

1.8.1.78 5411 - Follow-up from “cpukit/libio: Support close with IOP references held”

Id	5411
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2025-12-26T19:02:47.354Z
Closed	2026-02-12T21:06:00.887Z
Updated	2026-02-12T21:06:01.071Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5411
Merges	1

The following discussion from !635 should be addressed:

- [] @opticron started a discussion:

  @chris This appears to have broken the newlib01 test on at least zynqmp_qemu.

  Author: Kinsey Moore 2025-12-26T19:02:47.481Z

  set status to **To do**

  Author: Kinsey Moore 2025-12-26T19:02:56.885Z

  added rtems#15 as parent epic

  Author: Kinsey Moore 2025-12-26T19:03:17.498Z

  assigned to @chris

  Author: Allan Hessenflow 2026-01-16T03:54:44.833Z

  I’m testing in main, not a 6.x branch, but newlib01 is also broken for the efm32gg11 bsp and it runs okay if I revert the referenced IOP changes. It seems likely to be the same issue seen with the zynqmp_qemu. Here’s what I’ve found and a possible fix:

  This call chain occurs (omitting some irrelevant stuff) exit() -> fatal_extension() -> fstat() -> rtems_libio_get_iop().

  That calls rtems_libio_iop_hold() followed by rtems_libio_iop_drop() because the descriptor is closed.

  Then rtems_libio_iop_drop() -> rtems_libio_free() -> rtems_libio_free_iop(). However the referenced iop is already on the free list. So I added an additional check below before calling rtems_libio_free_iop(), which appears to fix the problem. However I don’t feel I have a good understanding of how all this IOP stuff is intended to work so hopefully someone who does will evaluate and comment.

I'll also note that spintrcritical24 was failing as well on the efm32gg11 and it also appears to be fixed with this change. It had been ending up in an infinite loop trying to count free iops because rtems_libio_iop_free_head->data1 == rtems_libio_iop_free_head. That state is consistent with an iop being appended to the free list twice.

```
diff --git a/cpukit/include/rtems/libio_.h b/cpukit/include/rtems/libio_
↪.h
index 21a57cdc4f..0bd088d498 100644
--- a/cpukit/include/rtems/libio_.h
+++ b/cpukit/include/rtems/libio_.h
@@ -150,12 +150,13 @@ static inline void rtems_libio_free(
* the iop so consider it an indirect reference. We cannot return
* the iop to the free list while the user owns the fd.
*
-   * Read the flags once as it is an atomic and we need to test 2
+   * Read the flags once as it is an atomic and we need to test 3
* flags. No convenience call as this is the only case we have.
*/
const unsigned int flags = rtems_libio_iop_flags( iop );
if ( ( ( flags & LIBIO_FLAGS_OPEN ) == 0 )
-       && ( ( flags & LIBIO_FLAGS_REFERENCE_MASK ) == 0 ) ) {
+       && ( ( flags & LIBIO_FLAGS_REFERENCE_MASK ) == 0 )
+       && ( ( flags & LIBIO_FLAGS_FREE ) == 0 ) ) {
rtems_libio_free_iop( iop );
}
}
```

Author: Allan Hessenflow 2026-01-16T17:27:01.435Z

On further reflection the possible fix above is certainly incorrect. A better fix would be the one below, replace the test !rtems_ibio_iop_is_free() inside rtems_libio_free_iop() with an atomic test and set of LIBIO_FLAGS_FREE prior to the rtems_libio_lock(). I'm fairly confident this correctly addresses the newlib01 case. I don't know about spintrcritical24 (it does pass with the efm32gg11 bsp with either patch but I can't explain why; it is very sensitive to timing).

```
diff --git a/cpukit/libcsupport/src/libio.c b/cpukit/libcsupport/src/
↪libio.c
index 0a0c238d43..cd1bf2e851 100644
--- a/cpukit/libcsupport/src/libio.c
+++ b/cpukit/libcsupport/src/libio.c
@@ -156,10 +156,12 @@ void rtems_libio_free_iop(
)
{
size_t zero;
+  unsigned int flags;

-  rtems_libio_lock();
+  flags = rtems_libio_iop_flags_set( iop, LIBIO_FLAGS_FREE );
```

(continues on next page)

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```
+  if ( ( flags & LIBIO_FLAGS_FREE ) == 0 ) {
+    rtems_libio_lock();

-  if ( !rtems_libio_iop_is_free( iop ) ) {
/*
* Clear the flags. All references should have been dropped.
*/
@@ -176,9 +178,10 @@ void rtems_libio_free_iop(
*/
*rtems_libio_iop_free_tail = iop;
rtems_libio_iop_free_tail = &iop->data1;
+
+    rtems_libio_unlock();
}

-  rtems_libio_unlock();
}

int rtems_libio_count_open_iops(
```

Author: Allan Hessenflow 2026-01-18T01:32:59.209Z

With additional testing I can now explain the spintrcritical24 failures I've seen and the patch above that adds the atomic test and set of LIBIO_FLAGS_FREE in rtems_libio_free_iop outside the semaphore protected section is a correct fix for that as well as for newlib01.

In spintrcritical24 fcntl() is called from inside an interrupt on a file descriptor that is being closed from a normal task at approximately the same time. The close() results in rtems_libio_free_iop() being called. If the interrupt occurs inside that function after the test for LIBIO_FLAGS_FREE and before that flag is set then the free occurs twice on the same descriptor, messing up the free list.

The newlib01() test is similar in that it causes rtems_libio_free_iop() to be called at a point in the exit() process when semaphores can no longer be taken.

After this patch I'm not certain there isn't still a window for spintrcritical24 to cause a problem. If the interrupt were to occur earlier, but still after LIBIO_FLAGS_OPEN has been cleared and the hold close() had on the descriptor has been dropped, then the rtems_libio_free_iop() would actually occur during the interrupt context. Assuming this scenario is possible, one solution would be to check for interrupt context prior to the test+set of LIBIO_FLAGS_FREE and not proceed in that case.

Finally, I think it would also be acceptable to just declare spintrcritical24 as invalid since I don't think fcntl() is ever guaranteed to be safe from an interrupt context. If it was my decision I'd still fix it on the off chance there is or will someday be a function that takes a file descriptor and that's specified as interrupt safe, by using either of the above patches combined with an ISR_Is_in_progress() check. In the case of newlib01, in general calling fstat() on an already closed file isn't safe since the descriptor could have been reused, but when newlib01 does it that isn't posslbe and either of the two above patches would allow newlib01 to do so.

Author: Chris Johns 2026-02-06T00:05:39.380Z

set status to **In progress**

Author: Aaron Nyholm 2026-02-06T04:59:18.803Z

mentioned in merge request !1048

Author: Kinsey Moore 2026-02-12T21:06:02.190Z

set status to **Done**

1.8.1.79 5488 - Complete the u-boot support for qoriq_e500

Id	5488
State	closed
Type	ISSUE
Author	Gedare Bloom
Closed by	Gedare Bloom
Created	2026-02-12T16:29:01.822Z
Closed	2026-02-12T16:31:56.770Z
Updated	2026-02-12T16:31:56.855Z
Milestone	6.3
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5488
Merges	0

Summary

The u-boot support for powerpc/qoriq is not complete. Under bsps/powerpc/qoriq/include/bsp.h, bsp_uboot_getenv is declared if HAS_UBOOT is defined. However, in HAS_UBOOT is not configurable through waf and variables needed by bsp_uboot_getenv are not defined for qoriq.

Steps to reproduce

- Add the .yml file under spec so that HAS_UBOOT can be defined in config.ini
- Add uboot_support.c to define the u-boot environment base address and size

Expected behaviour

User can have “HAS_UBOOT = True” in config.ini when building RTEMS, and then use bsp_uboot_getenv in applications to access the u-boot environment variables.

powerpc, qoriq

Author: Gedare Bloom 2026-02-12T16:29:01.890Z

cloned from #5439

Author: Gedare Bloom	2026-02-12T16:29:57.722Z

mentioned in merge request !976

Author: Gedare Bloom	2026-02-12T16:30:37.068Z

added rtems#15 as parent epic

Author: Gedare Bloom	2026-02-12T16:31:56.831Z

set status to **Done**

1.8.1.80 5227 - testsuites/psxtests: psxaio05 fails on ZynqMP

Id	5227
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-03-10T20:26:35.031Z
Closed	2026-01-30T19:38:43.726Z
Updated	2026-01-30T19:38:43.885Z
Milestone	6.3
Labels	rtems::testing, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5227
Merges	0

Summary

The psxaio05 test fails on both hardware and QEMU BSPs with:

```
../../../testsuites/psxtests/psxaio05/init.c: 142 status == 0
```

Steps to reproduce

Run the psxaio05 test under QEMU with:

```
qemu-system-aarch64 -no-reboot -nographic -serial mon:stdio -machine xlnx-zcu102 -
↪m 4096 -kernel build/aarch64/zynqmp_qemu/testsuites/psxtests/psxaio05.exe
```

1.8.1.80.2.1 Pre-set options

Author: Kinsey Moore 2025-03-11T20:34:44.479Z

assigned to @opticron

Author: yang zhang 2025-03-20T06:32:27.762Z

I also find this issue, i think the reason maybe below: In toolchain, <limits.h> also define AIO_LISTIO_MAX /* * Definitions of the following may be omitted if the value is >= stated * minimum but is indeterminate. */

So AIO_LISTIO_MAX in <aio_misc.h> won't be defined again.

Author: Amar Takhar 2025-10-12T18:25:20.534Z

Does this need fixing for 7.1? If not please bump.

Author: Kinsey Moore 2025-10-12T18:25:20.494Z

Moved.

Author: Kinsey Moore 2025-12-26T18:16:05.074Z

As Yang noted, this appears to be an issue with conflicting definitions and this is no longer present on main/7. I will submit a fix for the 6 branch that overrides the toolchain value.

Author: Kinsey Moore 2025-12-26T18:16:12.123Z

added rtems#15 as parent epic

Author: Kinsey Moore 2025-12-26T18:59:30.094Z

mentioned in merge request !884

Author: Joel Sherrill 2026-01-23T01:32:05.249Z

mentioned in commit 4d38bf6ec039efc0b522ba8e4da7539367f5ff7c

Author: Kinsey Moore 2026-01-30T19:38:43.843Z

set status to **Done**

1.8.1.81 5410 - Follow-up from “cpukit/sapi/src/interrtext.c: Add missing definition”

Id	5410
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-12-26T18:20:10.574Z
Closed	2026-01-24T19:09:25.125Z
Updated	2026-01-24T19:09:25.278Z
Milestone	6.3
Labels	backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5410
Merges	0

The following discussion from !883 should be addressed:

- [] @opticron started a discussion:

  This needs a backport to 6 branch.

  Author: Kinsey Moore 2025-12-26T18:20:10.777Z

  added rtems#15 as parent epic

  Author: Kinsey Moore 2025-12-26T18:20:10.898Z

  set status to **To do**

  Author: Kinsey Moore 2025-12-26T18:20:13.401Z

  assigned to @opticron

  Author: Kinsey Moore 2025-12-26T18:34:20.915Z

  mentioned in merge request !884

  Author: Joel Sherrill 2026-01-23T01:32:05.214Z

  mentioned in commit ac41d58472a1ead957f51829a043f76ac397e021

  Author: Kinsey Moore 2026-01-24T19:09:25.186Z

  set status to **Done**

1.8.1.82 5422 - Follow-up from “bsps/aarch64: Add isb instruction after write to sctlr_el1 in aarch64_mmu_enable”

Id	5422
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2026-01-15T18:01:47.709Z
Closed	2026-01-16T22:06:32.047Z
Updated	2026-01-16T22:06:32.183Z
Milestone	6.3
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5422
Merges	0

The following discussion from !908 should be addressed:

- [] @opticron started a discussion:

  Thanks for the contribution! Would you mind also creating a backport MR that references the issue created from this thread?

  Author: Kinsey Moore 2026-01-15T18:01:47.888Z

  added rtems#15 as parent epic

  Author: Kinsey Moore 2026-01-15T18:01:47.995Z

  set status to **To do**

  Author: Kinsey Moore 2026-01-15T18:01:48.133Z

  assigned to @opticron

  Author: Kinsey Moore 2026-01-15T18:02:09.383Z

  mentioned in merge request !908

  Author: Preetam Das 2026-01-15T20:13:40.133Z

  mentioned in merge request !916

  Author: Kinsey Moore 2026-01-16T22:06:01.829Z

  mentioned in commit 7f064c49bdea4c0e7c4d6502e0500c4098f01786

Author: Kinsey Moore	2026-01-16T22:06:32.140Z

set status to **Done**

1.8.1.83 5403 - Backport to 6 branch: “bsps/shared/dev/flash: Add a flashdev simulation backend”

Id	5403
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-12-04T14:31:50.120Z
Closed	2025-12-16T20:48:19.523Z
Updated	2025-12-16T20:48:19.726Z
Milestone	6.3
Labels	device::flash
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5403
Merges	0

The following discussion from !799 should be addressed:

- [] @opticron started a discussion:

  This is purely additive and can be backported to 6 branch.

Author: Kinsey Moore	2025-12-04T14:31:50.309Z

  added rtems#15 as parent epic

Author: Kinsey Moore	2025-12-04T14:31:50.413Z

  set status to **To do**

Author: Kinsey Moore	2025-12-04T14:31:50.551Z

  assigned to @opticron

Author: Kinsey Moore	2025-12-04T15:18:12.178Z

  mentioned in merge request !863

Author: Kinsey Moore	2025-12-16T20:48:19.588Z

  set status to **Done**

1.8.1.84 4095 - Remove doc from rtems-tools

Id	4095
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2020-09-24T23:53:13.000Z
Closed	2025-10-12T19:45:57.375Z
Updated	2025-10-12T20:03:55.957Z
Milestone	6.3
Labels	priority::normal, tickettype::task, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4095
Merges	0

This directory is not used and needs to go. I will push the change directly to the repo to avoid the clutter a review would generate as most of the files and imported.

Author: Joel Sherrill 2022-03-03T22:54:55.000Z

Is this done? Easy to close?

Author: Joel Sherrill 2022-12-28T19:51:02.000Z

Please check if this can be closed.

Author: Gedare Bloom 2023-01-23T20:41:52.000Z

https://git.rtems.org/rtems-tools/tree/doc

Still exists.

Author: Joel Sherrill 2023-02-09T16:04:32.000Z

I think that much of the content in rtems-tools/doc is NOT in the Users Guide. The discussion of the RTEMS Tester in the Users Guide takes a different view and appears to never show how to use it which is the focus of much of this documentation. I don't think this is a simple remove some files.

Author: Joel Sherrill 2023-06-22T21:21:57.000Z

- **Owner** set to @kinsey

Author: Amar Takhar 2024-05-17T02:01:29.459Z

Can this be moved to %6.2?

Author: Kinsey Moore 2024-05-17T02:54:17.851Z

This is fine to move to %”6.2”.

Author: Kinsey Moore 2024-05-17T02:54:22.287Z

changed the description

Author: Gedare Bloom 2024-12-04T21:40:36.469Z

Author: Chris Johns 2025-10-02T23:13:27.246Z

added rtems#15 as parent epic

Author: Kinsey Moore 2025-10-12T19:45:57.435Z

set status to **Done**

Author: Kinsey Moore 2025-10-12T19:45:58.291Z

This was removed in 82a8824fb5eecb61a6aa4e765f4502d051220e02

Author: Amar Takhar 2025-10-12T20:03:55.920Z

Adding link https://gitlab.rtems.org/rtems/tools/rtems-tools/-/commit/82a8824fb5eecb61a6aa4e765f4502d051220e02

1.8.1.85 5771 - Complete the u-boot support for qoriq_e500 (opened)

Id	5771
State	opened
Type	ISSUE
Author	Vijay Banerjee
Created	2026-09-11T18:55:58.837Z
Updated	2026-09-11T18:57:25.202Z
Milestone	6.3
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5771
Merges	0

Summary

The u-boot support for powerpc/qoriq is not complete. Under bsps/powerpc/qoriq/include/bsp.h, bsp_uboot_getenv is declared if HAS_UBOOT is defined. However, in HAS_UBOOT is not configurable through waf and variables needed by bsp_uboot_getenv are not defined for qoriq.

Steps to reproduce

- Add the .yml file under spec so that HAS_UBOOT can be defined in config.ini
- Add uboot_support.c to define the u-boot environment base address and size

Expected behaviour

User can have “HAS_UBOOT = True” in config.ini when building RTEMS, and then use bsp_uboot_getenv in applications to access the u-boot environment variables.

powerpc, qoriq

Author: Vijay Banerjee 2026-09-11T18:55:58.927Z

cloned from #5439

1.8.1.86 4903 - TMS570 console driver, SCI frame error (baudrate calculation error) (opened)

Id	4903
State	opened
Type	ISSUE
Author	Trac Migrate
Created	2023-05-08T11:46:26.000Z
Updated	2026-07-30T23:57:18.161Z
Milestone	6.3
Labels	arch:arm, old-indefinite, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4903
Merges	0

Original author: usha

bsps/arm/tms570/console/tms570-sci.c: tms570_sci_set_attributes()

```
/* Apply baudrate to the hardware */
baudrate *= 2 * 16;
bauddiv = (BSP_PLL_OUT_CLOCK + baudrate / 2) / baudrate;
ctx->regs->BRS = bauddiv? bauddiv - 1: 0;
```

replacing with 2 fixed frame error

```
ctx->regs->BRS = bauddiv? bauddiv - 2: 0;
```

there is issue in baudrate calculation

Author: Joel Sherrill 2023-06-22T20:58:14.000Z

Original author: usha

Can you please submit this as a patch? See https://docs.rtems.org/branches/master/user/support/contrib.html for details.

Thanks.

Author: Trac Migrate 2023-07-13T06:41:03.000Z

Original author: usha

Comment to the next patch proposal

```
--- a/bsps/arm/tms570/console/tms570-sci.c
+++ b/bsps/arm/tms570/console/tms570-sci.c
@@ -311,7 +311,7 @@ bool tms570_sci_set_attributes(
/* Apply baudrate to the hardware */
baudrate *= 2 * 16;
bauddiv = (BSP_PLL_OUT_CLOCK + baudrate / 2) / baudrate;
-  ctx->regs->BRS = bauddiv? bauddiv - 1: 0;
+  ctx->regs->BRS = bauddiv? bauddiv - 2: 0;
```

I think that change is not correct. The actual used values for BSP_PLL_OUT_CLOCK and baudrate should be provided to analyze the case. The code can result in some rounding error and can be enhanced if fractional divider is used or even super fine-grained fractional divider. But these options are available only for for SCI/LIN peripheral case.

According to

TMS570LS31x/21x 16/32-Bit RISC Flash Microcontroller Technical Reference Manual Literature Number: SPNU499B

26.2.3 SCI Baud Rate

SCICLK Frequency = VCLK Frequency / (P + 1 + M / 16)

Asynchronous baud value = SCICLK Frequency / 16

So the subtraction of one corresponds to the manual.

Actual code does not use M part. It would be problem if it is leftover from some boot/monitor but it is part of BRS 32-bit register which is overwritten in the whole, so such problem should not appear either.

So I vote against the proposed change for now and suggest to do analysis what happens in the computation and what are input values and output. Change would/could affect negatively large number of combinations of the baudrate and clocks.

I would consider to discuss if the rounding formula could/should be updated, but I think that it is the best which cane be achieved for rations which do not result in exact ratio.

```
(BSP_PLL_OUT_CLOCK + baudrate / 2) / baudrate;
```

If there is interrest then code can be enhanced by fraction dividers for SCI/LIN peripheral case. The field with variant should be added into tms570_sci_context and in this case the alternative formula can be used

```
long long bauddiv;
bauddiv = (BSP_PLL_OUT_CLOCK * 16ll + baudrate / 2) / baudrate;
ctx->regs->BRS = ((bauddiv >> 4) & 0xffffff) | ((bauddiv & 0xf) << 24);
```

which should be rewritten after header for SCI/LIN update to

```
ctx->regs->BRS = TMS570_LIN_BRS_P(bauddiv >> 4) | TMS570_LIN_BRS_
↪M(bauddiv & 0xf);
```

Author: Trac Migrate 2023-07-27T01:21:34.000Z

Original author: usha

Fri, 14 Jul, 21:37 (12 days ago) hi, so do you want me make this change? Gedare Bloom via gwmail.gwu.edu

Mon, 17 Jul, 14:17 (9 days ago)

to me, joel, Pavel, Přemysl, devel No, because we don't have a reproducible test case.

Do you want to close this ticket as we do not have a test case?

Author: Gedare Bloom 2023-07-27T18:31:31.000Z

Original author: usha

- **Milestone** changed from %"6.1" to %"Indefinite"

Leaving open for now, but not setting a milestone until the bug can be confirmed.

Author: Amar Takhar 2025-09-05T02:57:54.530Z

changed the description

Author: Chris Johns 2026-07-30T23:57:18.124Z

unassigned @tracmigrate

1.8.1.87 3701 - RTEMS Pre-Qualification (ECSS) for SMP (opened)

Id	3701
State	opened
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Sebastian Huber
Created	2019-02-26T10:19:31.000Z
Updated	2026-07-30T23:09:38.883Z
Milestone	6.3
Labels	priority::normal, qualification, tickettype::project, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3701
Merges	0

Original author: sebastian.huber

This ticket summarises activities carried out by a 24 month project sponsored by the European Space Agency (ESA). The project start was February 2019.

The main goal of the project is to enable European space missions to use RTEMS as a software product in criticality category C (this is basically category B without independent software verification and validation, ISVV). Criticality category C means according to ECSS-Q-ST-80C:

“Software that if not executed, or if not correctly executed, or whose anomalous behaviour can cause or contribute to a system failure resulting in: Major consequences”

In ECSS-Q-ST-40C major consequences are characterized in Table 6-1 as a major mission degradation without effects to the outside world of the system. A future activity may perform ISVV to enable a use in category B settings.

The qualification will be done according to ECSS standards (ECSS-E-ST-40C and ECSS-Q-ST-80C). The standards are available at

http://ecss.nl/

free of charge after registration.

The project consists of four major tasks.

1. Qualification toolchain

This task aims to produce a tool chain so that qualification related work can be carried out efficiently. For example: document generation, test suite runs (including code coverage), test reporting, test result archiving, code metrics, static code analysis, traceability (e.g. requirements to tests), etc.

2. RTEMS SMP qualification data package

This task covers the main RTEMS components (source code, tests, documentation; new: requirements document, ECSS standard tailoring) so that a data package for space mission consumers can be generated.

-

3702: Space profile for RTEMS SMP

-

3703: Technical Specification (TS) for space profile

-

3715: Add Requirements Engineering chapter to RTEMS Software Engineering Handbook

-

3726: Select a requirements engineering tool

-

3705: Software Design Document (SDD) for space profile

-

3704: Review and update Doxygen recommendations

-

3706: Create a hierarchy of RTEMS software components using Doxygen groups

-

3707: Assign each code file to a Doxygen group

-

3708: Remove Doxygen comments from confdefs.h

-

3716: Unit, integration and validation tests for space profile

-

3717: Add test guidelines chapter to RTEMS Software Engineering Handbook

-

3718: Add support for test plans

-

3199: New test framework

3. RTEMS SMP formal verification

This is a research project. The aim is to apply formal methods for the verification of a subset of the RTEMS SMP algorithms.

4. RTEMS SMP application porting

The goal of this task is to port an existing uniprocessor space software from RTEMS 4.8 (RTEMS Improvement by Edisoft) to RTEMS SMP. The algorithms used by the software needs to be parallelized.

The project partners are:

- Edisoft (prime) and [CISTER](http://www.cister.isep.ipp.pt/) from Portugal
- Lero with Lero researchers from Trinity College Dublin and University of Limerick from Ireland
- Jena-Optronik GmbH and [embedded brains GmbH](https://embedded-brains.de/) from Germany

The results of this activity should be open source and available to the RTEMS community.

Author: Trac Migrate 2019-02-26T13:30:45.000Z

Original author: sebastian.huber

- **Status** changed from *assigned* to *accepted*

Author: Trac Migrate 2019-02-26T13:42:07.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
This ticket summarises activities carried out by a 24 month project␣
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↪assurance-15-february-2017/):

"Software that if not executed, or if not correctly executed, or whose␣
↪anomalous behaviour can cause or contribute to a system failure␣
↪resulting in: Major consequences"

In [ECSS-Q-ST-40C](https://ecss.nl/standard/ecss-e-st-40c-software-
```

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```
↪general-requirements/) major consequences are characterized in Table␣
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- 1. Qualification toolchain
+ 1. Qualification toolchain


?                           ++++++++++++

-
This task aims to produce a tool chain so that qualification related␣
↪work can be carried out efficiently. For example: document generation,
↪ test suite runs (including code coverage), test reporting, test␣
↪result archiving, code metrics, static code analysis, traceability (e.
↪g. requirements to tests), etc.

- 2. RTEMS SMP qualification data package
+ 2. RTEMS SMP qualification data package


?                                       ++++++++++++

+    This task covers the main RTEMS components (source code, tests,␣
↪documentation; new: requirements document, ECSS standard tailoring)␣
↪so that a data package for space mission consumers can be generated.


+    * #3702: Space profile for RTEMS SMP
+    * #3703: Technical Specification (TS) for space profile
+    * #3705: Software Design Document (SDD) for space profile
+       * #3704: Review and update Doxygen recommendations
+       * #3706: Create a hierarchy of RTEMS software components using␣
↪Doxygen groups
+       * #3707: Assign each code file to a Doxygen group

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```

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```
-
- 3. RTEMS SMP formal verification
+ 3. RTEMS SMP formal verification


?                                  ++++++++++++

-
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+ 4. RTEMS SMP application porting


?                                  ++++++++++++

-
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↪brains GmbH](https://embedded-brains.de/) from Germany

The results of this activity should be open source and available to the␣
↪RTEMS community.
```

Author: Trac Migrate 2019-02-26T14:27:27.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
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```
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```
+       * #3708: Remove Doxygen comments from confdefs.h

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The results of this activity should be open source and available to the RTEMS community.
```

Author: Trac Migrate 2019-03-04T13:09:08.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
This ticket summarises activities carried out by a 24 month project sponsored by the European Space Agency (ESA). The project start was February 2019.

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* #3702: Space profile for RTEMS SMP
* #3703: Technical Specification (TS) for space profile
+       * #3715: Add Requirements Engineering chaper to RTEMS Software␣
↪Engineering Handbook
* #3705: Software Design Document (SDD) for space profile
* #3704: Review and update Doxygen recommendations
* #3706: Create a hierarchy of RTEMS software components using Doxygen␣
↪groups
* #3707: Assign each code file to a Doxygen group
* #3708: Remove Doxygen comments from confdefs.h
+    * #3716: Unit, integration and validation tests for space profile
+       * #3717: Add test guidelines chapter to RTEMS Software␣
↪Engineering Handbook
+       * #3718: Add support for test plans
```

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```
+       * #3199: New test framework

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The results of this activity should be open source and available to the RTEMS community.
-
```

Author: Trac Migrate 2019-03-04T13:11:03.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
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?                                              +

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* #3706: Create a hierarchy of RTEMS software components using Doxygen groups
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```

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```
* #3708: Remove Doxygen comments from confdefs.h
* #3716: Unit, integration and validation tests for space profile
* #3717: Add test guidelines chapter to RTEMS Software Engineering␣
↪Handbook
* #3718: Add support for test plans
* #3199: New test framework

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↪RTEMS community.
```

Author: Trac Migrate 2019-03-13T06:38:43.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
This ticket summarises activities carried out by a 24 month project␣
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```

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```
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↪so that a data package for space mission consumers can be generated.


* #3702: Space profile for RTEMS SMP
* #3703: Technical Specification (TS) for space profile
-       * #3715: Add Requirements Engineering chapter to RTEMS Software␣
↪Engineering Handbook
?                                                                      -
↪--------------------

+       * #3715: Add Requirements Engineering chapter to RTEMS Software
+       * #3726: Select a requirements engineering tool
```

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```
+ Engineering Handbook
* #3705: Software Design Document (SDD) for space profile
* #3704: Review and update Doxygen recommendations
* #3706: Create a hierarchy of RTEMS software components using Doxygen␣
↪groups
* #3707: Assign each code file to a Doxygen group
* #3708: Remove Doxygen comments from confdefs.h
* #3716: Unit, integration and validation tests for space profile
* #3717: Add test guidelines chapter to RTEMS Software Engineering␣
↪Handbook
* #3718: Add support for test plans
* #3199: New test framework

3. RTEMS SMP formal verification


This is a research project. The aim is to apply formal methods for the␣
↪verification of a subset of the RTEMS SMP algorithms.

4. RTEMS SMP application porting


The goal of this task is to port an existing uniprocessor space␣
↪software from RTEMS 4.8 (RTEMS Improvement by Edisoft) to RTEMS SMP.␣
↪The algorithms used by the software needs to be parallelized.

The project partners are:

* [Edisoft](http://www.edisoft.pt/) (prime) and [CISTER](http://www.
↪cister.isep.ipp.pt/) from Portugal

* [Lero](https://www.lero.ie/) with Lero researchers from Trinity␣
↪College Dublin and University of Limerick from Ireland

* [Jena-Optronik GmbH](https://www.jena-optronik.de/) and [embedded␣
↪brains GmbH](https://embedded-brains.de/) from Germany

The results of this activity should be open source and available to the␣
↪RTEMS community.
```

Author: Trac Migrate 2019-03-13T06:40:22.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
This ticket summarises activities carried out by a 24 month project␣
```

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```
 ↪sponsored by the European Space Agency (ESA). The project start was␣
 ↪February 2019.
2
3 The main goal of the project is to enable European space missions to␣
 ↪use RTEMS as a software product in criticality category C (this is␣
 ↪basically category B without independent software verification and␣
 ↪validation, ISVV). Criticality category C means according to [ECSS-Q-
 ↪ST-80C](http://ecss.nl/standard/ecss-q-st-80c-rev-1-software-product-
 ↪assurance-15-february-2017/):
4
5 "Software that if not executed, or if not correctly executed, or whose␣
 ↪anomalous behaviour can cause or contribute to a system failure␣
 ↪resulting in: Major consequences"
6
7 In [ECSS-Q-ST-40C](https://ecss.nl/standard/ecss-e-st-40c-software-
 ↪general-requirements/) major consequences are characterized in Table␣
 ↪6-1 as a major mission degradation without effects to the outside␣
 ↪world of the system. A future activity may perform ISVV to enable a␣
 ↪use in category B settings.
8
9 The qualification will be done according to ECSS standards (ECSS-E-ST-
 ↪40C and ECSS-Q-ST-80C). The standards are available at
10
11 http://ecss.nl/
12
13 free of charge after registration.
14
15 The project consists of four major tasks.
16
17 1. Qualification toolchain
18
19
20 This task aims to produce a tool chain so that qualification related␣
 ↪work can be carried out efficiently. For example: document generation,
 ↪ test suite runs (including code coverage), test reporting, test␣
 ↪result archiving, code metrics, static code analysis, traceability (e.
 ↪g. requirements to tests), etc.
21
22 2. RTEMS SMP qualification data package
23
24
25 This task covers the main RTEMS components (source code, tests,␣
 ↪documentation; new: requirements document, ECSS standard tailoring)␣
 ↪so that a data package for space mission consumers can be generated.
26
27
28 * #3702: Space profile for RTEMS SMP
29 * #3703: Technical Specification (TS) for space profile
30 -       * #3715: Add Requirements Engineering chapter to RTEMS Software
```

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```
+       * #3715: Add Requirements Engineering chapter to RTEMS Software␣
↪Engineering Handbook
?                                                                      ␣
↪++++++++++++++++++++

* #3726: Select a requirements engineering tool
- Engineering Handbook
* #3705: Software Design Document (SDD) for space profile
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↪College Dublin and University of Limerick from Ireland

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↪brains GmbH](https://embedded-brains.de/) from Germany

The results of this activity should be open source and available to the␣
↪RTEMS community.
```

Author: Chris Johns 2019-03-20T01:33:11.000Z

Original author: sebastian.huber

- **Summary** changed from *RTEMS SMP Pre-Qualification (ECSS)* to *RTEMS Pre-Qualification (ECSS) for SMP*

Correct the title.

Author: Chris Johns 2022-11-29T21:38:18.000Z

Original author: sebastian.huber

Please update. This ticket is still blocked by 3 other tickets?

Author: Trac Migrate 2022-11-30T08:50:46.000Z

Original author: sebastian.huber

- **Milestone** changed from %"6.1" to %"7.1"

Yes, there are still open issues.

Author: Amar Takhar 2024-04-25T20:47:07.717Z

changed the description

Author: Amar Takhar 2024-04-25T20:47:08.650Z

mentioned in issue #3702

Author: Amar Takhar 2024-04-25T20:50:56.426Z

mentioned in issue #4963

Author: Sebastian Huber 2024-07-02T07:35:23.427Z

mentioned in commit 6c5925361cd8360768197cfcb907da731f28d496

Author: Joel Sherrill 2025-09-18T23:58:23.150Z

unassigned @tracmigrate

Author: Chris Johns 2026-07-30T23:09:38.840Z

assigned to @sebhub

Author: Chris Johns 2026-07-30T23:10:08.608Z

Please update the Status.

1.8.1.88 5663 - Follow-up from “spintrcritical0[1-5, 20, 23]: Fix sporadic test failures” (opened)

Id	5663
State	opened
Type	ISSUE
Author	Chris Johns
Assignee(s)	Sebastian Huber
Created	2026-07-28T01:27:09.386Z
Updated	2026-07-28T01:27:09.386Z
Milestone	6.3
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5663
Merges	0

The following discussion from !1370 should be addressed:

- [] @chris started a discussion: (+1 comment)

  Is the same issue on RTEMS 6?

Author:	Chris Johns	2026-07-28T01:27:09.571Z

  added rtems#15 as parent item

Author:	Chris Johns	2026-07-28T01:27:09.668Z

  set status to **To do**

Author:	Chris Johns	2026-07-28T01:27:09.787Z

  assigned to @sebhub

1.8.1.89 4364 - rtems-test Fails to list failed tests to user (opened)

Id	4364
State	opened
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Chris Johns
Created	2021-03-28T15:51:47.000Z
Updated	2025-10-02T22:39:35.876Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4364
Merges	0

rtems-test does not report the set of failed tests to the user at the conclusion of its run. It only gives a summary by category. They ARE in the log file. I assume this is a minor issue now that I have spotted the pattern.

I assume this also applies to 5 but I spotted it on 6 during the recent heavy round of manual testing.

Author: Amar Takhar 2024-05-17T02:02:50.798Z

Joel are you OK with this being moved to %6.2 Since there is already a solution this is more of an ease-of-use feature.

Author: Joel Sherrill 2024-05-17T13:46:01.611Z

It is not an ease of use feature. If interactive, you do not get the list of failures unless you enable logging.

I don't mind moving the milestone though. This has been sitting here for 3 years already.

Author: Amar Takhar 2024-05-17T15:09:16.482Z

changed the description

Author: Gedare Bloom 2024-12-04T21:40:36.939Z

Author: Chris Johns 2025-10-02T22:39:32.181Z

added rtems#15 as parent epic

1.8.2 Merge Requests

1.8.2.1 697 - bbb bsp: add modified gpio handling and adc section

Id	697
State	merged
Merged by	Chris Johns
Merged at	2026-10-31T19:55:56.897Z
Assignee(s)	Heinz Junkes
Created	2025-09-03T14:06:24.244Z
Updated	2026-10-31T19:55:56.890Z
Milestone	6.3
Labels	backport, bsp:beaglebone
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/697
Commit	de23ff5960decc2db58e75188a0ca28f4c6864d8

Summary

add modified gpio handling and adc section to BBB

could close #5198

This is based on the work of ketul93 (https://gist.github.com/ketul93/d717555951174a74c8b4)

All gpio I/O pins can be used (Mode7). Extension of the adc-section to be able to use optional channels.

I am unsure whether I meet the requirements for RTEMS code development ;-) However, I was able to put the BBB into production with these changes.

Author: Amar Takhar 2025-09-03T14:12:24.808Z

changed target branch from `main` to `6`

Author: Amar Takhar 2025-09-03T14:14:00.020Z

Couple of issues in the commit messages see: https://gitlab.rtems.org/rtems/rtos/rtems/-/jobs/14290

Author: Heinz Junkes 2026-09-10T22:31:50.591Z

Sorry, I wanted to delete the fork and do everything from scratch with 6.1 fork. Unfortunately I can't manage it :-(I can't delete my fork and the merge request. And I can't create a new fork of 6.1 either. And customizing the commit message is not clear to me either. Unfortunately, I've probably gone off the rails here. Can you give me a tip on how to proceed? I would like to try again.

Author: Kinsey Moore 2026-09-10T22:31:50.591Z

First off, I would recommend against working directly on upstream branches going forward (once we've sorted all this out). When starting a new feature branch for 6, I tend to check out 6 branch, update it, and then create a new branch of the form br6-short-description. However, this advice does no good for you at the moment.

You need to edit your existing commit and push that updated commit with the -f flag to overwrite the content on your fork which will update this MR. Which step are you getting stuck on?

Author: Heinz Junkes 2026-09-10T22:31:50.591Z

I have now managed to change my commit message in the gilab gui and this time it went through. I am curious what will happen now ;-) Thank you

Author: Kinsey Moore 2026-09-10T22:31:50.591Z

Changing the title of the MR is not sufficient. You need to change the subject line of the commit which can still be seen as the original text under the “Commits” tab.

Author: Wayne Thornton 2026-09-10T22:31:50.591Z

@junkes The best way is to run a git commit –amend in your terminal and update the commit message to comply with what is being requested. Then run a git push -f (which forces the push to the repo). The MR will automatically update with the changed commit messages.

Author: Kinsey Moore 2026-09-10T22:31:50.591Z

@junkes I suggest you hop on discord so we can work out your workflow.

Author: Heinz Junkes 2025-09-03T15:26:46.113Z

changed title from

add modified gpio handling and adc section

to BBB

to

bbb bsp:

add modified gpio handling and adc section

Author: Heinz Junkes 2026-07-31T09:16:55.151Z

mentioned in issue #5235

Author: Chris Johns 2026-09-10T22:36:01.231Z

Please change the license to 2 Clause BSD. I emailed Ketul and permission has been given to make the change. We should also have a SPDX line at the start:

```
/* SPDX-License-Identifier: BSD-2-Clause */
```

Author: Joel Sherrill 2026-09-10T22:36:01.231Z

In case it helps, the commit to main is https://gitlab.rtems.org/rtems/rtos/rtems/-/commit/b57a7b5cdf2d05003dd89a15d8af00a0a6610043

Author: Kinsey Moore 2026-09-10T22:36:01.231Z

I’ll pull that into this MR later today and get it fixed up.

Author: Kinsey Moore 2026-09-10T22:30:42.748Z

changed this line in version 3 of the diff

Author: Chris Johns 2026-08-25T04:03:29.290Z

requested changes

Author: Kinsey Moore 2026-09-04T14:12:06.675Z

added 49 commits

- 36562fe4...51f962fb - 48 commits from branch `rtems/rtos:6`
- 3aeecdcd - add gpio handling and adc section to BBB

Compare with previous version

Author: Kinsey Moore 2026-09-10T22:35:25.171Z

added 1 commit

- 9e7891d4 - bsps/arm/beagle: Add gpio handling and adc to BBB

Compare with previous version

Author: Kinsey Moore 2026-09-10T22:36:01.256Z

resolved all threads

Author: Kinsey Moore 2026-09-10T22:36:10.871Z

approved this merge request

Author: Kinsey Moore 2026-09-10T22:37:10.381Z

added 1 commit

- 81983ef4 - bsps/arm/beagle: Add gpio handling and adc to BBB

Compare with previous version

Author: Kinsey Moore 2026-09-10T22:37:26.093Z

reset approvals from @opticron by pushing to the branch

Author: Kinsey Moore 2026-09-10T22:37:34.616Z

assigned to @junkes

Author: Kinsey Moore 2026-09-10T22:37:43.517Z

approved this merge request

Author: Kinsey Moore 2026-09-10T22:38:16.423Z

enabled an automatic merge when all merge checks for 81983ef4200f3a3753bea79f731dac9ab4a4abf4 pass

Author: Joel Sherrill 2026-09-17T22:18:26.859Z

aborted the automatic merge because target branch was updated

Author: Kinsey Moore 2026-09-19T02:43:20.861Z

added 8 commits

- 81983ef4...1d572e05 - 8 commits from branch `rtems/rtos:6`

Compare with previous version

Author: Kinsey Moore 2026-09-19T02:43:33.166Z

reset approvals from @opticron by pushing to the branch

Author: Kinsey Moore 2026-09-19T02:45:40.213Z

added 1 commit

- b4f1bdf6 - bsps/arm/beagle: Add gpio handling and adc to BBB

Compare with previous version

Author: Chris Johns 2026-10-06T21:18:17.892Z

added 3 commits

- b4f1bdf6...46daa108 - 2 commits from branch `rtems/rtos:6`
- dffb71a5 - bsps/arm/beagle: Add gpio handling and adc to BBB

Compare with previous version

Author: Chris Johns 2026-10-31T08:57:21.397Z

added 3 commits

- dffb71a5...8b5a6cb7 - 2 commits from branch `rtems/rtos:6`
- de23ff59 - bsps/arm/beagle: Add gpio handling and adc to BBB

Compare with previous version

Author: Chris Johns 2026-10-31T08:57:33.971Z

enabled an automatic merge when all merge checks for de23ff5960decc2db58e75188a0ca28f4c6864d8 pass

Author: Chris Johns 2026-10-31T08:57:39.918Z

approved this merge request

Author: Joel Sherrill 2026-10-31T16:46:15.200Z

approved this merge request

Author: Kinsey Moore 2026-10-31T17:45:56.458Z

approved this merge request

1.8.2.2 1523 - bsps/shared/nandpsu: Invalidate page cache on erase

Id	1523
State	merged
Merged by	Chris Johns
Merged at	2026-10-22T22:37:26.275Z
Assignee(s)	Kinsey Moore
Created	2026-10-05T13:57:02.301Z
Updated	2026-10-22T22:37:26.249Z
Milestone	6.3
Labels	arch:aarch64, bsp::shared, device::flash
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1523
Commit	8b5a6cb7d64dcecc6b6c6f2377ddecdb860098d5

Summary

bsps/shared/nandpsu: Invalidate page cache on erase

When the opportunistic page cache was added, invalidation was only added for writes. This could result in bad behavior under certain access patterns where a read is used to verify an erase. This change ensures that the page cache is invalidated on block erasure.

Updates #5803

The second patch reduces the invalidation footprint to what is actually necessary instead of being overbroad.

Generative AI

None

Author: Kinsey Moore 2026-10-05T13:57:02.482Z

assigned to @opticron

Author: Kinsey Moore 2026-10-05T13:57:02.600Z

marked this merge request as blocked by !1522

Author: Kinsey Moore 2026-10-05T13:57:22.375Z

changed the description

Author: Joel Sherrill 2026-10-22T22:34:36.576Z

approved this merge request

Author: Chris Johns 2026-10-22T22:37:03.600Z

enabled an automatic merge when all merge checks for 8b5a6cb7d64dcecc6b6c6f2377ddecdb860098d5 pass

Author: Chris Johns 2026-10-22T22:37:08.119Z

approved this merge request

1.8.2.3 1510 - powerpc/shared/console: Fix uart build for beatnik

Id	1510
State	merged
Merged by	Joel Sherrill
Merged at	2026-09-24T19:04:35.764Z
Assignee(s)	Vijay Banerjee
Created	2026-09-24T18:56:03.139Z
Updated	2026-09-24T19:04:35.757Z
Milestone	6.3
Labels	arch:powerpc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1510
Commit	46daa1083b84f1ac71307681145e40e9e82c21b1

Summary

powerpc/shared/console: Fix uart build for beatnik

This commit fixes implicit declaration error with “BSP_REG_OFF”

Generative AI

Author: Vijay Banerjee 2026-09-24T18:56:03.610Z

assigned to @vijay

Author: Joel Sherrill 2026-09-24T19:01:54.081Z

enabled an automatic merge when all merge checks for 46daa1083b84f1ac71307681145e40e9e82c21b1 pass

Author: Joel Sherrill 2026-09-24T19:01:55.864Z

approved this merge request

Author: Kinsey Moore 2026-09-24T19:04:31.919Z

approved this merge request

1.8.2.4 1497 - cpukit/libmisc/shell/main_mdump.c: Use uintptr_t to print address

Id	1497
State	merged
Merged by	Vijay Banerjee
Merged at	2026-09-21T15:54:30.054Z
Assignee(s)	Joel Sherrill
Created	2026-09-18T18:06:34.346Z
Updated	2026-09-21T15:54:30.044Z
Milestone	6.3
Labels	cpukit::shell, rtems::shell
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1497
Commit	4a76fe06008c70dc40f01bce76071bdca612a52c

Summary

cpukit/libmisc/shell/main_mdump.c: Use uintptr_t to print address

The behavior of the %p printf() specifier is implementation dependent. The behavior varies on RTEMS between printf() and printk(). This change prints an address as a uintptr_t to ensure formatting is consistent. It also adjusts the output width based on target architecture pointer size.

Closes rtems/docs/rtems-docs#163

Generative AI

None

Closes #6

Author: Joel Sherrill 2026-09-18T18:06:34.501Z

assigned to @joel

Author: Joel Sherrill 2026-09-18T18:07:44.665Z

marked this merge request as blocked by !1496

Author: Joel Sherrill 2026-09-18T18:19:49.594Z

enabled an automatic merge when all merge checks for f61b3cf5f8ef7be14faa50e197aee15116518050 pass

Author: Vijay Banerjee 2026-09-18T18:36:45.056Z

approved this merge request

Author: Vijay Banerjee 2026-09-18T19:16:09.344Z

removed the relation with !1496

Author: Vijay Banerjee 2026-09-18T21:54:37.848Z

aborted the automatic merge because target branch was updated

Author: Wayne Thornton 2026-09-19T01:39:56.571Z

approved this merge request

Author: Vijay Banerjee 2026-09-21T15:52:54.649Z

added 3 commits

- f61b3cf5...1d572e05 - 2 commits from branch `rtems/rtos:6`
- 4a76fe06 - cpukit/libmisc/shell/main_mdump.c: Use uintptr_t to print address

Compare with previous version

Author: Vijay Banerjee 2026-09-21T15:54:01.604Z

enabled an automatic merge when all merge checks for 4a76fe06008c70dc40f01bce76071bdca612a52c pass

1.8.2.5 1475 - Use page tables for MVME5100 VME window Init

Id	1475
State	merged
Merged by	Joel Sherrill
Merged at	2026-09-18T21:56:33.443Z
Assignee(s)	Vijay Banerjee
Created	2026-09-04T19:30:10.229Z
Updated	2026-09-18T21:56:33.436Z
Milestone	6.3
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1475
Commit	1d572e051db11b42237b92c85522732f3b5195cc

Summary

Closes #5734

Generative AI

Author: Vijay Banerjee 2026-09-04T19:30:10.840Z

marked this merge request as blocked by !1474

Author: Vijay Banerjee 2026-09-04T19:30:12.241Z

assigned to @vijay

Author: Joel Sherrill 2026-09-17T22:14:02.302Z

enabled an automatic merge when all merge checks for e8fd7bc684c5e571838b85b23e1af0a55e524494 pass

Author: Joel Sherrill 2026-09-17T22:14:05.447Z

approved this merge request

Author: Joel Sherrill 2026-09-17T22:18:26.025Z

aborted the automatic merge because target branch was updated

Author: Kinsey Moore 2026-09-17T22:58:14.189Z

added 7 commits

- e8fd7bc6...a49d5241 - 5 commits from branch `rtems/rtos:6`
- 9cd5e71d - motorola_powerpc: Add support for MVME5100
- b1fdcdcd - bsps/powerpc/motorola_powerpc: Use page tables for MVME5100 VME init

Compare with previous version

Author: Joel Sherrill 2026-09-17T23:24:19.988Z

enabled an automatic merge when all merge checks for b1fdcdcdfe9f1df458b29c0aa55d4c99d15e0aec pass

Author: Chris Johns 2026-09-17T23:29:19.920Z

approved this merge request

Author: Chris Johns 2026-09-18T06:59:54.279Z

aborted the automatic merge because target branch was updated

Author: Vijay Banerjee 2026-09-18T18:09:01.483Z

added 2 commits

- 6b539035 - 1 commit from branch `rtems/rtos:6`
- cd44e554 - bsps/powerpc/motorola_powerpc: Use page tables for MVME5100 VME init

Compare with previous version

Author: Vijay Banerjee 2026-09-18T18:09:13.389Z

enabled an automatic merge when all merge checks for cd44e554e2dee0d136a69bca8fffafb3448f8519 pass

Author: Vijay Banerjee 2026-09-18T18:09:14.963Z

reset approvals from @chris and @joel by pushing to the branch

Author: Vijay Banerjee 2026-09-18T19:20:33.956Z

@chris @joel Rebasing has reset your approvals. Can you please approve it again? There are no additional changes, just a simple rebase. Thanks!!

Author: Kinsey Moore 2026-09-18T19:25:24.804Z

approved this merge request

Author: Vijay Banerjee 2026-09-18T21:54:37.431Z

aborted the automatic merge because target branch was updated

Author: Joel Sherrill 2026-09-18T21:55:34.550Z

approved this merge request

Author: Joel Sherrill 2026-09-18T21:56:10.852Z

added 2 commits

- 01e89cfa - 1 commit from branch `rtems/rtos:6`
- 1d572e05 - bsps/powerpc/motorola_powerpc: Use page tables for MVME5100 VME init

Compare with previous version

1.8.2.6 1476 - Fix mvme2100 reset

Id	1476
State	merged
Merged by	Vijay Banerjee
Merged at	2026-09-18T21:54:35.105Z
Assignee(s)	Vijay Banerjee
Created	2026-09-04T19:59:24.777Z
Updated	2026-09-18T21:54:35.097Z
Milestone	6.3
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1476
Commit	01e89cfa7bbf24ceab85c9894a329928e5fa2629

Summary

Closes #5679

Generative AI

Author: Vijay Banerjee 2026-09-04T19:59:24.906Z

assigned to @vijay

Author: Vijay Banerjee 2026-09-04T19:59:25.016Z

marked this merge request as blocked by !1474

Author: Joel Sherrill 2026-09-17T22:12:57.162Z

enabled an automatic merge when all merge checks for e78f427795bf8052fe4fbaf5a755fc3ccc861faa pass

Author: Joel Sherrill 2026-09-17T22:13:01.884Z

approved this merge request

Author: Joel Sherrill 2026-09-17T22:18:26.575Z

aborted the automatic merge because target branch was updated

Author: Joel Sherrill 2026-09-17T22:30:51.512Z

added 7 commits

- e78f4277...a49d5241 - 5 commits from branch `rtems/rtos:6`
- 62f3bec6 - motorola_powerpc: Add support for MVME5100
- 65c76e24 - motorola_powerpc: Fix reset for MVME2100

Compare with previous version

Author: Joel Sherrill 2026-09-17T22:32:30.534Z

enabled an automatic merge when all merge checks for 65c76e243b7c5bc76298f5301e6ee370dd3b3d94 pass

Author: Kinsey Moore 2026-09-17T22:46:29.272Z

approved this merge request

Author: Chris Johns 2026-09-18T06:59:53.718Z

aborted the automatic merge because target branch was updated

Author: Vijay Banerjee 2026-09-18T18:07:53.933Z

added 2 commits

- 6b539035 - 1 commit from branch `rtems/rtos:6`
- 01e89cfa - motorola_powerpc: Fix reset for MVME2100

Compare with previous version

Author: Vijay Banerjee 2026-09-18T18:08:06.873Z

reset approvals from @opticron and @joel by pushing to the branch

Author: Vijay Banerjee 2026-09-18T19:19:21.405Z

@opticron @joel Rebasing has reset your approvals. Can you please approve it again? There are no additional changes, just a rebase. Thanks!

Author: Vijay Banerjee 2026-09-18T19:19:26.505Z

enabled an automatic merge when all merge checks for 01e89cfa7bbf24ceab85c9894a329928e5fa2629 pass

Author: Kinsey Moore 2026-09-18T19:25:10.744Z

approved this merge request

Author: Joel Sherrill 2026-09-18T21:54:30.650Z

approved this merge request

1.8.2.7 1474 - motorola_powerpc: Add support for MVME5100

Id	1474
State	merged
Merged by	Chris Johns
Merged at	2026-09-18T06:59:52.008Z
Assignee(s)	Vijay Banerjee
Created	2026-09-04T18:45:49.937Z
Updated	2026-09-18T06:59:52.000Z
Milestone	6.3
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1474
Commit	6b5390358f3bc75888980ee99117588b751cdaf8

Summary

motorola_powerpc: Add support for MVME5100

This patch adds a variant of the motorola_powerpc BSP to support MVME5100

Closes #5677

Generative AI

Author: Vijay Banerjee 2026-09-04T18:45:50.117Z

assigned to @vijay

Author: Vijay Banerjee 2026-09-04T19:30:10.758Z

marked this merge request as blocking !1475

Author: Vijay Banerjee 2026-09-04T19:59:24.964Z

marked this merge request as blocking !1476

Author: Christian Mauderer 2026-09-18T06:39:51.729Z

Are really both IRQs on the same number? I have seen controllers like that but it could be also a copy and paste bug.

Author: Vijay Banerjee 2026-09-18T06:39:51.729Z

Hi Christian. Thanks for the review!

Yes. According to the board's manual they are both same.

Author: Christian Mauderer 2026-09-18T06:40:20.154Z

You defined the `BSP_UART_IOBASE_COM1` in BSP.h. Why don't you use a `BSP_UART_IOBASE_COM1 + 0xa0` here instead of the magic number so that it is obvious that it's an access to the COM1?

Author: Vijay Banerjee 2026-09-18T06:40:20.154Z

This is not a COM access. `0xfef88000` is the base of the Hawk ASIC's external register sets. The UART happens to sit at the base of the register set and it occupies offsets `00` to `70`. `80` is the STATUS register and at `a0` is the reset register (MODRST). This call is setting the reset register that triggers a board reset. I have tested this on hardware.

Author: Christian Mauderer 2026-09-18T06:40:20.154Z

OK.

Author: Christian Mauderer 2026-09-18T06:40:38.666Z

That is in the same range as the `BSP_UART_IOBASE_COM1`. Is that correct?

Author: Vijay Banerjee 2026-09-18T06:40:38.666Z

Also outside UART, the `$c8` is the NVRAM base

Author: Christian Mauderer 2026-09-18T06:40:38.666Z

OK.

Author: Christian Mauderer 2026-09-17T06:53:45.532Z

left review comments

Author: Christian Mauderer 2026-09-18T06:40:38.692Z

resolved all threads

Author: Christian Mauderer 2026-09-18T06:40:46.600Z

approved this merge request

Author: Chris Johns 2026-09-18T06:59:24.151Z

approved this merge request

Author: Chris Johns 2026-09-18T06:59:32.926Z

added 6 commits

- 8e4dd166...a49d5241 - 5 commits from branch `rtems/rtos:6`
- 6b539035 - motorola_powerpc: Add support for MVME5100

Compare with previous version

Author: Chris Johns 2026-09-18T06:59:37.458Z

enabled an automatic merge when all merge checks for 6b5390358f3bc75888980ee99117588b751cdaf8 pass

1.8.2.8 1473 - Backport Libi2c support for mvme3100

Id	1473
State	merged
Merged by	Joel Sherrill
Merged at	2026-09-17T22:18:22.959Z
Assignee(s)	Vijay Banerjee
Created	2026-09-04T18:02:17.833Z
Updated	2026-09-17T22:18:22.951Z
Milestone	6.3
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1473
Commit	a49d524167868e9eee31351315c9451343f4239c

Summary

Backport libi2c changes

Closes #5678

Generative AI

Author: Vijay Banerjee 2026-09-04T18:02:18.013Z

assigned to @vijay

Author: Joel Sherrill 2026-09-17T22:14:27.545Z

enabled an automatic merge when all merge checks for a49d524167868e9eee31351315c9451343f4239c pass

Author: Joel Sherrill 2026-09-17T22:14:43.888Z

approved this merge request

Author: Kinsey Moore 2026-09-17T22:18:19.506Z

approved this merge request

1.8.2.9 1439 - libfs/pipe: Add pipe and pipe2 indirect handler calls

Id	1439
State	merged
Merged by	Kinsey Moore
Merged at	2026-08-24T02:01:52.621Z
Created	2026-08-21T00:34:31.425Z
Updated	2026-08-24T02:01:52.613Z
Milestone	6.3
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1439
Commit	51f962fb3fd8e1eae4249d04f3821e7630eda774

Backport of ec42cadd3b4 (!1383) to 6, needed so rtems/pkg/rtems-libbsd!156 can follow to 6-freebsd-14 — the handler registration cannot link without the hooks. psxpipe01 passes on arm/xilinx_zynq_a9_qemu.

Author: Kinsey Moore 2026-08-23T00:06:21.378Z

enabled an automatic merge when all merge checks for 51f962fb3fd8e1eae4249d04f3821e7630eda774 pass

Author: Kinsey Moore 2026-08-23T00:06:22.395Z

approved this merge request

Author: Joel Sherrill 2026-08-24T02:01:49.747Z

approved this merge request

1.8.2.10 976 - Complete the u-boot support for qoriq BSP

Id	976
State	merged
Merged by	Kinsey Moore
Merged at	2026-07-31T00:33:40.157Z
Created	2026-01-30T21:19:00.503Z
Updated	2026-07-31T00:33:40.150Z
Milestone	6.3
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/976
Commit	2be19a2a0a6b35604f4bc55e714d854bcbfe32ef

Summary

The u-boot support for powerpc/qoriq is not complete. Under bsps/powerpc/qoriq/include/bsp.h, bsp_uboot_getenv is declared if HAS_UBOOT is defined. However, in HAS_UBOOT is not configurable through waf and variables needed by bsp_uboot_getenv are not defined for qoriq.

- Added the .yml files under spec so that HAS_UBOOT can be defined in config.ini
- Updated .yml files for the added build dependencies
- Added uboot_support.c to define the u-boot environment base address and size

Generative AI

Author: Joel Sherrill 2026-02-06T18:25:22.347Z

Please complete the Generative AI statement for the MR.

Author: Ran Hong 2026-02-06T18:25:22.347Z

I didn't use Generative AI at all, so I left it blank as instructed in the comment from the template. Should I write anything there instead?

Author: Joel Sherrill 2026-02-06T18:31:18.325Z

Where did this address come from? It needs a reference.

Author: Ran Hong 2026-02-06T18:13:04.282Z

changed this line in version 2 of the diff

Author: Ran Hong 2026-02-06T18:31:18.325Z

This address is actually configurable by users. I am developing this feature for a specific board (mvme2500) that can run with the qoriq_e500 BSP. For mvme2500, it has a 512k MRAM (a type of nonvolatile memory) starting from address 0xfff00000, which can be configured to hold the u-boot environment, and it can be access using the same functions in bsps/powerpc/shared/u-boot. I updated the address and mentioned that this can be referenced to the mvme2500 manual.

Author: Joel Sherrill 2026-02-06T18:31:04.303Z

The comment blocks at the top of this file need to follow the RTEMS standard. There are plenty of examples beyond what's documented.

Author: Ran Hong 2026-02-06T18:13:04.863Z

changed this line in version 2 of the diff

Author: Ran Hong 2026-02-06T18:31:04.303Z

Yes. Updated.

Author: Joel Sherrill 2026-02-06T18:30:23.328Z

Delete the white space except for one before the =

Author: Ran Hong 2026-02-06T18:13:05.390Z

changed this line in version 2 of the diff

Author: Ran Hong 2026-02-06T18:30:23.328Z

sure. Changed.

Author: Gedare Bloom 2026-02-09T22:19:57.900Z

Is there a reason this targets `6` and not going into `main`?

Author: Ran Hong 2026-02-09T22:19:57.900Z

Since most of my current development work is based on branch 6, so I would like to have it updated first. Then I will create a similar merge request for main.

Author: Gedare Bloom 2026-02-09T22:19:57.900Z

Please have a look at https://docs.rtems.org/docs/main/eng/release-maintenance.html#release-backports to see the process for MRs on release branch. You'll need to create an issue for this, and might need some help to link it to the epic and set the issue metadata.

We will want to have the merge request available for `main` before we merge into `6` most likely.

Author: Ran Hong 2026-02-09T22:19:57.900Z

I do have a issue for this, but I am not so sure how to link the issue (https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/5439) with this merge request. I will work on the merge request on main and link it to the issue. After reading Joel's comment, I think I can make the uboot environment base address configurable via waf configure.

Author: Ran Hong 2026-02-09T22:19:57.900Z

I just created another merge request !1046. I modified the code according to the comments Joel gave. The related issue is #5439, but I am not sure how to link them together. Could anyone help? Thanks!

Author: Kinsey Moore 2026-02-06T18:48:00.346Z

This needs a backport issue and the issue should be referenced from the commit message with: `Closes #issuenumberhere`

Author: Kinsey Moore 2026-02-05T22:12:32.227Z

created #5481 to continue this discussion

Author: Kinsey Moore 2026-02-06T18:48:00.346Z

I have created #5481 for this purpose.

Author: Kinsey Moore 2026-02-05T22:12:33.135Z

mentioned in issue #5481

Author: Ran Hong 2026-02-06T18:13:05.761Z

added 1 commit

- bc1b7c79 - Add the u-boot support for powerpc/qoriq.

Compare with previous version

Author: Ran Hong 2026-02-06T18:20:39.305Z

added 1 commit

- 3a9aa308 - bsps/powerpc/qoriq: Add the u-boot support for powerpc/qoriq.

Compare with previous version

Author: Ran Hong 2026-02-06T18:31:18.509Z

left review comments

Author: Ran Hong 2026-02-09T22:19:57.922Z

resolved all threads

Author: Gedare Bloom 2026-02-23T19:29:18.173Z

Add “Closes #5481” to the commit message

Author: Ran Hong 2026-02-23T19:29:18.173Z

It is already in the current commit message. See below. Do I need to move it to the same line?

For qoriq boards with u-boot, user can use the same environment access fuctions shared with other bsps like gen83xx.

Closes #5481

Author: Gedare Bloom 2026-02-23T19:29:18.197Z

resolved all threads

Author: Gedare Bloom 2026-02-23T19:30:34.848Z

resolved all threads

Author: Gedare Bloom 2026-02-23T19:30:35.370Z

approved this merge request

Author: Sebastian Huber 2026-07-31T00:26:36.216Z

On which board was this change tested?

Author: Ran Hong 2026-07-31T00:26:36.216Z

mvme2500

Author: Ran Hong 2026-02-24T16:26:52.647Z

added 2 commits

- f6933b9c - 1 commit from branch `rtems/rtos:6`
- 1e5f181d - bsps/powerpc/qoriq: Add the u-boot support for powerpc/qoriq.

Compare with previous version

Author: Chris Johns 2026-07-31T00:26:36.239Z

resolved all threads

Author: Chris Johns 2026-07-31T00:26:43.356Z

approved this merge request

Author: Chris Johns 2026-07-31T00:26:53.770Z

added 14 commits

- 1e5f181d...536f52c4 - 13 commits from branch `rtems/rtos:6`
- 6c00f0cc - bsps/powerpc/qoriq: Add the u-boot support for powerpc/qoriq.

Compare with previous version

Author: Chris Johns 2026-07-31T00:26:57.739Z

enabled an automatic merge when all merge checks for 6c00f0cc436ff51cc59db107614c9e59cd533fef pass

Author: Kinsey Moore 2026-07-31T00:33:22.034Z

added 1 commit

- 2be19a2a - bsps/powerpc/qoriq: Add the u-boot support for powerpc/qoriq.

Compare with previous version

Author: Kinsey Moore 2026-07-31T00:33:30.396Z

enabled an automatic merge when all merge checks for 2be19a2a0a6b35604f4bc55e714d854bcbfe32ef pass

1.8.2.11 1378 - libmisc/shell: Add -a to print all vars in the shell getenv command

Id	1378
State	merged
Merged by	Gedare Bloom
Merged at	2026-07-29T02:50:10.715Z
Assignee(s)	Chris Johns
Created	2026-07-28T04:22:15.350Z
Updated	2026-07-29T02:50:10.605Z
Milestone	6.3
Labels	rtems::shell
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1378
Commit	536f52c4b5d792072712c22c95473b3dc04216e1

Summary

libmisc/shell: Add -a to print all vars in the shell getenv command

Closes #5664

Generative AI

None

Author: Chris Johns 2026-07-28T04:22:15.543Z

assigned to @chris

Author: Chris Johns 2026-07-28T04:22:22.330Z

enabled an automatic merge when all merge checks for ccc42007085e071156f9ce6a203d29a09ca5eb35 pass

Author: Kinsey Moore 2026-07-28T13:48:46.985Z

approved this merge request

Author: Chris Johns 2026-07-29T02:26:51.400Z

aborted the automatic merge because target branch was updated

Author: Gedare Bloom 2026-07-29T02:49:32.494Z

approved this merge request

Author: Gedare Bloom 2026-07-29T02:49:46.651Z

added 3 commits

- ccc42007...50887ddf - 2 commits from branch `rtems/rtos:6`
- 536f52c4 - libmisc/shell: Add -a to print all vars in the shell getenv command

Compare with previous version

1.8.2.12 1380 - powerpc/motorola_powerpc: Convert PPCBug NVRAM vars into env vars

Id	1380
State	merged
Merged by	Gedare Bloom
Merged at	2026-07-29T02:34:25.666Z
Assignee(s)	Chris Johns
Created	2026-07-28T05:16:42.478Z
Updated	2026-07-29T02:34:25.659Z
Milestone	6.3
Labels	arch:powerpc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1380
Commit	50887ddfea3ac9bfef902d6ba3f23b36b8ade605

Summary

powerpc/motorola_powerpc: Convert PPCBug NVRAM vars into env vars

Closes #5666

Generative AI

None

Author: Chris Johns 2026-07-28T05:16:42.657Z

assigned to @chris

Author: Chris Johns 2026-07-28T05:16:49.783Z

enabled an automatic merge when all merge checks for cbb62bd6195745fb0f96784918ec27d41183d050 pass

Author: Vijay Banerjee 2026-07-28T13:41:19.035Z

approved this merge request

Author: Kinsey Moore 2026-07-28T13:49:13.760Z

approved this merge request

Author: Chris Johns 2026-07-29T02:26:51.032Z

aborted the automatic merge because target branch was updated

Author: Gedare Bloom 2026-07-29T02:27:22.084Z

added 2 commits

- 41622343 - 1 commit from branch `rtems/rtos:6`
- 50887ddf - powerpc/motorola_powerpc: Convert PPCBug NVRAM vars into env vars

Compare with previous version

Author: Gedare Bloom 2026-07-29T02:33:47.705Z

approved this merge request

1.8.2.13 1379 - powerpc/beatnik: Convert MOTLoad GEV variables into env variables

Id	1379
State	merged
Merged by	Chris Johns
Merged at	2026-07-29T02:26:49.041Z
Assignee(s)	Chris Johns
Created	2026-07-28T04:33:46.457Z
Updated	2026-07-29T02:26:49.034Z
Milestone	6.3
Labels	arch:powerpc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1379
Commit	4162234368cf643db525028b26b461362eb2e5a4

Summary

powerpc/beatnik: Convert MOTLoad GEV variables into env variables

Closes #5665

Generative AI

None

Author: Chris Johns 2026-07-28T04:33:46.591Z

assigned to @chris

Author: Chris Johns 2026-07-28T04:33:54.561Z

enabled an automatic merge when all merge checks for 4162234368cf643db525028b26b461362eb2e5a4 pass

Author: Kinsey Moore 2026-07-28T13:48:56.000Z

approved this merge request

Author: Gedare Bloom 2026-07-29T02:26:46.445Z

approved this merge request

1.8.2.14 1354 - cpukit/flashdev: Clarify interface and update consumers

Id	1354
State	merged
Merged by	Joel Sherrill
Merged at	2026-07-27T21:35:14.597Z
Assignee(s)	Kinsey Moore
Created	2026-07-16T21:50:50.635Z
Updated	2026-07-27T21:35:14.588Z
Milestone	6.3
Labels	device::flash
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1354
Commit	178fee57713da888ae41062fa2e51d980cbb3d91

Summary

cpukit/flashdev: Clarify interface and update consumers

This clarifies the flashdev out of band read and write interfaces and updates any consumers of those interfaces. This was partially refactored at one point and the refactoring didn't extend to the consumers as it should have.

Closes #5652

Generative AI

None

Author: Kinsey Moore 2026-07-16T21:50:50.763Z

assigned to @opticron

Author: Kinsey Moore 2026-07-16T21:51:15.765Z

marked this merge request as blocked by !1353

Author: Kinsey Moore 2026-07-27T02:42:38.928Z

mentioned in merge request !1373

Author: Kinsey Moore 2026-07-27T02:43:04.160Z

enabled an automatic merge when all merge checks for 640dfd5c21caa977ee60077311fca87f1a9a739b pass

Author: Chris Johns 2026-07-27T02:47:48.249Z

approved this merge request

Author: Chris Johns 2026-07-27T14:11:43.855Z

aborted the automatic merge because target branch was updated

Author: Joel Sherrill 2026-07-27T21:34:50.108Z

approved this merge request

Author: Joel Sherrill 2026-07-27T21:34:57.707Z

added 8 commits

- 640dfd5c...e2859cf1 - 7 commits from branch `rtems/rtos:6`
- 178fee57 - cpukit/flashdev: Clarify interface and update consumers

Compare with previous version

Author: Joel Sherrill 2026-07-27T21:35:01.583Z

enabled an automatic merge when all merge checks for 178fee57713da888ae41062fa2e51d980cbb3d91 pass

1.8.2.15 1375 - Backport libdebugger fix for corruption of thread registers with 32 or more threads

Id	1375
State	merged
Merged by	Vijay Banerjee
Merged at	2026-07-27T14:26:27.216Z
Assignee(s)	Chris Johns
Created	2026-07-27T03:27:08.599Z
Updated	2026-07-27T14:26:27.202Z
Milestone	6.3
Labels	cpukit::debugger
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1375
Commit	e2859cf1c5dbfde7dc2ddb5e2e0aaa3c0dbda822

Summary

libdebugger: Fix corruption of thread registers with 32 or more threads

The block logic uses realloc to resize memory used by libdebugger when creating a snapshot of threads. Thread registers take a reference to the block and if a realloc changes the base address any references are invalid. Add rebase handler support to blocks that is called when the block base changes and add a handler to thread register blocks to rebase a thread's registers.

Exclude threads using both types of names they can have. This lets all names be reported in extra thread info packets.

Closes #5662

Generative AI

None

Author: Chris Johns 2026-07-27T03:27:08.984Z

assigned to @chris

Author: Chris Johns 2026-07-27T03:27:23.372Z

enabled an automatic merge when all merge checks for 8c57cbe765fc1ce564b501867359d77c047595db pass

Author: Chris Johns 2026-07-27T14:11:44.750Z

aborted the automatic merge because target branch was updated

Author: Joel Sherrill 2026-07-27T14:23:30.989Z

approved this merge request

Author: Joel Sherrill 2026-07-27T14:23:37.403Z

added 6 commits

- 8c57cbe7...d22c6298 - 5 commits from branch `rtems/rtos:6`
- fcd5676b - libdebugger: Fix corruption of thread registers with 32 or more threads

Compare with previous version

Author: Joel Sherrill 2026-07-27T14:23:42.039Z

enabled an automatic merge when all merge checks for fcd5676b6d24131748db1eeb05d617f969df728a pass

Author: Joel Sherrill 2026-07-27T14:24:38.637Z

aborted the automatic merge because target branch was updated

Author: Vijay Banerjee 2026-07-27T14:25:58.922Z

approved this merge request

Author: Vijay Banerjee 2026-07-27T14:26:13.381Z

added 2 commits

- 5c074eb0 - 1 commit from branch `rtems/rtos:6`
- e2859cf1 - libdebugger: Fix corruption of thread registers with 32 or more threads

Compare with previous version

Author: Vijay Banerjee 2026-07-27T14:26:22.248Z

enabled an automatic merge when all merge checks for e2859cf1c5dbfde7dc2ddb5e2e0aaa3c0dbda822 pass

1.8.2.16 1374 - Backport cpuuse fix of thread names in top

Id	1374
State	merged
Merged by	Joel Sherrill
Merged at	2026-07-27T14:24:36.541Z
Assignee(s)	Chris Johns
Created	2026-07-27T02:52:44.823Z
Updated	2026-07-27T14:24:36.533Z
Milestone	6.3
Labels	rtems::shell
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1374
Commit	5c074eb03c35fb617ce4456925d2c1c55fe0c134

Summary

libmisc/cpuuse: Fix thread names in top

- Show classic and POSIX thread names working around the mess we now have with the name management in threads

Closes #5638

Generative AI

None

Author: Chris Johns 2026-07-27T02:52:44.993Z

assigned to @chris

Author: Chris Johns 2026-07-27T02:53:32.292Z

enabled an automatic merge when all merge checks for c2f5a380f1c9d5d4d46e1d24f7a9710e3ca94d0d pass

Author: Chris Johns 2026-07-27T03:05:05.045Z

changed title from

Backport puuse fix of thread names in top

to

Backport

c

puuse fix of thread names in top

Author: Kinsey Moore 2026-07-27T13:55:09.653Z

approved this merge request

Author: Chris Johns 2026-07-27T14:11:44.311Z

aborted the automatic merge because target branch was updated

Author: Joel Sherrill 2026-07-27T14:24:15.198Z

approved this merge request

Author: Joel Sherrill 2026-07-27T14:24:18.547Z

added 6 commits

- c2f5a380...d22c6298 - 5 commits from branch `rtems/rtos:6`
- 5c074eb0 - libmisc/cpuuse: Fix thread names in top

Compare with previous version

Author: Joel Sherrill 2026-07-27T14:24:21.185Z

enabled an automatic merge when all merge checks for 5c074eb03c35fb617ce4456925d2c1c55fe0c134 pass

1.8.2.17 1376 - Backport libdebugger to add TCB to extra thread info

Id	1376
State	merged
Merged by	Vijay Banerjee
Merged at	2026-07-27T14:22:21.473Z
Assignee(s)	Chris Johns
Created	2026-07-27T03:33:58.342Z
Updated	2026-07-27T14:22:21.465Z
Milestone	6.3
Labels	cpukit::debugger
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1376
Commit	d22c629885096e26e8e8e32c7abc8bd1ce5fbfdd

Summary

libdebugger: Add TCB to extra thread info

Closes #5640

Generative AI

None

Author: Chris Johns 2026-07-27T03:33:58.516Z

assigned to @chris

Author: Chris Johns 2026-07-27T03:34:12.269Z

enabled an automatic merge when all merge checks for d4e04de9fb5a6811d3656b041a75debf4b8c157d pass

Author: Kinsey Moore 2026-07-27T13:53:01.358Z

approved this merge request

Author: Chris Johns 2026-07-27T14:11:44.968Z

aborted the automatic merge because target branch was updated

Author: Joel Sherrill 2026-07-27T14:19:49.408Z

approved this merge request

Author: Joel Sherrill 2026-07-27T14:19:58.189Z

added 5 commits

- d4e04de9...d38a27d7 - 4 commits from branch `rtems/rtos:6`
- d22c6298 - libdebugger: Add TCB to extra thread info

Compare with previous version

1.8.2.18 1372 - Remove MGHTTP (Mongoose) Web server

Id	1372
State	merged
Merged by	Vijay Banerjee
Merged at	2026-07-27T14:19:22.504Z
Assignee(s)	Chris Johns
Created	2026-07-27T02:30:02.964Z
Updated	2026-07-27T14:19:22.497Z
Milestone	6.3
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1372
Commit	d38a27d7a699fcc728c3be55d1e6b2f2dbd96450

The Mongoose web server was subject to CVE notices. This change removed the code from RTEMS and we recommend all RTEMS 6 users move to the CivetWeb.

Closes #5310

Generative AI

None

Author: Chris Johns 2026-07-27T02:30:03.530Z

assigned to @chris

Author: Chris Johns 2026-07-27T02:30:18.945Z

enabled an automatic merge when all merge checks for cda97e309af7e0c8f721444c72b28e9867bc9a15 pass

Author: Kinsey Moore 2026-07-27T02:32:18.863Z

approved this merge request

Author: Chris Johns 2026-07-27T14:11:44.580Z

aborted the automatic merge because target branch was updated

Author: Vijay Banerjee 2026-07-27T14:18:09.723Z

added 4 commits

- cda97e30...0e36f6ca - 3 commits from branch `rtems/rtos:6`
- d38a27d7 - cpukit/mghttp: Remove

Compare with previous version

Author: Vijay Banerjee 2026-07-27T14:18:41.738Z

approved this merge request

1.8.2.19 1371 - Backport PowerPC assembler warnings fixes

Id	1371
State	merged
Merged by	Chris Johns
Merged at	2026-07-27T14:11:40.926Z
Assignee(s)	Chris Johns
Created	2026-07-27T02:10:44.460Z
Updated	2026-07-27T14:11:40.918Z
Milestone	6.3
Labels	arch:powerpc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1371
Commit	0e36f6cae8e3320bce41b83a364983f59c8e4a89

The commits are backports of fixes in `main`.

Updates #5661

Generative AI

No

Author: Chris Johns 2026-07-27T02:10:44.670Z

assigned to @chris

Author: Chris Johns 2026-07-27T02:11:04.221Z

enabled an automatic merge when all merge checks for 0e36f6cae8e3320bce41b83a364983f59c8e4a89 pass

Author: Vijay Banerjee 2026-07-27T13:29:17.799Z

approved this merge request

Author: Kinsey Moore 2026-07-27T13:48:46.093Z

approved this merge request

Author: Joel Sherrill 2026-07-27T14:11:38.216Z

approved this merge request

1.8.2.20 1262 - 6 - powerpc/beatnik: Support generic IRQ

Id	1262
State	merged
Merged by	Joel Sherrill
Merged at	2026-05-28T23:22:57.773Z
Assignee(s)	Chris Johns
Created	2026-05-26T01:19:44.360Z
Updated	2026-05-28T23:22:57.762Z
Milestone	6.3
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1262
Commit	2faafecb7f9df8400fd78a1e6d9b3cf3df0eeccc

Summary

powerpc/beatnik: Support generic IRQ

This effects the MVME6100 and MVME5500.

Closes #5589

Generative AI

None

Author: Chris Johns 2026-05-26T01:19:44.548Z

assigned to @chris

Author: Chris Johns 2026-05-26T01:25:24.433Z

added 1 commit

- 5db21622 - powerpc/beatnik: Support generic IRQ

Compare with previous version

Author: Gedare Bloom 2026-05-27T21:40:34.524Z

approved this merge request

Author: Joel Sherrill 2026-05-28T23:22:44.524Z

added 2 commits

- c4553bbd - 1 commit from branch `rtems/rtos:6`
- 2faafecb - powerpc/beatnik: Support generic IRQ

Compare with previous version

Author: Joel Sherrill 2026-05-28T23:22:46.423Z

approved this merge request

Author: Joel Sherrill 2026-05-28T23:22:51.072Z

enabled an automatic merge when all merge checks for 2faafecb7f9df8400fd78a1e6d9b3cf3df0eeccc pass

1.8.2.21 1252 - bsps/zynq-uart: fix parity configuration handling

Id	1252
State	merged
Merged by	Kinsey Moore
Merged at	2026-05-18T21:51:14.074Z
Assignee(s)	Kinsey Moore
Created	2026-05-18T19:21:03.401Z
Updated	2026-05-18T21:51:14.064Z
Milestone	6.3
Labels	bsp, bsp::shared
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1252
Commit	c4553bbd2d35d61adc6e8f5d0b1ca034a0e587d4

Summary

bsps/zynq-uart: fix parity configuration handling

Fix parity handling in zynq_uart_set_attributes() by clearing existing parity bits before setting a new mode instead of always ORing PAR_NONE, which caused incorrect or ignored parity; also fix inverted PARODD logic and add ZYNQ_UART_MODE_PAR_MASK to manage the parity field correctly.

Updates #5554 Closes #5580

Generative AI

See !1212

Author: Kinsey Moore 2026-05-18T19:21:04.355Z

assigned to @opticron

Author: Kinsey Moore 2026-05-18T19:21:28.719Z

mentioned in merge request !1212

Author: Kinsey Moore 2026-05-18T19:21:32.999Z

enabled an automatic merge when all merge checks for c4553bbd2d35d61adc6e8f5d0b1ca034a0e587d4 pass

Author: Joel Sherrill 2026-05-18T19:54:09.962Z

approved this merge request

Author: Gedare Bloom 2026-05-18T21:51:11.718Z

approved this merge request

1.8.2.22 1060 - cpukit/libio: Fix race condition in iop free

Id	1060
State	merged
Merged by	Joel Sherrill
Merged at	2026-02-12T21:35:14.631Z
Assignee(s)	Kinsey Moore
Created	2026-02-12T21:09:28.230Z
Updated	2026-02-12T21:35:14.620Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1060
Commit	f6933b9c6ff6780c1b3a56d80aa9577f181e5763

Summary

cpukit/libio: Fix race condition in iop free

Closes #5490

Generative AI

Author: Kinsey Moore 2026-02-12T21:09:28.382Z

assigned to @opticron

Author: Joel Sherrill 2026-02-12T21:13:10.187Z

enabled an automatic merge when all merge checks for f6933b9c6ff6780c1b3a56d80aa9577f181e5763 pass

Author: Joel Sherrill 2026-02-12T21:13:20.630Z

approved this merge request

Author: Gedare Bloom 2026-02-12T21:35:11.986Z

approved this merge request

1.8.2.23 951 - bsps/m68k: Add -D_LDBL_EQ_DBL=1 workaround to ABI_FLAGS

Id	951
State	merged
Merged by	Chris Johns
Merged at	2026-01-27T13:25:29.116Z
Assignee(s)	Jeremy Lorelli
Reviewer(s)	Chris Johns
Created	2026-01-27T06:06:03.587Z
Updated	2026-01-27T13:25:29.107Z
Milestone	6.3
Labels	arch:m68k, lang::c
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/951
Commit	a0a80f08cad29dc3fdc0fa31a0200725185fda3e

Summary

Backport of !937

Author: Chris Johns 2026-01-27T07:06:34.137Z

We need an issue for an MR to the branch. I have created the https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/5435. Could you please update the commit message to say `Closes #5435` and also please update issue with the link to the `main` branch MR so the original discussion is linked? Thanks.

Author: Chris Johns 2026-01-27T06:56:45.114Z

Updated commit message with the 6.3 milestone issue,

Author: Chris Johns 2026-01-27T06:56:45.168Z

requested changes

Author: Chris Johns 2026-01-27T06:57:20.702Z

assigned to @jjl77

Author: Chris Johns 2026-01-27T06:58:34.970Z

requested review from @chris

Author: Jeremy Lorelli 2026-01-27T07:04:01.613Z

added 1 commit

- a0a80f08 - bsps/m68k: Add -D_LDBL_EQ_DBL=1 workaround to ABI_FLAGS

Compare with previous version

Author: Chris Johns 2026-01-27T07:06:34.154Z

resolved all threads

Author: Chris Johns 2026-01-27T07:06:37.041Z

approved this merge request

Author: Chris Johns 2026-01-27T07:06:40.196Z

enabled an automatic merge when all merge checks for a0a80f08cad29dc3fdc0fa31a0200725185fda3e pass

Author: Kinsey Moore 2026-01-27T13:25:25.959Z

approved this merge request

1.8.2.24 884 - Fix failing tests

Id	884
State	merged
Merged by	Joel Sherrill
Merged at	2026-01-23T01:32:03.974Z
Assignee(s)	Kinsey Moore
Created	2025-12-26T18:34:14.764Z
Updated	2026-01-23T01:32:03.939Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/884
Commit	4d38bf6ec039efc0b522ba8e4da7539367f5ff7c

Summary

cpukit/sapi/src/interrtext.c: Add missing definition

This adds a missing text description for an internal error and updates the spinternalerror02 test to check for the correct end of internal error definitions.

Closes #5410

cpukit/posix/aio: Override AIO_LISTIO_MAX from newlib

Newer versions of newlib do not define AIO_LISTIO_MAX, so override this value for the RTEMS implementation.

Closes #5227

Author: Kinsey Moore 2025-12-26T18:34:15.701Z

assigned to @opticron

Author: Kinsey Moore 2025-12-26T18:59:29.981Z

changed title from

cpukit/sapi/src/interrtext.c: Add missing definition

to

Fix failing tests

Author: Kinsey Moore 2025-12-26T18:59:30.008Z

changed the description

Author: Kinsey Moore 2026-01-13T21:06:43.545Z

enabled an automatic merge when all merge checks for f9eb6a4bdf44878665e53d59af9a90930331fab1 pass

Author: Kinsey Moore 2026-01-16T22:06:04.468Z

aborted the automatic merge because target branch was updated

Author: Joel Sherrill 2026-01-21T16:54:59.265Z

approved this merge request

Author: Joel Sherrill 2026-01-21T16:55:11.101Z

added 3 commits

- 7f064c49 - 1 commit from branch `rtems/rtos:6`
- ac41d584 - cpukit/sapi/src/interrtext.c: Add missing definition
- 4d38bf6e - cpukit/posix/aio: Override AIO_LISTIO_MAX from newlib

Compare with previous version

Author: Joel Sherrill 2026-01-21T16:56:57.600Z

enabled an automatic merge when all merge checks for 4d38bf6ec039efc0b522ba8e4da7539367f5ff7c pass

Author: Gedare Bloom 2026-01-23T01:31:48.217Z

approved this merge request

1.8.2.25 916 - bsps/aarch64: Add missing ISB after SCTLR write

Id	916
State	merged
Merged by	Kinsey Moore
Merged at	2026-01-16T22:06:00.481Z
Created	2026-01-15T20:13:36.113Z
Updated	2026-01-16T22:06:00.472Z
Milestone	6.3
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/916
Commit	7f064c49bdea4c0e7c4d6502e0500c4098f01786

Summary

bsps/aarch64: Add missing ISB after SCTLR write

A write to the sctlr_el1 register is a ‘context-changing operation’ and thus requires a pipeline flush for the change to actually take effect on subsequent instructions.

The isb instruction gurantees this, and ensures mmu is enabled immediately.

Closes #5422

Author: Preetam Das 2026-01-15T20:15:57.499Z

mentioned in merge request !908

Author: Kinsey Moore 2026-01-15T20:19:16.861Z

enabled an automatic merge when all merge checks for 7f064c49bdea4c0e7c4d6502e0500c4098f01786 pass

Author: Kinsey Moore 2026-01-15T20:19:19.464Z

approved this merge request

Author: Joel Sherrill 2026-01-16T22:05:57.682Z

approved this merge request

1.8.2.26 763 - bsps/noelv: Align instruction in *bsp_reset()*

Id	763
State	merged
Merged by	Kinsey Moore
Merged at	2025-10-03T15:28:54.408Z
Created	2025-10-03T09:41:58.501Z
Updated	2025-12-05T00:45:39.623Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/763
Commit	10154a6ecaf9db4d1b485ce59338b79f18eac037

Summary

bsps/noelv: Align instruction in `bsp_reset()`

Closes #5368

Author: Joel Sherrill 2025-10-03T15:26:04.990Z

approved this merge request

Author: Kinsey Moore 2025-10-03T15:28:51.306Z

approved this merge request

1.8.2.27 863 - bsps/shared/dev/flash: Add a flashdev simulation backend

Id	863
State	merged
Merged by	Kinsey Moore
Merged at	2025-12-05T00:10:59.363Z
Assignee(s)	Kinsey Moore
Created	2025-12-04T15:18:05.364Z
Updated	2025-12-05T00:10:59.351Z
Milestone	6.3
Labels	device::flash
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/863
Commit	be446b02d091a2a745e03405eaab4de078571532

Summary

bsps/shared/dev/flash: Add a flashdev simulation backend

This adds a backend for flashdev that simulates a flash device with adjustable delays to simulate real flash devices and offers configurable flash parameters. This also migrates the JFFS2 filesystem tests to the flashdev framework and eliminates the purpose-built simulated flash in the testsuite in favor of a more generic and widely usable solution.

Closes #5403

Author: Kinsey Moore 2025-12-04T15:18:05.966Z

assigned to @opticron

Author: Kinsey Moore 2025-12-04T15:18:45.357Z

enabled an automatic merge when all merge checks for d5f9bea3785f4f12a097f7845636ab9622e9d8fe pass

Author: Joel Sherrill 2025-12-04T20:14:18.429Z

Missing Doxygen @file block

Author: Kinsey Moore 2025-12-04T20:14:18.429Z

Fixed in the latest push.

Author: Joel Sherrill 2025-12-04T20:14:28.937Z

These are not Doxygen comments.

Author: Kinsey Moore 2025-12-04T20:12:38.592Z

changed this line in version 2 of the diff

Author: Kinsey Moore 2025-12-04T20:14:28.937Z

Fixed in the latest push.

Author: Joel Sherrill 2025-12-04T20:14:03.279Z

Again.

Author: Kinsey Moore 2025-12-04T20:12:39.247Z

changed this line in version 2 of the diff

Author: Kinsey Moore 2025-12-04T20:14:03.279Z

Fixed in the latest push.

Author: Joel Sherrill 2025-12-04T20:13:56.081Z

Not Doxygen comment.

Author: Kinsey Moore 2025-12-04T20:12:40.263Z

changed this line in version 2 of the diff

Author: Kinsey Moore 2025-12-04T20:13:56.081Z

Fixed in the latest push.

Author: Joel Sherrill 2025-12-04T23:42:11.446Z

For all the methods, there is no error checking of parameters. Can they always be trusted? Should there be debug assertions?

Author: Kinsey Moore 2025-12-04T23:42:11.446Z

As far as I'm aware, all the other flashdev backends trust the passed parameters. I suppose debug assertions wouldn't hurt, but those might be better placed in the flashdev framework itself to avoid duplication.

Author: Joel Sherrill 2025-12-04T20:13:47.266Z

Having this second half in an else is unnecessary and makes it look like the function can fall out the bottom.

Author: Kinsey Moore 2025-12-04T20:12:42.060Z

changed this line in version 2 of the diff

Author: Kinsey Moore 2025-12-04T20:13:47.266Z

Fixed in the latest push.

Author: Joel Sherrill 2025-12-04T18:43:01.843Z

left review comments

Author: Kinsey Moore 2025-12-04T20:12:42.697Z

added 1 commit

- be446b02 - bsps/shared/dev/flash: Add a flashdev simulation backend

Compare with previous version

Author: Kinsey Moore 2025-12-04T20:14:49.527Z

enabled an automatic merge when all merge checks for be446b02d091a2a745e03405eaab4de078571532 pass

Author: Kinsey Moore 2025-12-04T23:42:11.478Z

resolved all threads

Author: Joel Sherrill 2025-12-05T00:10:42.456Z

approved this merge request

Author: Amar Takhar 2025-12-05T00:10:53.893Z

approved this merge request

1.8.2.28 806 - bsps/qspi: Make flashdev control structure private

Id	806
State	merged
Merged by	Chris Johns
Merged at	2025-10-20T14:42:05.939Z
Assignee(s)	Kinsey Moore
Created	2025-10-16T16:34:24.724Z
Updated	2025-10-20T14:42:05.931Z
Milestone	6.3
Labels	device::spi
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/806
Commit	36a3845d9cf896bb14ad9a9534b8f6acacba39b4

Summary

bsps/qspi: Make flashdev control structure private

These structures are not required to be exposed to users for any functionality and users of the API have no way to make use of them.

Closes #5375

Author: Kinsey Moore 2025-10-16T16:34:24.863Z

assigned to @opticron

Author: Kinsey Moore 2025-10-16T16:35:19.456Z

mentioned in merge request !804

Author: Chris Johns 2025-10-16T21:57:24.723Z

approved this merge request

Author: Chris Johns 2025-10-16T21:57:31.007Z

enabled an automatic merge when all merge checks for 36a3845d9cf896bb14ad9a9534b8f6acacba39b4 pass

Author: Joel Sherrill 2025-10-20T14:42:04.042Z

approved this merge request

1.8.2.29 424 - build: Provide LDFLAGS for pkg-config (closed)

Id	424
State	closed
Assignee(s)	Sebastian Huber
Reviewer(s)	Chris Johns
Closed by	Sebastian Huber
Created	2025-02-15T05:42:39.462Z
Closed	2026-10-16T05:10:18.112Z
Updated	2026-10-16T05:10:18.101Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/424
Commit	571dc6fb3168293f94439fc864e9d05c0c3da490

Summary

Some pkg-config variants perform transformations on the –libs options. This may lead to completely broken linker options:

https://github.com/pkgconf/pkgconf/issues/371

Provide the LDFLAGS as a variable. Do not add the ABI_FLAGS to LDFLAGS since they are already contained in the CFLAGS. The linker command line should include the compiler flags so that link-time optimization works properly.

Update #5165.

Author: Sebastian Huber 2025-02-15T05:42:39.627Z

assigned to @sebhub

Author: Sebastian Huber 2025-02-15T05:44:12.602Z

changed title from **{-cpukit/jffs2/rtime: Fix off-by-one error in decompression check-}** to **{+build: Provide LDFLAGS for pkg-config+}**

Author: Sebastian Huber 2025-02-15T05:44:12.631Z

changed the description

Author: Sebastian Huber 2025-02-15T05:44:12.670Z

changed target branch from `main` to `6`

Author: Sebastian Huber 2025-02-15T05:48:57.400Z

I created the MR with the wrong target branch. Now the pipeline is confused.

Author: Amar Takhar 2025-02-15T05:59:03.534Z

Yes, we actually enacted a new policy and adding to gitlab that branches targeted towards branches need to start with `5-*` or `6-*` gitlab will then automatically set the branch.

This just happened no doc updating the old way is still fine but this way this CI issue won't happen. Let me try and see if restarting the pipeline manually fixes it.

Author: Amar Takhar 2025-02-15T06:00:16.820Z

Nope that didn't fix it let me see how to properly handle this situation it may be how I have the CI setup

Author: Amar Takhar 2025-02-16T09:50:17.653Z

I think we're stuck unless you do an update the source or we have to rebase on it. GitLab will snapshot the state when an MR comes in and use that. I have seen complaints about this exact issue but no solutions anywhere so we'll wait until there is a chance to rebase.

Author: Kinsey Moore 2025-03-04T15:20:39.238Z

approved this merge request

Author: Amar Takhar 2025-07-02T18:25:44.075Z

added 8 commits

- a5e5c058...dd490c5c - 7 commits from branch `rtems/rtos:6`
- 3e90c378 - build: Provide LDFLAGS for pkg-config

Compare with previous version

Author: Amar Takhar 2025-07-02T18:25:58.823Z

reset approvals from @opticron by pushing to the branch

Author: Gedare Bloom 2025-08-05T14:04:56.716Z

requested review from @chris

Author: Chris Johns 2025-10-02T23:48:33.228Z

This was reverted on `main`.

Author: Sebastian Huber 2025-10-03T01:12:29.082Z

This MR doesn't contain the reverted change. There is an associated MR for main: https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/425.

Author: Sebastian Huber 2026-03-18T01:41:10.821Z

added 40 commits

- 3e90c378...f6933b9c - 39 commits from branch `rtems/rtos:6`
- 0f11145b - build: Provide LDFLAGS for pkg-config

Compare with previous version

Author: Sebastian Huber 2026-10-15T06:23:36.037Z

added 26 commits

- 0f11145b...46daa108 - 25 commits from branch `rtems/rtos:6`
- 571dc6fb - build: Provide LDFLAGS for pkg-config

Compare with previous version

Author: Sebastian Huber 2026-10-16T05:10:17.593Z

Not accepted by rtems.org.

1.8.2.30 1373 - Backport of Flashdev fix to clarify interface and update consumers (closed)

Id	1373
State	closed
Assignee(s)	Chris Johns
Reviewer(s)	Kinsey Moore
Closed by	Chris Johns
Created	2026-07-27T02:38:13.085Z
Closed	2026-07-27T02:47:36.220Z
Updated	2026-07-27T03:32:55.565Z
Milestone	6.3
Labels	device::flash
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1373
Commit	d86d12119a46944f3cbf511d0fb204d8cffa6a38

cpukit/flashdev: Clarify interface and update consumers

This clarifies the flashdev out of band read and write interfaces and updates any consumers of those interfaces. This was partially refactored at one point and the refactoring didn't extend to the consumers as it should have.

Closes #5652

Generative AI

None

Author: Chris Johns 2026-07-27T02:38:13.228Z

requested review from @opticron

Author: Chris Johns 2026-07-27T02:38:13.246Z

assigned to @chris

Author: Chris Johns 2026-07-27T02:38:26.066Z

enabled an automatic merge when all merge checks for d86d12119a46944f3cbf511d0fb204d8cffa6a38 pass

Author: Kinsey Moore 2026-07-27T02:47:33.070Z

This is a duplicate of !1354

Author: Chris Johns 2026-07-27T02:47:33.070Z

Sorry I did not see the linked MR.

Author: Kinsey Moore 2026-07-27T03:32:55.527Z

It is unfortunate that gitlab only appears to link the MRs one direction and does not show “MRs that depend on this one” for a given MR.

Author: Chris Johns 2026-07-27T02:47:33.093Z

resolved all threads

Author: Chris Johns 2026-07-27T02:47:36.408Z

aborted the automatic merge because merge request was closed

1.9 RTEMS / RTOS / Release

Go to *Issues* (page 3309) or *Merge Requests* (page 3317)

Issues Summary

13 - Version string missmatch in 6.1 Release (opened) (page 299)

Merge Requests Summary

1.9.1 Issues

1.9.1.1 13 - Version string missmatch in 6.1 Release (opened)

Id	13
State	opened
Type	ISSUE
Author	Heinz Junkes
Assignee(s)	Chris Johns
Created	2025-01-30T07:11:19.589Z
Updated	2026-01-16T00:12:29.482Z
Milestone	6.3
Labels	release
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/work_items/13
Merges	0

Summary

FATAL (assert exception) - output shows wrong version string.

```
*** FATAL ***
fatal source: 7 (RTEMS_FATAL_SOURCE_ASSERT)
fatal code: 2156335792 (0x808712b0)
RTEMS version: 6.1.0.not-released
RTEMS tools: 13.3.0 20240521 (RTEMS 6, RSB no-repo, Newlib 1b3dcfd)
executing thread ID: 0x0b010001
executing thread name: _main_
U-Boot SPL 2018.09-00002-g0b54a51eee (Sep 10 2018 - 19:41:39 -0500)
...
```

Steps to reproduce

In a 'normal' programme 'assert()'

```
assertion "sc == RTEMS_SUCCESSFUL" failed: file "../pyroArrayIOCGpio.c", line 139,
↪ function: testingGpio
```

rtems_get_version_string() shows:

```
rtems-6.1.0 (ARM/ARMv4/beagleboneblack)
```

Author: Gedare Bloom 2025-01-30T16:43:48.716Z

assigned to @chris

Author: Chris Johns 2025-09-25T23:23:05.369Z

changed Version to

6

1.10 RTEMS / Tools / RTEMS Source Builder

Go to *Issues* (page 302) or *Merge Requests* (page 319)

Issues Summary

216 - Microblaze tools do not build for RTEMS 6 (page 303)
214 - Qemu build relies on libslirp.so (backport to 6) (page 304)
213 - Remove libbsd 6-freebsd-12 from the RSB (page 302)
212 - Released LibBSD branches so not build (page 305)
206 - Add a source and hash check to the get sources command (page 306)
197 - Building GDB fails for RTEMS 6 on MacOS (page 314)
188 - spike does not compile and needs C version set (backport to 6 branch) (page 307)
184 - Back port main source-builder to the 6 branch (page 316)
133 - Backport to 6 branch: "config: Update expat to 2.7.3" (page 317)
87 - Unable to build the BSP with Python 3.12 (page 309)
59 - rtems6: spike fails to link on arm64-apple-darwin23.2.0 (page 318)
39 - User manual RSB BSP build examples need updating (page 313)

Merge Requests Summary

303 - qemu-common-2.cfg: Add ${prefix}/lib64 to rpath (page 319)
300 - rtems/libbsd: Handle releases of 6-freebsd-fb14 correctly (page 320)
297 - sb/getsources: Apply missing fixes to the hash checker (page 321)
294 - Fix backport issues and update RTEMS versions and hashes (page 323)
292 - sb/getsources: Check sources all have a valid hash (page 321)
282 - Adjust GDB versions after general move to gdb 17.2 (page 324)
281 - 6/rtems-default.bset: Update to gdb 17.2 (page 326)
263 - sb/defaults: Add C and C++ standard option support for packages (page 331)
260 - rtems/c++: Patch to support C++17 filesystem namespace calls (page 332)
254 - sb: Back port main to the 6 branch (page 327)
248 - sis-2-1.cfg: Define host_c_std as GNU17 (page 333)

1.10.1 Issues

1.10.1.1 213 - Remove libbsd 6-freebsd-12 from the RSB

Id	213
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-09-02T00:16:26.653Z
Closed	2026-10-31T16:44:55.410Z
Updated	2026-10-31T16:44:55.559Z
Milestone	6.3
Labels	libbsd, libbsd::freebsd-12, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/213
Merges	0

Summary

Remove RSB support to build LibBSD `6-freebsd-12` as this is only and has known problems. Users need to upgrade to `6-freebsd-14`.

Author: Chris Johns 2026-09-02T00:16:26.863Z

added rtems#15 as parent item

Author: Chris Johns 2026-09-02T00:16:26.956Z

set status to **In progress**

Author: Chris Johns 2026-09-02T00:16:27.060Z

assigned to @chris

Author: Chris Johns 2026-10-31T16:44:55.460Z

set status to **Done**

Author: Chris Johns 2026-10-31T16:44:56.590Z

Fixed. A test release build for 6.3 has:

```
$ ls 6.3/sources/ | grep libbsd
rtems-libbsd-fb14-6.3.tar.xz
```

1.10.1.2 216 - Microblaze tools do not build for RTEMS 6

Id	216
State	closed
Type	ISSUE
Author	Joel Sherrill
Closed by	Chris Johns
Created	2026-10-26T15:22:17.305Z
Closed	2026-10-31T16:26:59.952Z
Updated	2026-10-31T16:26:59.958Z
Milestone	6.3
Labels	tool::gdb
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/216
Merges	0

Summary

The microblaze tools do not build with the RSB. See this build report for details.

Steps to reproduce

Normal RSB build for this target.

Author: Joel Sherrill 2026-10-26T15:22:17.390Z

set status to **To do**

Author: Joel Sherrill 2026-10-26T15:23:29.527Z

mentioned in merge request !309

Author: Joel Sherrill 2026-10-28T02:22:50.155Z

mentioned in commit 10b4e2fa2358c884a086840e5a14f8ffafbb29d2

Author: Chris Johns 2026-10-31T16:26:59.981Z

set status to **Done**

1.10.1.3 214 - Qemu build relies on libslirp.so (backport to 6)

Id	214
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Chris Johns
Created	2026-09-02T12:50:54.775Z
Closed	2026-09-03T01:37:40.560Z
Updated	2026-09-03T01:37:40.565Z
Milestone	6.3
Labels	tool::qemu
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/214
Merges	0

Summary

Backport of #210 with changes in !301

Qemu built by the RSB relies on _libslirp.so_. Unfortunately, the one we build is not used by default so on Rocky 9, it results in a failure:

```
$ ~/rtems-work/tools/next/qemu/bin/qemu-system-arm
/home/joel/rtems-work/tools/next/qemu/bin/qemu-system-arm: /lib64/libslirp.so.0:␣
↪version `SLIRP_4.9' not found (required by /home/joel/rtems-work/tools/next/
↪qemu/bin/qemu-system-arm)
/home/joel/rtems-work/tools/next/qemu/bin/qemu-system-arm: /lib64/libslirp.so.0:␣
↪version `SLIRP_4.7' not found (required by /home/joel/rtems-work/tools/next/
↪qemu/bin/qemu-system-arm)
/home/joel/rtems-work/tools/next/qemu/bin/qemu-system-arm: /lib64/libslirp.so.0:␣
↪version `SLIRP_4.5' not found (required by /home/joel/rtems-work/tools/next/
↪qemu/bin/qemu-system-arm)
```

This can be resolved by setting _LD_LIBRARY_PATH_ to point to the _libslirp.so_ installed by the RSB. The following command or just exporting LD_LIBRARY_PATH works.

```
LD_LIBRARY_PATH=/home/joel/rtems-work/tools/next/qemu/lib64      /tmp/rttools/bin/
rtems-test --rtems-bsp=malta_qemu ``find build -name hello.exe``
```

Depending on the host operating systems this is happening on, it could be negatively impacting the cron sweeper.

Steps to reproduce

This is a normal RSB build of qemu. I think all you need is to be on a host without the _libslirp.so_ version used to build qemu.

Steps to reproduce

Author: Joel Sherrill 2026-09-02T12:50:54.910Z

set status to **To do**

Author: Joel Sherrill 2026-09-02T12:50:55.049Z

assigned to @joel

Author: Joel Sherrill 2026-09-02T13:41:33.565Z

mentioned in merge request !303

Author: Chris Johns 2026-09-03T01:37:07.473Z

added rtems#15 as parent item

Author: Chris Johns 2026-09-03T01:37:40.596Z

set status to **Done**

1.10.1.4 212 - Released LibBSD branches so not build

Id	212
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-08-31T05:40:12.252Z
Closed	2026-09-02T00:14:25.263Z
Updated	2026-09-02T00:14:25.361Z
Milestone	6.3
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/212
Merges	0

Summary

The build scripts so not handle releases and default to the standard package name. For LibBSD is `*-freebsd-12` branch that has been removed from releases. The branch `6-freebsd-14` package is `rtems-libbsd-fb14-6.3.tar.xz`.

Fix the support.

Author: Chris Johns 2026-08-31T05:40:12.371Z

cloned from #211

Author: Chris Johns 2026-08-31T05:41:23.084Z

changed the description

Author: Chris Johns 2026-08-31T05:41:31.765Z

added rtems#15 as parent item

Author: Chris Johns 2026-08-31T05:47:52.979Z

mentioned in merge request !300

Author: Chris Johns 2026-09-02T00:14:25.302Z

set status to **Done**

1.10.1.5 206 - Add a source and hash check to the get sources command

Id	206
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-08-18T01:10:43.761Z
Closed	2026-08-27T05:50:57.919Z
Updated	2026-08-27T05:50:58.043Z
Milestone	6.3
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/206
Merges	0

Summary

Add a check of the sources and hashes when getting sources to make sure all files have a valid hash reference.

This is important when generating the catalog for use with the download cache.

Author: Chris Johns 2026-08-18T01:10:43.867Z

cloned from #205

Author: Chris Johns 2026-08-18T01:11:02.747Z

added rtems#15 as parent item

Author: Chris Johns 2026-08-18T01:20:00.119Z

mentioned in merge request !292

Author: Chris Johns 2026-08-21T03:56:12.480Z

set status to **Done**

Author: Chris Johns 2026-08-27T03:19:27.050Z

set status to **To do**

Author: Chris Johns 2026-08-27T03:19:48.962Z

The 6 branch is missing some changes on the 5 and main branches

Author: Chris Johns 2026-08-27T03:22:07.852Z

mentioned in merge request !297

Author: Chris Johns 2026-08-27T05:50:57.994Z

set status to **Done**

1.10.1.6 188 - spike does not compile and needs C version set (backport to 6 branch)

Id	188
State	closed
Type	ISSUE
Author	Joel Sherrill
Closed by	Chris Johns
Created	2026-05-21T14:47:28.322Z
Closed	2026-07-31T00:31:56.201Z
Updated	2026-07-31T00:31:56.270Z
Milestone	6.3
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/188
Merges	0

Summary

The same version of spike is used on the 5, 6, and 7 branches. With recent host OS and compilers, it does not compile because it needs to explicitly include .

This patch spike-1.1.0-add-cstdint.h.diff addresses the issue.

Related to #186

Steps to reproduce

Build with recent host and gcc.

Author: Joel Sherrill 2026-05-21T14:47:28.424Z

set status to **To do**

Author: Joel Sherrill 2026-05-21T19:23:21.174Z

added rtems#15 as parent epic

Author: Joel Sherrill 2026-05-21T19:29:18.969Z

mentioned in merge request !260

Author: Joel Sherrill 2026-05-28T14:06:57.260Z

mentioned in merge request !263

Author: Chris Johns 2026-07-28T01:42:25.934Z

@joel Is this issue done?

Author: Chris Johns 2026-07-31T00:31:56.241Z

set status to **Done**

1.10.1.7 87 - Unable to build the BSP with Python 3.12

Id	87
State	closed
Type	ISSUE
Author	Giles Knap
Closed by	Chris Johns
Created	2025-02-04T09:00:46.456Z
Closed	2026-07-31T00:18:10.684Z
Updated	2026-07-31T00:18:10.748Z
Milestone	6.3
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/87
Merges	0

Summary

On Ubuntu 24.04 (container) using python 3.12 I see the following error when doing `waf configure`

```
 #23 [developer 18/18] RUN ./waf configure --prefix=/rtems6-beatnik-legacy/rtems/6.1 --rtems-bsps=powerpc/beatnik &&     ./waf &&     ./waf install
 #23 0.196 /rtems6-beatnik-legacy/rtems-net-legacy-6.1/rtems_waf/pkgconfig.py:73: SyntaxWarning: invalid escape sequence '\$'
 #23 0.196   mre = re.compile('\$\{[^\}]+\}')
 #23 0.240 Setting top to                           : /rtems6-beatnik-legacy/rtems-net-legacy-6.1
 #23 0.241 Setting out to                           : /rtems6-beatnik-legacy/rtems-net-legacy-6.1/build
 #23 0.241 RTEMS Version                            : 6
 #23 0.241 Architectures                            : powerpc-rtems6
 #23 0.241 Board Support Package (BSP)              : powerpc-rtems6-beatnik
 #23 0.241 Show commands                            : no
 #23 0.241 Long commands                            : no
 #23 0.241 Checking for program 'powerpc-rtems6-gcc' : /rtems6-beatnik-legacy/rtems/6.1/bin/powerpc-rtems6-gcc
 #23 0.242 Checking for program 'powerpc-rtems6-g++' : /rtems6-beatnik-legacy/rtems/6.1/bin/powerpc-rtems6-g++
 #23 0.242 Checking for program 'powerpc-rtems6-gcc' : /rtems6-beatnik-legacy/rtems/6.1/bin/powerpc-rtems6-gcc
 #23 0.242 Checking for program 'powerpc-rtems6-ld'  : /rtems6-beatnik-legacy/rtems/6.1/bin/powerpc-rtems6-ld
 #23 0.243 Checking for program 'powerpc-rtems6-ar'  : /rtems6-beatnik-legacy/rtems/6.1/bin/powerpc-rtems6-ar
 #23 0.243 Checking for program 'powerpc-rtems6-nm'  : /rtems6-beatnik-legacy/rtems/6.1/bin/powerpc-rtems6-nm
 #23 0.243 Checking for program 'powerpc-rtems6-objdump' : /rtems6-beatnik-legacy/rtems/6.1/bin/powerpc-rtems6-objdump
 #23 0.244 Checking for program 'powerpc-rtems6-objcopy' : /rtems6-beatnik-
```

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```
↪legacy/rtems/6.1/bin/powerpc-rtems6-objcopy
 #23 0.245 Checking for program 'powerpc-rtems6-readelf' : /rtems6-beatnik-
↪legacy/rtems/6.1/bin/powerpc-rtems6-readelf
 #23 0.245 Checking for program 'powerpc-rtems6-strip'   : /rtems6-beatnik-
↪legacy/rtems/6.1/bin/powerpc-rtems6-strip
 #23 0.245 Checking for program 'powerpc-rtems6-ranlib'  : /rtems6-beatnik-
↪legacy/rtems/6.1/bin/powerpc-rtems6-ranlib
 #23 0.246 Checking for program 'rtems-ld'               : /rtems6-beatnik-
↪legacy/rtems/6.1/bin/rtems-ld
 #23 0.246 Checking for program 'rtems-tld'              : /rtems6-beatnik-
↪legacy/rtems/6.1/bin/rtems-tld
 #23 0.247 Checking for program 'rtems-syms'             : /rtems6-beatnik-
↪legacy/rtems/6.1/bin/rtems-syms
 #23 0.247 Checking for program 'rtems-bin2c'            : /rtems6-beatnik-
↪legacy/rtems/6.1/bin/rtems-bin2c
 #23 0.248 Checking for program 'tar'                    : /usr/bin/tar
 #23 0.250 Checking for program 'gcc, cc'                : /rtems6-beatnik-
↪legacy/rtems/6.1/bin/powerpc-rtems6-gcc
 #23 0.272 Checking for program 'ar'                     : /rtems6-beatnik-
↪legacy/rtems/6.1/bin/powerpc-rtems6-ar
 #23 0.277 Checking for program 'g++, c++'               : /rtems6-beatnik-
↪legacy/rtems/6.1/bin/powerpc-rtems6-g++
 #23 0.294 Checking for program 'ar'                     : /rtems6-beatnik-
↪legacy/rtems/6.1/bin/powerpc-rtems6-ar
 #23 0.298 Checking for program 'gas, gcc'               : /rtems6-beatnik-
↪legacy/rtems/6.1/bin/powerpc-rtems6-gcc
 #23 0.300 Checking for program 'ar'                     : /rtems6-beatnik-
↪legacy/rtems/6.1/bin/powerpc-rtems6-ar
 #23 0.301 Checking for c flags '-MMD'                   : yes
 #23 0.316 Checking for cxx flags '-MMD'                 : yes
 #23 0.333 Compiler version (powerpc-rtems6-gcc)         : 13.3.0 20240521␣
↪(RTEMS 6, RSB no-repo, Newlib 1b3dcfd)
 #23 0.334 Checking for a valid RTEMS BSP installation   : yes
 #23 0.475 Checking for RTEMS_DEBUG                      : no
 #23 0.528 Checking for RTEMS_MULTIPROCESSING            : no
 #23 0.581 Checking for RTEMS_NEWLIB                     : yes
 #23 0.720 Checking for RTEMS_POSIX_API                  : yes
 #23 0.861 Checking for RTEMS_SMP                        : no
 #23 0.912 Checking for RTEMS_NETWORKING                 : no
 #23 0.963 Configure variant:                            : powerpc-rtems6-beatnik
 #23 0.964 Checking version                              : Traceback (most␣
↪recent call last):
 #23 0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/.waf3-2.1.4-
↪72787ce48f227ac42c4b0da24e780694/waflib/Scripting.py", line 122, in waf_entry_
↪point
 #23 0.965     run_commands()
 #23 0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/.waf3-2.1.4-
↪72787ce48f227ac42c4b0da24e780694/waflib/Scripting.py", line 185, in run_commands
 #23 0.965     ctx=run_command(cmd_name)
```

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```
 #23 0.965         ^^^^^^^^^^^^^^^^^^^^
 #23 0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/.waf3-2.1.4-
↪72787ce48f227ac42c4b0da24e780694/waflib/Scripting.py", line 176, in run_command
 #23 0.965     ctx.execute()
 #23 0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/.waf3-2.1.4-
↪72787ce48f227ac42c4b0da24e780694/waflib/Configure.py", line 86, in execute
 #23 0.965     super(ConfigurationContext,self).execute()
 #23 0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/.waf3-2.1.4-
↪72787ce48f227ac42c4b0da24e780694/waflib/Context.py", line 92, in execute
 #23 0.965     self.recurse([os.path.dirname(g_module.root_path)])
 #23 0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/.waf3-2.1.4-
↪72787ce48f227ac42c4b0da24e780694/waflib/Context.py", line 133, in recurse
 #23 0.965     user_function(self)
 #23 0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/wscript", line 69,
↪ in configure
 #23 0.965     rtems.configure(conf, bsp_configure)
 #23 0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/rtems_waf/rtems.py
↪", line 304, in configure
 #23 0.965     bsp_configure(conf, ab)
 #23 0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/wscript", line 62,
↪ in bsp_configure
 #23 0.965     netlegacy.bsp_configure(conf, arch_bsp)
 #23 0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/netlegacy.py",␣
↪line 81, in bsp_configure
 #23 0.965     conf.env.RTEMS_NET_LEGACY_VERSION = version.string(conf)
 #23 0.965                                         ^^^^^^^^^^^^^^^^^^^^
 #23 0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/rtems_waf/version.
↪py", line 258, in string
 #23 0.965     _load_released_version(ctx)
 #23 0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/rtems_waf/version.
↪py", line 142, in _load_released_version
 #23 0.965     vc, v = _load_released_version_config(ctx)
 #23 0.965             ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
 #23 0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/rtems_waf/version.
↪py", line 117, in _load_released_version_config
 #23 0.965     v = configparser.SafeConfigParser()
 #23 0.965         ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
 #23 0.965 AttributeError: module 'configparser' has no attribute
↪'SafeConfigParser'. Did you mean: 'RawConfigParser'?
 #23 ERROR: process "/bin/sh -c ./waf configure --prefix=${RTEMS_PREFIX} --rtems-
↪bsps=${RTEMS_ARCH}/${RTEMS_BSP} &&     ./waf &&     ./waf install" did not␣
↪complete successfully: exit code: 2
 ------


   [developer 18/18] RUN ./waf configure --prefix=/rtems6-beatnik-legacy/rtems/6.
↪1 --rtems-bsps=powerpc/beatnik &&     ./waf &&     ./waf install:
   0.965                                          ^^^^^^^^^^^^^^^^^^^^
   0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/rtems_waf/version.py
```

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```
↪", line 258, in string
    0.965     _load_released_version(ctx)
    0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/rtems_waf/version.py
↪", line 142, in _load_released_version
    0.965     vc, v = _load_released_version_config(ctx)
    0.965             ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
    0.965   File "/rtems6-beatnik-legacy/rtems-net-legacy-6.1/rtems_waf/version.py
↪", line 117, in _load_released_version_config
    0.965     v = configparser.SafeConfigParser()
    0.965         ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
    0.965 AttributeError: module 'configparser' has no attribute 'SafeConfigParser
↪'. Did you mean: 'RawConfigParser'?



Steps to reproduce
..................


The whole github actions log can be seen here:
https://github.com/epics-containers/rtems-bsp/actions/runs/13130540022/job/
↪36634604325


Pre-set options
~~~~~~~~~~~~~~~
```

Author: Giles Knap 2025-02-05T15:47:24.120Z

I believe that the versioning function could be replaced by setuptools_scm e.g. as used here https://github.com/DiamondLightSource/python-copier-template/blob/9c6f34d60a138f72fe01aed8f9639773d1ce635d/pyproject.toml#L1-L3

This should be backward compatible to python3.8.

I would be interested in submitting a PR this if it is likely to be of use.

Author: Chris Johns 2025-09-25T23:20:24.844Z

changed Version to

6

Author: Chris Johns 2025-10-02T22:30:24.225Z

added rtems#10 as parent epic

Author: Chris Johns 2025-12-16T20:45:44.675Z

added rtems#15 as parent epic

Author: Chris Johns 2026-07-28T01:38:27.995Z

Are you able to retest this? I was able to build net-legacy with Python 3.14 on FreeBSD.

Author: Chris Johns 2026-07-31T00:18:10.720Z

set status to **Obsolete**

1.10.1.8 39 - User manual RSB BSP build examples need updating

Id	39
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2023-07-25T02:33:00.000Z
Closed	2026-07-31T00:01:34.704Z
Updated	2026-07-31T00:01:34.708Z
Milestone	6.3
Labels	priority::normal, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/39
Merges	0

Author: Gedare Bloom 2024-10-07T20:21:20.440Z

assigned to @chris

Author: Gedare Bloom 2024-10-06T19:11:51.794Z

changed the description

Author: Gedare Bloom 2024-10-06T19:11:51.834Z

assigned to @chris and unassigned @tracmigrate

Author: Gedare Bloom 2024-10-07T20:21:20.778Z

moved from rtems/rtos/rtems#4931

Author: Amar Takhar 2024-10-18T00:14:24.980Z

unassigned @chris

Author: Amar Takhar 2024-10-18T00:14:41.189Z

Unassigned Chris whoever can get to this it needs to be done for %6.1

Author: Chris Johns 2024-11-07T23:39:19.647Z

assigned to @chris

Author: Gedare Bloom 2024-12-04T21:39:40.002Z

Author: Chris Johns 2024-12-06T00:05:06.531Z

Author: Chris Johns 2025-10-02T22:29:44.320Z

added rtems#15 as parent epic

Author: Chris Johns 2026-07-31T00:01:29.162Z

set status to **Needs funding**

Author: Chris Johns 2026-07-31T00:01:34.742Z

set status to **Done**

1.10.1.9 197 - Building GDB fails for RTEMS 6 on MacOS

Id	197
State	closed
Type	ISSUE
Author	Jeff Mayes
Closed by	Chris Johns
Created	2026-06-26T15:39:25.478Z
Closed	2026-06-30T01:14:32.967Z
Updated	2026-07-09T23:19:56.252Z
Milestone	6.3
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/197
Merges	0

Summary

In file included from ../../gdb-15.2/gdb/value.h:1035: ../../gdb-15.2/gdb/symtab.h:920:31: error: constexpr variable ‘SEARCH_ALL_DOMAINS’ must be initialized by a constant expression constexpr domain_search_flags SEARCH_ALL_DOMAINS ^ = ((domain_search_flags) 0

. . .

../../gdb-15.2/gdb/symtab.h:961:16: error: static assertion expression is not an integral constant expression static_assert (SCRIPTING_SEARCH_FLAG > SEARCH_ALL_DOMAINS); ^~~~

Author: Kinsey Moore 2026-07-09T23:04:16.806Z

added rtems#15 as parent item

Author: Chris Johns 2026-07-09T23:19:56.229Z

The update missed NIOS and MIPSTX39 to use the same version of GDB. These are not covered by the default.

1.10.1.10 184 - Back port main source-builder to the 6 branch

Id	184
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2026-05-15T04:19:07.474Z
Closed	2026-06-29T02:28:33.539Z
Updated	2026-06-29T02:28:33.543Z
Milestone	6.3
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/184
Merges	0

Summary

Update the 6 branch to be in sync with `main`. The update includes support for `host_c_std` and `host_cxx_std`.

Author: Chris Johns 2026-05-15T04:19:07.600Z

set status to **In progress**

Author: Chris Johns 2026-05-15T04:19:07.748Z

assigned to @chris

Author: Chris Johns 2026-05-15T05:57:19.230Z

mentioned in merge request !254

Author: Kinsey Moore 2026-05-16T03:57:53.155Z

added rtems#15 as parent epic

Author: Chris Johns 2026-06-29T02:28:33.572Z

set status to **Done**

1.10.1.11 133 - Backport to 6 branch: “config: Update expat to 2.7.3”

Id	133
State	closed
Type	ISSUE
Author	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-10-20T18:50:29.001Z
Closed	2025-10-20T19:09:56.580Z
Updated	2025-10-20T19:10:06.588Z
Milestone	6.3
Labels	tool::gdb
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/133
Merges	0

The following discussion from !189 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to 6 branch.

Author: Kinsey Moore 2025-10-20T18:50:29.144Z

  added rtems#15 as parent epic

Author: Kinsey Moore 2025-10-20T18:50:29.208Z

  set status to **To do**

Author: Kinsey Moore 2025-10-20T19:09:56.640Z

  set status to **Done**

Author: Kinsey Moore 2025-10-20T19:09:57.448Z

  Disregard this issue. It appears that gdb 15.2 in 6 branch builds fine with a mismatched expat. 16.x must have introduced a new dependency.

Author: Kinsey Moore 2025-10-20T19:10:06.613Z

set status to **Won't do**

1.10.1.12 59 - rtems6: spike fails to link on arm64-apple-darwin23.2.0

Id	59
State	closed
Type	ISSUE
Author	Joel Sherrill
Closed by	Chris Johns
Created	2024-12-13T14:12:40.071Z
Closed	2025-10-02T22:35:29.136Z
Updated	2025-10-02T22:35:29.141Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/59
Merges	0

Summary

This was reported by the OAR Build Sweeper. Full output is at this build list entry. The pertinent output is:

```
g++ -L. -L/lib64  -Wl,-rpath,/Users/tester/rtems-cron-6/tools/6/lib  -o termios-xspike termios-xspike.o  libspike_main.a  libriscv.a  libdisasm.a  libsoftfloat.a  libfesvr.a  libfdt.a -lpthread -lpthread
ld: warning: directory not found for option '-L/lib64'ld: warning:
ld: warning: directory not found for option '-L/lib64'
directory not found for option '-L/lib64'
ld: warning: directory not found for option '-L/lib64'
ld: warning: directory not found for option '-L/lib64'
ld: in libspike_main.a(libriscv.a), archive member 'libriscv.a' with length 448440448 is not mach-o or llvm bitcode file 'libspike_main.a' for architecture arm64
clang: error: linker command failed with exit code 1 (use -v to see invocation)
ld: in libspike_main.a(libriscv.a), archive member 'libriscv.a' with length 448440448 is not mach-o or llvm bitcode file 'libspike_main.a' for architecture arm64
clang: error: linker command failed with exit code 1 (use -v to see invocation)
make: *** [xspike] Error 1
make: *** Waiting for unfinished jobs....
make: *** [libcustomext.so] Error 1
```

This appears to indicate that this version of spike does not have build awareness of arm Macs. Perhaps an update will fix this.

1.10.1.12.1.1 Pre-set options

Author: Kinsey Moore 2025-01-16T23:44:39.928Z

Author: Chris Johns 2025-01-16T23:45:15.503Z

Author: Chris Johns 2025-10-02T22:35:14.284Z

added rtems#15 as parent epic

Author: Chris Johns 2025-10-02T22:35:29.165Z

set status to **Won't do**

1.10.2 Merge Requests

1.10.2.1 303 - qemu-common-2.cfg: Add ${prefix}/lib64 to rpath

Id	303
State	merged
Merged by	Joel Sherrill
Merged at	2026-09-02T14:08:10.961Z
Assignee(s)	Joel Sherrill
Created	2026-09-02T13:41:28.743Z
Updated	2026-09-02T14:08:10.953Z
Milestone	6.3
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/303
Commit	84b3f5660ebaa96e1e405ca12f67b538b48636d6

Summary

qemu-common-2.cfg: Add ${prefix}/lib64 to rpath

On some hosts, libslirp.so is installed into ${prefix}/lib64 and may be a different version from the host's. This ensures the RSB built qemu uses the intended shared library.

Closes #214.

Generative AI

Closes #6

Author: Joel Sherrill 2026-09-02T13:41:28.941Z

assigned to @joel

Author: Joel Sherrill 2026-09-02T13:41:38.016Z

enabled an automatic merge when all merge checks for 84b3f5660ebaa96e1e405ca12f67b538b48636d6 pass

Author: Kinsey Moore 2026-09-02T14:08:06.342Z

approved this merge request

1.10.2.2 300 - rtems/libbsd: Handle releases of 6-freebsd-fb14 correctly

Id	300
State	merged
Merged by	Chris Johns
Merged at	2026-08-31T13:08:20.450Z
Assignee(s)	Chris Johns
Created	2026-08-31T05:47:48.229Z
Updated	2026-08-31T13:08:20.443Z
Milestone	6.3
Labels	libbsd::freebsd-14, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/300
Commit	ef20a404e723d5fdaec52d1fcb0c68366a4e150a

Summary

rtems/libbsd: Handle releases of 6-freebsd-fb14 correctly

Closes #212

Generative AI

None

Author: Chris Johns 2026-08-31T05:47:48.399Z

assigned to @chris

Author: Chris Johns 2026-08-31T05:47:57.433Z

enabled an automatic merge when all merge checks for ef20a404e723d5fdaec52d1fcb0c68366a4e150a pass

Author: Chris Johns 2026-08-31T05:49:08.967Z

marked this merge request as blocked by !299

Author: Kinsey Moore 2026-08-31T13:07:40.570Z

approved this merge request

1.10.2.3 297 - sb/getsources: Apply missing fixes to the hash checker

Id	297
State	merged
Merged by	Joel Sherrill
Merged at	2026-08-27T03:29:12.700Z
Assignee(s)	Chris Johns
Created	2026-08-27T03:22:00.046Z
Updated	2026-08-27T03:29:12.693Z
Milestone	6.3
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/297
Commit	101dc7b2cca2ecd471fc33c5ea1e3acd55f79070

Summary

sb/getsources: Apply missing fixes to the hash checker

Closes #206

Generative AI

None.

Author: Chris Johns 2026-08-27T03:22:00.274Z

assigned to @chris

Author: Joel Sherrill 2026-08-27T03:28:52.448Z

approved this merge request

1.10.2.4 292 - sb/getsources: Check sources all have a valid hash

Id	292
State	merged
Merged by	Kinsey Moore
Merged at	2026-08-19T01:34:45.377Z
Assignee(s)	Chris Johns
Created	2026-08-18T01:19:55.864Z
Updated	2026-08-19T01:34:45.369Z
Milestone	6.3
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/292
Commit	06460f631ff4b71dfd7e1f83c64b4628d5f6140d

Summary

sb/getsources: Check sources all have a valid hash

Closes #206

Generative AI

None

Author: Chris Johns 2026-08-18T01:19:55.987Z

assigned to @chris

Author: Chris Johns 2026-08-18T01:19:56.092Z

marked this merge request as blocked by !290

Author: Chris Johns 2026-08-18T01:20:03.292Z

enabled an automatic merge when all merge checks for 02263c6085e226aa3bb4fdbe08dfd95224c44775 pass

Author: Joel Sherrill 2026-08-18T18:01:29.632Z

aborted the automatic merge because target branch was updated

Author: Kinsey Moore 2026-08-19T01:34:28.043Z

added 3 commits

- 02263c60...17130333 - 2 commits from branch `rtems/tools:6`
- 06460f63 - sb/getsources: Check sources all have a valid hash

Compare with previous version

Author: Kinsey Moore 2026-08-19T01:34:32.249Z

enabled an automatic merge when all merge checks for 06460f631ff4b71dfd7e1f83c64b4628d5f6140d pass

Author: Kinsey Moore 2026-08-19T01:34:37.869Z

approved this merge request

1.10.2.5 294 - Fix backport issues and update RTEMS versions and hashes

Id	294
State	merged
Merged by	Joel Sherrill
Merged at	2026-08-18T18:01:27.803Z
Assignee(s)	Kinsey Moore
Created	2026-08-18T17:52:07.656Z
Updated	2026-08-18T18:01:27.796Z
Milestone	6.3
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/294
Commit	1713033362c271f91df27816180aecd3060dc2a0

Summary

rtems/config/tools: Update RTEMS versions and hashes

Update RTEMS repositories to pull in the telnetlib fix in rtems-tools.

This MR also fixes some issues that were brought in with the large backport from main.

Generative AI

Author: Kinsey Moore 2026-08-18T17:52:07.891Z

assigned to @opticron

Author: Kinsey Moore 2026-08-18T17:52:56.524Z

changed title from

rtems/config/tools: U

pdate RTEMS versions and hashes

to

Fix backport issues and u

pdate RTEMS versions and hashes

Author: Kinsey Moore 2026-08-18T17:52:56.550Z

changed the description

Author: Joel Sherrill 2026-08-18T18:01:22.602Z

enabled an automatic merge when all merge checks for 1713033362c271f91df27816180aecd3060dc2a0 pass

Author: Joel Sherrill 2026-08-18T18:01:25.009Z

approved this merge request

1.10.2.6 282 - Adjust GDB versions after general move to gdb 17.2

Id	282
State	merged
Merged by	Kinsey Moore
Merged at	2026-07-09T23:08:53.911Z
Assignee(s)	Joel Sherrill
Created	2026-07-01T15:50:39.576Z
Updated	2026-07-09T23:08:53.904Z
Milestone	6.3
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/282
Commit	5dbc1e0855820578661fa4bf8384abc8dda21357

Summary

Previous move to gdb 17.2 missed:

- rtems-mipstx39 was not updated
- rtems-nios2 cannot go to 17.2. Needs to stay on last version for nios2 support

Generative AI

None

Author: Joel Sherrill 2026-07-01T16:03:34.796Z

changed title from

rtems-mipxtx39: Updat

e to gdb 17.2

to

Adjust GDB versions after general mov

e to gdb 17.2

Author: Joel Sherrill 2026-07-01T16:03:34.824Z

changed the description

Author: Joel Sherrill 2026-07-01T16:03:34.928Z

assigned to @joel

Author: Kinsey Moore 2026-07-02T23:25:56.854Z

enabled an automatic merge when all merge checks for 80653d1657f3dd073e4d351521c897a5515dd2e3 pass

Author: Kinsey Moore 2026-07-09T23:08:51.251Z

This does not have a backport issue. Is this really intended for 6 branch?

Author: Joel Sherrill 2026-07-09T23:08:51.251Z

Yes. It was missed whenever the other targets were moved to gdb 17.2. Using gdb 17.2 isn't as much a backport as a way to build on mac and this one was missed by https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/281.

Author: Kinsey Moore 2026-07-09T23:08:51.251Z

That should not have been merged without referencing a backport issue.

Author: Joel Sherrill 2026-07-09T23:08:51.251Z

This is the original issue. It did not impact 7 at all so it isn't really a backport.

Author: Kinsey Moore 2026-07-09T23:08:51.251Z

I have set the parent on that issue appropriately. Please reference it in the commit message. All commits/MRs to released branches need an associated issue with the appropriate parent (even if they're not technically backports).

Author: Joel Sherrill 2026-07-09T23:09:03.085Z

Author: Joel Sherrill 2026-07-09T23:08:14.942Z

added 2 commits

- 05274de2 - rtems-mipxtx39: Update to gdb 17.2
- 5dbc1e08 - rtems-nios2.bset: Revert to GDB 15.2

Compare with previous version

Author: Kinsey Moore 2026-07-09T23:08:37.578Z

approved this merge request

Author: Kinsey Moore 2026-07-09T23:08:41.378Z

enabled an automatic merge when all merge checks for 5dbc1e0855820578661fa4bf8384abc8dda21357 pass

Author: Kinsey Moore 2026-07-09T23:08:51.271Z

resolved all threads

1.10.2.7 281 - 6/rtems-default.bset: Update to gdb 17.2

Id	281
State	merged
Merged by	Chris Johns
Merged at	2026-06-30T00:29:19.970Z
Assignee(s)	Joel Sherrill
Created	2026-06-29T21:53:32.564Z
Updated	2026-06-30T00:29:40.703Z
Milestone	6.3
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/281
Commit	5d642fa4a69a3fbac5d749d3fc71f0cf8291f31f

Summary

6/rtems-default.bset: Update to gdb 17.2

Updating gdb to the latest is expected to resolve build issues on newer hosts.

Generative AI

None

Author: Joel Sherrill 2026-06-29T21:53:32.728Z

assigned to @joel

Author: Chris Johns 2026-06-30T00:29:15.632Z

approved this merge request

Author: Chris Johns 2026-06-30T00:29:40.761Z

changed title from

6/rtems-default.bset: Update to gdb 17

,

2

to

6/rtems-default.bset: Update to gdb 17

.

2

Author: Chris Johns 2026-06-30T00:29:40.787Z

changed the description

Author: Chris Johns 2026-06-30T01:14:25.980Z

mentioned in issue #197

Author: Joel Sherrill 2026-07-09T22:41:00.824Z

mentioned in merge request !282

1.10.2.8 254 - sb: Back port main to the 6 branch

Id	254
State	merged
Merged by	Chris Johns
Merged at	2026-05-28T22:37:03.283Z
Assignee(s)	Chris Johns
Created	2026-05-15T05:57:10.716Z
Updated	2026-05-28T22:37:03.220Z
Milestone	6.3
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/254
Commit	ca9f8ede09aa9e90c639765ef5f9a501b660ed0d

Summary

sb: Back port main to the 6 branch

- This adds host_c_std and host_cxx_std

Updates #184

Generative AI

no

Author: Chris Johns 2026-05-15T05:57:10.861Z

assigned to @chris

Author: Joel Sherrill 2026-05-15T21:13:32.317Z

Why is it commented ou

Author: Chris Johns 2026-05-15T21:13:32.317Z

This is a back port from `main`. Please fix on that branch and it can be back ported.

Author: Joel Sherrill 2026-05-15T12:58:18.391Z

requested changes

Author: Chris Johns 2026-05-15T21:13:32.339Z

resolved all threads

Author: Kinsey Moore 2026-05-16T03:57:33.108Z

enabled an automatic merge when all merge checks for 1320790f9a3d280eb4cb10eb29d80f6077864e93 pass

Author: Kinsey Moore 2026-05-21T19:38:39.056Z

aborted the automatic merge because target branch was updated

Author: Kinsey Moore 2026-05-24T03:31:18.855Z

added 2 commits

- dd3a820c - 1 commit from branch `rtems/tools:6`

- 0421ebb9 - sb: Back port main to the 6 branch

Compare with previous version

Author: Kinsey Moore 2026-05-28T22:35:59.858Z

The python and defaults updates look fine and some of the package updates make sense, but this also pulls in many .cfg files that aren't referenced at all. This likely results from the 6 branch having already had its unused files pruned and those still existing on main. This likely needs the prune operation applied again and squashed with this commit.

Author: Chris Johns 2026-05-28T22:35:59.858Z

Thanks for review. The only configurations files pulled in are the common base ones and they cannot be used without a version level build set or configuration file. The nice things about the approach used is a single simple `git` command run in the top directory of:

```
git checkout main -- source-builder
```

Pruning means we would have to remove the unused files and a further back pork would add them again. We can:

1. Leave the files
2. Back port from `main`, commit, prune and a further commit
3. Back port from `main` and prune with a single commit

Note, other configuration files maybe needed if we need to use more recent configuration files. This complicates the build and testing if pruning.

—

Running:

```
../source-builder/sb-track --not-referenced
```

reports:

```
Not referenced (25):

rtems/config/tools/rtems-lwip-6.cfg
source-builder/config/clang-format-common-1.cfg
source-builder/config/fmt-1.cfg
source-builder/config/gcc-10.cfg
source-builder/config/gcc-14.cfg
source-builder/config/gcc-15.cfg
source-builder/config/gcc-4.3-1.cfg
source-builder/config/gcc-4.4-1.cfg
source-builder/config/gcc-4.5-1.cfg
source-builder/config/gcc-4.7-1.cfg
```

(continues on next page)

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```
source-builder/config/gcc-4.8-1.cfg
source-builder/config/gcc-6-1.cfg
source-builder/config/gcc-7-1.cfg
source-builder/config/gcc-7.2-1.cfg
source-builder/config/gcc-9.cfg
source-builder/config/gcc-head.cfg
source-builder/config/gdb-6-1.cfg
source-builder/config/libslirp-4-1.cfg
source-builder/config/m4-1-1.cfg
source-builder/config/pcre-8-1.cfg
source-builder/config/pixman-0-2.cfg
source-builder/config/portablegl-1.cfg
source-builder/config/qemu-1-1.cfg
source-builder/config/qemu-9-1.cfg
```

How does this look?

Author: Chris Johns 2026-05-28T22:35:59.877Z

resolved all threads

Author: Chris Johns 2026-05-28T22:36:16.470Z

added 5 commits

- 0421ebb9...d8cc3d15 - 4 commits from branch `rtems/tools:6`
- ca9f8ede - sb: Back port main to the 6 branch

Compare with previous version

Author: Chris Johns 2026-05-28T22:36:34.148Z

enabled an automatic merge when all merge checks for ca9f8ede09aa9e90c639765ef5f9a501b660ed0d pass

Author: Joel Sherrill 2026-05-28T22:37:00.077Z

resolved all threads

Author: Joel Sherrill 2026-05-28T22:37:00.476Z

approved this merge request

1.10.2.9 263 - sb/defaults: Add C and C++ standard option support for packages

Id	263
State	merged
Merged by	Kinsey Moore
Merged at	2026-05-28T15:03:16.685Z
Assignee(s)	Joel Sherrill
Created	2026-05-28T14:06:52.325Z
Updated	2026-05-28T15:03:16.673Z
Milestone	6.3
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/263
Commit	d8cc3d157b18d5bac50457bdab6f6338c881bad2

Summary

sb/defaults: Add C and C++ standard option support for packages

Closes #176

Generative AI

None

Closes #188

Author: Joel Sherrill 2026-05-28T14:06:52.478Z

assigned to @joel

Author: Kinsey Moore 2026-05-28T15:03:13.410Z

enabled an automatic merge when all merge checks for d8cc3d157b18d5bac50457bdab6f6338c881bad2 pass

Author: Kinsey Moore 2026-05-28T15:03:14.498Z

approved this merge request

1.10.2.10 260 - rtems/c++: Patch to support C++17 filesystem namespace calls

Id	260
State	merged
Merged by	Kinsey Moore
Merged at	2026-05-21T19:38:36.839Z
Assignee(s)	Joel Sherrill
Created	2026-05-21T19:29:07.746Z
Updated	2026-05-21T19:38:36.829Z
Milestone	6.3
Labels	arch:riscv
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/260
Commit	dd3a820c2eb666dadc7161b49a9d8ab474f030e1

Summary

rtems/c++: Patch to support C++17 filesystem namespace calls

Updates #46

(cherry picked from commit 8d96b6fc4419a14b6f5be7c1b792805041e014e6)

Co-authored-by: Chris Johns <chrisj@rtems.org>

Generative AI

None

Closes #188

Author: Joel Sherrill 2026-05-21T19:29:07.984Z

assigned to @joel

Author: Kinsey Moore 2026-05-21T19:38:00.144Z

changed target branch from `main` to `6`

Author: Kinsey Moore 2026-05-21T19:38:31.887Z

enabled an automatic merge when all merge checks for dd3a820c2eb666dadc7161b49a9d8ab474f030e1 pass

Author: Kinsey Moore 2026-05-21T19:38:34.106Z

approved this merge request

1.10.2.11 248 - sis-2-1.cfg: Define host_c_std as GNU17

Id	248
State	merged
Merged by	Kinsey Moore
Merged at	2026-05-14T15:22:32.526Z
Assignee(s)	Joel Sherrill
Created	2026-05-14T14:45:00.199Z
Updated	2026-05-14T15:22:32.516Z
Milestone	6.3
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/248
Commit	7c3fffecf84f0333c940bdda3f9f19f8ed8398f4

Summary

sis-2-1.cfg: Define host_c_std as GNU17

SIS does not build using C23 which is the default for newer GCC versions. Using GNU17 allows use of GNU extensions. This corresponds to the default for pre-C23 GCC versions.

Generative AI

Assistance from KiwiChrisAI

Author: Joel Sherrill 2026-05-14T14:45:00.726Z

assigned to @joel

Author: Kinsey Moore 2026-05-14T15:22:23.261Z

enabled an automatic merge when all merge checks for 7c3fffecf84f0333c940bdda3f9f19f8ed8398f4 pass

Author: Kinsey Moore 2026-05-14T15:22:30.305Z

approved this merge request

1.11 RTEMS / Tools / RTEMS Tools

Go to *Issues* (page 3563) or *Merge Requests* (page 3586)

Issues Summary

40 - Backport to 6 branch "tester: Avoid relying on external telnetlib" (page 334)
30 - RTEMS tester fails with telnet under python 3.13 (page 335)

Merge Requests Summary

98 - tester/rt/tftp.py: Prevent infinite hang (page 339)
91 - tester: Avoid relying on external telnetlib (page 340)

1.11.1 Issues

1.11.1.1 40 - Backport to 6 branch "tester: Avoid relying on external telnetlib"

Id	40
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2026-08-14T18:44:01.865Z
Closed	2026-08-27T22:57:32.746Z
Updated	2026-08-27T22:57:32.987Z
Milestone	6.3
Labels	tool::test
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/40
Merges	0

The following discussion from !90 should be addressed:

- [] @opticron started a discussion:

  If this is an acceptable solution, it needs to be backported to 6 branch.

  Author: Kinsey Moore 2026-08-14T18:44:02.057Z

  added rtems#15 as parent item

  Author: Kinsey Moore 2026-08-14T18:44:02.173Z

  set status to **To do**

Author: Kinsey Moore	2026-08-14T18:44:02.322Z

assigned to @opticron

Author: Kinsey Moore	2026-08-14T18:47:22.966Z

mentioned in merge request !91

Author: Kinsey Moore	2026-08-27T22:57:32.827Z

set status to **Done**

1.11.1.2 30 - RTEMS tester fails with telnet under python 3.13

Id	30
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Kinsey Moore, Chris Johns
Closed by	Chris Johns
Created	2025-10-02T22:50:32.938Z
Closed	2026-08-13T23:50:09.392Z
Updated	2026-08-13T23:50:09.759Z
Milestone	6.3
Labels	tool::test
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/30
Merges	1

Summary

When attempting to run the RTEMS tester with Python 3.13 an error about no `telnetlib` support appears.

Steps to reproduce

1.11.1.2.2.1 Pre-set options

Author: Kinsey Moore	2025-03-02T02:21:55.776Z

assigned to @opticron

Author: Kinsey Moore	2025-02-28T22:39:31.957Z

assigned to @opticron

Author: Kinsey Moore 2025-02-28T22:39:32.416Z

Author: Kinsey Moore 2026-07-31T16:28:04.497Z

On further investigation, this is 2 separate issues. The escapes need to be fixed to resolve the warnings and the actual exit is caused by missing telnetlib since it was deprecated in 3.11 and removed in 3.13.

Author: Kinsey Moore 2026-07-31T16:28:04.497Z

On debian systems, there is currently a workaround for the actual exit issue by installing `python3-zombie-telnetlib`.

Author: Amar Takhar 2026-07-31T16:28:04.497Z

The current state of telnetlib isn't great I don't think there are any maintained ones. This one is its own project but no activity from the maintainer in years: https://github.com/jquast/telnetlib3

The Python one was just removed there is nobody touching the code anymore which is why they called it 'zombie' .. apt name.

`telnetlib3` is at least installable via pypi. I'm not sure if it's a drop in replacement does it work can you try it out?

FreeBSD for example has no telnet library for python available and I'm sure that's true for most OS the Python project itself recommends either telnetlib3 or Exscript which is even more out of maintainership

Author: Kinsey Moore 2026-07-31T16:28:04.497Z

`telnetlib3` *appears* to be a mostly drop-in replacement (s/telnetlib/telnetlib3/g), but I don't have an example of a tester configuration that actually uses it, so I can't verify that functionality completely.

Author: Chris Johns 2026-07-31T16:28:04.497Z

https://docs.rtems.org/docs/main/user/testing/configuration.html#console and look for:

```
%define bsp_tty_dev      1.2.3.4:8989
```

Author: Kinsey Moore 2026-07-31T16:28:04.497Z

Ah, I *do* actually have a test configuration that I can verify this on. It'll probably have to wait until Monday.

Author: Kinsey Moore 2025-03-02T02:21:56.083Z

moved from rtems-source-builder#95

Author: Kinsey Moore 2025-03-02T02:22:42.566Z

mentioned in merge request !53

Author: Kinsey Moore 2025-07-30T18:50:47.695Z

The situation has been improved by 0efe888d3cbdc82fb4ba95c6ad8b2d2e5c960d2e in that the reason for exit is displayed. This still needs work to verify the migration path to telnetlib3.

Author: Chris Johns 2025-10-02T22:41:29.516Z

changed the description

Author: Chris Johns 2025-10-02T22:44:15.955Z

This is issue cover two problem. We need to split it as the syntax issue has been fixed and we should close this issue.

Author: Chris Johns 2025-10-02T22:49:19.321Z

/clone–with_notes

Author: Chris Johns 2025-10-02T22:50:33.404Z

cloned from #22

Author: Chris Johns 2025-10-02T22:51:41.583Z

changed title from

RTEMS tester fails

to run correctly

under python 3.13

to

RTEMS tester fails

with telnet

under python 3.13

Author: Chris Johns 2025-10-02T22:51:41.613Z

changed the description

Author: Chris Johns 2025-10-09T22:25:36.758Z

added rtems#15 as parent epic

Author: Christian Mauderer 2025-11-03T08:54:03.258Z

mentioned in merge request rtems-sis!7

Author: Chris Johns 2026-07-31T00:23:47.657Z

assigned to @chris

Author: Kinsey Moore 2026-07-31T16:32:08.443Z

The quick and dirty fix until we have something better is to vendor telnetlib ourselves.

Author: Kinsey Moore 2026-07-31T17:06:58.029Z

mentioned in merge request !90

Author: Kinsey Moore 2026-07-31T17:20:15.015Z

set status to **In progress**

Author: Chris Johns 2026-08-13T23:50:11.709Z

set status to **Done**

1.11.2 Merge Requests

1.11.2.1 98 - tester/rt/tftp.py: Prevent infinite hang

Id	98
State	merged
Merged by	Chris Johns
Merged at	2026-10-29T17:19:57.810Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Chris Johns
Created	2026-10-24T15:06:00.242Z
Updated	2026-10-29T17:19:57.803Z
Milestone	6.3
Labels	tool::test
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/98
Commit	214a3eeca7967808fa1afd2e4a97257ad998cf61

tester/rt/tftp.py: Prevent infinite hang

When tester setups are not ideal, conditions can occur where the tftp tester can hang indefinitely on a given test. This has been demonstrated both with corrupted output from the ZynqMP platform and with a hanging test on the versal platform. This condition also causes a loss of test data since the report is never written.

The solution is to set self.opened = False after the loop in open() to allow processing to proceed.

Closes #23

Generative AI

None

Author: Kinsey Moore 2026-10-24T15:06:10.544Z

marked this merge request as blocked by !97

Author: Kinsey Moore 2026-10-24T15:06:16.449Z

assigned to @opticron

Author: Kinsey Moore 2026-10-24T15:25:38.661Z

changed title from

gitlab: Add link to CI

to

tester/rt/tftp.py: Prevent infinite hang

Author: Kinsey Moore 2026-10-24T15:25:38.737Z

changed the description

Author: Kinsey Moore 2026-10-24T15:25:38.795Z

changed target branch from `main` to `6`

Author: Kinsey Moore 2026-10-29T17:13:23.053Z

requested review from @chris

Author: Chris Johns 2026-10-29T17:18:18.952Z

approved this merge request

Author: Chris Johns 2026-10-29T17:18:21.884Z

enabled an automatic merge when all merge checks for 214a3eeca7967808fa1afd2e4a97257ad998cf61 pass

1.11.2.2 91 - tester: Avoid relying on external telnetlib

Id	91
State	merged
Merged by	Kinsey Moore
Merged at	2026-08-14T18:48:16.741Z
Assignee(s)	Kinsey Moore
Created	2026-08-14T18:46:23.193Z
Updated	2026-08-14T18:48:16.731Z
Milestone	6.3
Labels	tool::test
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/91
Commit	adf3e254d08f678d3625a4edccb2ac3485d96519

Summary

tester: Avoid relying on external telnetlib

Kinsey Moore authored 2 weeks ago The telnetlib package has been deprecated and removed from the standard library. This pulls in its last source version so that it can be distributed until a better solution is found.

Closes #40

Generative AI

None

Author: Kinsey Moore 2026-08-14T18:46:23.367Z

assigned to @opticron

Author: Kinsey Moore 2026-08-14T18:46:46.571Z

changed target branch from `main` to `6`

Author: Kinsey Moore 2026-08-14T18:47:22.846Z

changed title from

gitlab: Add link to CI

to

tester: Avoid relying on external telnetlib

Author: Kinsey Moore 2026-08-14T18:47:22.875Z

changed the description

Author: Kinsey Moore 2026-08-14T18:47:29.447Z

enabled an automatic merge when all merge checks for adf3e254d08f678d3625a4edccb2ac3485d96519 pass

Author: Joel Sherrill 2026-08-14T18:48:11.819Z

approved this merge request

Author: Gedare Bloom 2026-08-14T18:48:13.135Z

approved this merge request

1.12 RTEMS / Tools / RTEMS Waf

Go to *Issues* (page 3648) or *Merge Requests* (page 3651)

Issues Summary

4 - _check_arch_bsps presents inconsistent behavior (page 342)

Merge Requests Summary

1.12.1 Issues

1.12.1.1 4 - _check_arch_bsps presents inconsistent behavior

Id	4
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2024-11-13T21:47:57.956Z
Closed	2026-02-27T00:28:19.100Z
Updated	2026-02-27T00:28:19.201Z
Milestone	6.3
Labels	rtems::build, tool::waf
Link	https://gitlab.rtems.org/rtems/tools/rtems_waf/-/work_items/4
Merges	2

Summary

If a list of BSPs is provided during configure and not all of that list is actually installed at the target prefix directory, two different outcomes can occur depending on the set of BSPs.

- If all BSPs are of the same architecture and one of them is installed in the prefix directory, configuration succeeds.
- If the BSPs are of two or more architectures and any of the architectures does not have a valid BSP (even if others do), then configuration fails.

This is caused by the `found` check in the first loop in `_check_arch_bsps` in rtems.py.

Steps to reproduce

Install the aarch64/zynqmp_apu BSP in the prefix directory. Configure rtems-lwip (or any other project that uses rtems_waf) with aarch64/zynqmp_apu,aarch64/zynqmp_qemu. The configuration attempt will succeed even though the aarch64/zynqmp_qemu BSP is not installed.

Now, configure rtems-lwip with aarch64/zynqmp_apu,arm/zynqmp_rpu_split_0 without performing additional BSP installations. The configuration attempt will fail.

1.12.1.1.2.1 Pre-set options

Author: Kinsey Moore 2024-11-13T21:47:58.068Z

assigned to @opticron

Author: Kinsey Moore 2024-11-13T21:48:34.684Z

changed the description

Author: Gedare Bloom 2024-12-04T21:40:37.836Z

Author: Chris Johns 2025-10-02T23:39:42.344Z

added rtems#15 as parent epic

Author: Kinsey Moore 2026-02-10T03:35:16.134Z

mentioned in merge request !16

Author: Kinsey Moore 2026-02-13T15:22:42.468Z

mentioned in merge request !17

Author: Kinsey Moore 2026-02-27T00:28:20.244Z

set status to **Done**

CHAPTER

TWO

RTEMS 6.2

2.1 RTEMS / Documentation / Documentation

Go to *Issues* (page 346) or *Merge Requests* (page 351)

Issues Summary

73 - posix_rst.py: Correct Spelling of Application (page 346)
65 - Update Incorrect (Old) RSB Links under Quick Start in Documentation (page 348)
46 - Fix broken links on https://www.rtems.org/architectures/ (page 347)
6 - Merge Request Approval process is broken (page 349)

Merge Requests Summary

151 - gitlab: Add link to CI (page 351)
141 - posix-compliance/posix_rst.py: Spell application correctly (page 352)
92 - README: Update to book theme (page 352)

2.1.1 Issues

2.1.1.1 73 - posix_rst.py: Correct Spelling of Application

Id	73
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Chris Johns
Created	2025-01-27T22:35:09.249Z
Closed	2025-10-09T22:51:49.304Z
Updated	2025-10-09T22:51:49.309Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/73
Merges	0

Summary

This issue is to correct the spelling of “Application” in the posix_rst.py program. This spelling error propagates into the headings of the generated documentation.

2.1.1.1.1.1 Pre-set options

Author: Joel Sherrill 2025-01-27T22:35:09.411Z

assigned to @joel

Author: Joel Sherrill 2025-01-27T22:35:13.341Z

Author: Joel Sherrill 2025-01-27T23:52:11.701Z

mentioned in merge request !141

Author: Chris Johns 2025-10-09T22:51:49.332Z

set status to **Done**

2.1.1.2 46 - Fix broken links on https://www.rtems.org/architectures/

Id	46
State	closed
Type	ISSUE
Author	ita2048 ita2048
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-11-01T12:23:45.281Z
Closed	2025-10-02T23:21:27.350Z
Updated	2025-10-02T23:21:27.356Z
Milestone	6.2
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/46
Merges	0

Summary

Please highlight the value of Rtems in the architecture page:

1. All links point to a blank page `We are working on content this page is intentionally left blank` with an additional link to the source code. Please point to the pages in the reference documentation such as https://docs.rtems.org/branches/master/cpu-supplement/arm.html, or to the source code directly if that's the intention. Right now there is no point in consulting this architectures page.
2. Why mention "obsoleted ports" at all on this page? Can that information be moved to a page specific to a particular release, for example https://docs.rtems.org/branches/master/cpu-supplement/preface.html ?
3. What is the process for having new supported architectures and what are the future plans for the RTEMS project?

Author: Chris Johns 2024-11-07T23:37:18.698Z

assigned to @amar

Author: Gedare Bloom 2024-12-04T21:39:40.423Z

Author: Chris Johns 2024-12-06T00:02:18.152Z

Author: Chris Johns 2025-10-02T23:21:27.287Z

moved to rtems/websites/www.rtems.org#11

Author: Chris Johns 2025-10-02T23:21:27.394Z

set status to **Done**

Author: Chris Johns 2025-10-02T23:21:27.639Z

removed parent epic rtems#10

2.1.1.3 65 - Update Incorrect (Old) RSB Links under Quick Start in Documentation

Id	65
State	closed
Type	ISSUE
Author	Vidhu Sarwal
Closed by	Gedare Bloom
Created	2024-12-31T11:37:33.801Z
Closed	2025-02-07T21:08:56.788Z
Updated	2025-09-19T00:43:03.477Z
Milestone	6.2
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/65
Merges	0

Summary

The FTP link to the RTEMS Source Builder (RSB) under the Quick Start section in the documentation is outdated and results in a 404 error. Currently, it points to:`https://ftp.rtems.org/pub/rtems/releases/6/6.0/sources/rtems-source-builder-6.0.tar.xz`

This link is broken and needs to be updated to the latest release, such as:`https://ftp.rtems.org/pub/rtems/releases/6/rc/6.1-rc7/sources/rtems-source-builder-6.1-rc7.tar.xz`

Link to the documentation page with the issue:RTEMS Quick Start - Sources Section

Author: Vidhu Sarwal 2024-12-31T11:38:35.368Z

Will start working on a fix.

Author: Gedare Bloom 2025-01-16T14:48:57.351Z

The problem here is that 6 hasn't finished being released. This is a transition issue during the release. I'm not sure what we should do about it. Maybe link to the parent directory instead?

https://ftp.rtems.org/pub/rtems/releases/6/

Author: Gedare Bloom 2025-02-07T21:08:56.381Z

Fixed in a3cfaea2

2.1.1.4 6 - Merge Request Approval process is broken

Id	6
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Amar Takhar, Gedare Bloom
Closed by	Amar Takhar
Created	2024-05-02T03:44:41.017Z
Closed	2024-07-08T04:18:12.604Z
Updated	2024-07-08T04:18:12.616Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/6
Merges	2

Summary

The approver flow in this repo requires 1 general approver and does not require 1 maintainer approver.

See also https://gitlab.rtems.org/administration/gitlab/-/issues/6

Steps to reproduce

Author: Gedare Bloom 2024-05-02T03:44:41.109Z

assigned to @gedare

Author: Amar Takhar 2024-05-02T03:57:25.218Z

marked this issue as related to administration/gitlab#6

Author: Amar Takhar 2024-05-02T03:57:54.881Z

FYI the 'linked items' section is handy keeps things more organised and will combine certain things

Author: Gedare Bloom 2024-05-02T04:07:03.082Z

created branch 6-merge-request-approval-process-is-broken to address this issue

Author: Gedare Bloom 2024-05-02T04:07:34.064Z

mentioned in merge request !6

Author: Gedare Bloom 2024-05-02T04:51:03.785Z

mentioned in merge request !7

Author: Gedare Bloom 2024-05-02T05:18:58.469Z

See https://gitlab.rtems.org/gedare/rtems-docs/-/commit/e59b13dd40f52a3d831967795b70a1681acbb84b for a proof-of-concept patch.

The basic logic is to make the General Approvers section optional, and to require at least 1 approval from the Maintainer Approvers section.

Now, since only 1 approval is required in the repo settings, this means the General Approvers approval is purely optional/advisory, as at least 1 Maintainer would still need to approve an MR.

Author: Amar Takhar 2024-05-17T00:39:46.439Z

assigned to @amar

Author: Amar Takhar 2024-07-08T04:18:12.376Z

We have been running this for over a month now it is all working as we want.

Author: Joel Sherrill 2026-09-09T19:23:53.229Z

mentioned in merge request !260

Author: Joel Sherrill 2026-09-10T15:32:27.909Z

mentioned in merge request !262

2.1.2 Merge Requests

2.1.2.1 151 - gitlab: Add link to CI

Id	151
State	merged
Merged by	Kinsey Moore
Merged at	2025-02-14T16:36:09.703Z
Assignee(s)	Amar Takhar
Created	2025-02-14T04:02:08.918Z
Updated	2025-02-14T16:36:11.054Z
Milestone	6.2
Labels	ci
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/151
Commit	0bc67a1155e63f6f6253275ac2b587ab5f4099c8

Summary

gitlab: Add link to CI

This runs only the commit message and merge request checker.

Required so we can have 'all pipelines must pass' enabled due to a bug in GitLab.

Author: Amar Takhar 2025-02-14T04:02:09.144Z

assigned to @amar

Author: Kinsey Moore 2025-02-14T16:35:20.085Z

added 6 commits

- 356614bc...9ad29e1c - 5 commits from branch `rtems/docs:6`
- 0bc67a11 - gitlab: Add link to CI

Compare with previous version

Author: Kinsey Moore 2025-02-14T16:35:35.678Z

approved this merge request

2.1.2.2 141 - posix-compliance/posix_rst.py: Spell application correctly

Id	141
State	merged
Merged by	Kinsey Moore
Merged at	2025-01-28T01:56:52.534Z
Assignee(s)	Joel Sherrill
Created	2025-01-27T23:52:05.883Z
Updated	2025-01-28T01:56:53.516Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/141
Commit	9ad29e1c674f2da9a6a6fad9a921bd8939abd525

Summary

posix-compliance/posix_rst.py: Spell application correctly

Closes #73

Author: Joel Sherrill 2025-01-27T23:52:06.085Z

assigned to @joel

Author: Kinsey Moore 2025-01-28T01:56:45.539Z

approved this merge request

2.1.2.3 92 - README: Update to book theme

Id	92
State	merged
Merged by	Chris Johns
Merged at	2024-11-22T06:16:51.135Z
Reviewer(s)	Chris Johns
Created	2024-11-22T06:11:14.520Z
Updated	2024-11-22T06:16:52.219Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/92
Commit	fffa54e29449d48d3e4cd66a309a5ea4630fc5ba

Summary

README: Update to book theme

(cherry picked from commit 3aa5a1aeef00fab266c07c4a732401f28a1eec45)

7ec1823f README: Update to book theme 3c7eb1e2 Update README.md 7619a2c7 Update README.md

Co-authored-by: Chris Johns <chrisj@rtems.org>

Author: Gedare Bloom 2024-11-22T06:11:14.682Z

requested review from @chris

Author: Chris Johns 2024-11-22T06:16:44.670Z

approved this merge request

2.2 RTEMS / Packages / LittlevGL

Go to *Issues* (page 796) or *Merge Requests* (page 804)

Issues Summary

Merge Requests Summary

9 - gitlab: Add link to CI (page 354)

2.2.1 Merge Requests

2.2.1.1 9 - gitlab: Add link to CI

Id	9
State	merged
Merged by	Christian Mauderer
Merged at	2025-02-17T12:08:21.387Z
Assignee(s)	Amar Takhar
Created	2025-02-14T10:23:24.677Z
Updated	2025-02-17T12:08:23.322Z
Milestone	6.2
Labels	ci
Link	https://gitlab.rtems.org/rtems/pkg/rtems-littlevgl/-/merge_requests/9
Commit	db779d1e171315651029473f5cc3417f157bf844

Summary

gitlab: Add link to CI

This runs only the commit message and merge request checker.

Required so we can have 'all pipelines must pass' enabled due to a bug in GitLab.

Author: Amar Takhar 2025-02-14T10:23:25.070Z

assigned to @amar

Author: Kinsey Moore 2025-02-14T16:33:43.461Z

approved this merge request

Author: Christian Mauderer 2025-02-17T12:08:04.633Z

approved this merge request

2.3 RTEMS / Packages / Network Services

Go to *Issues* (page 23) or *Merge Requests* (page 24)

Issues Summary

18 - Backport TTCP header install fix (page 355)
17 - Add ntpd sys var query and sync status calls (page 356)
15 - ntp: Backport ieeefp.h fix for coldfire to 6 branch (page 357)
13 - Backport MR21 to 6 branch (page 358)
11 - Backport NTP bug fixes to 6 branch (page 359)

Merge Requests Summary

32 - netservices.py: Ensure that ttcp.h is installed (page 359)
29 - bsd/ntpd: Add ntpd sys var query and sync status calls (page 360)
27 - legacy: Add missing include (page 361)
24 - ntp: Avoid including broken (on Coldfire) ieeefp.h header (page 362)
22 - 6/ntp: Fix a hang with sleeping workers and bad behavior with reverse time jumps (page 363)
19 - bsd/ntp: Fix inifinite loop and crash (page 364)
17 - gitlab: Add link to CI (page 555)

25 - ntp: Avoid including broken (on Coldfire) ieeefp.h header (closed) (page 366)

2.3.1 Issues

2.3.1.1 18 - Backport TTCP header install fix

Id	18
State	closed
Type	ISSUE
Author	Kinsey Moore
Closed by	Chris Johns
Created	2025-08-26T18:47:49.542Z
Closed	2025-10-03T00:12:48.980Z
Updated	2025-10-03T00:12:48.984Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/work_items/18
Merges	0

Summary

The header for the TTCP library was never installed properly. Back port the fix from main.

Steps to reproduce

2.3.1.1.2.1 Pre-set options

Author: Kinsey Moore 2025-08-26T18:47:49.695Z

added rtems#10 as parent epic

Author: Kinsey Moore 2025-08-26T18:47:49.783Z

set status to **To do**

Author: Kinsey Moore 2025-08-26T18:49:18.929Z

mentioned in merge request !32

Author: Chris Johns 2025-09-19T23:58:25.408Z

mentioned in commit 3381863ccf9f90f801fb16ad524a7fcff1301467

Author: Chris Johns 2025-10-03T00:12:49.010Z

set status to **Done**

2.3.1.2 17 - Add ntpd sys var query and sync status calls

Id	17
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-05-22T22:41:16.901Z
Closed	2025-10-02T23:39:19.950Z
Updated	2025-10-02T23:39:19.955Z
Milestone	6.2
Labels	pkg::ntp
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/work_items/17
Merges	0

Add `ntpd` sys var query and sync status calls to return the system level state of NTP. This call accesses the state directly and avoids the overhead or performing an `ntpq` query on the `127.0.0.1` address.

Provide calls to initialize the files for a client pool configuration. This is the most common RTEMS use case.

Author: Chris Johns	2025-05-22T22:41:17.003Z

assigned to @chris

Author: Chris Johns	2025-05-23T00:54:33.789Z

mentioned in merge request !29

Author: Kinsey Moore	2025-05-23T01:03:22.984Z

Author: Chris Johns	2025-10-02T23:39:19.978Z

set status to **Done**

2.3.1.3 15 - ntp: Backport ieeefp.h fix for coldfire to 6 branch

Id	15
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-03-19T17:22:04.634Z
Closed	2025-07-30T18:31:16.745Z
Updated	2025-07-30T18:31:16.810Z
Milestone	6.2
Labels	pkg::network-services
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/work_items/15
Merges	0

Summary

This issue exists in 6 and the fix needs to be backported.

Steps to reproduce

2.3.1.3.2.1 Pre-set options

Author: Kinsey Moore	2025-03-19T17:22:04.918Z

assigned to @opticron

Author: Kinsey Moore	2025-03-19T17:22:05.425Z

Author: Kinsey Moore 2025-03-19T17:24:18.529Z

mentioned in merge request !24

Author: Jeremy Lorelli 2025-04-08T00:24:07.242Z

mentioned in merge request !25

Author: Kinsey Moore 2025-07-30T18:31:16.790Z

set status to **Done**

2.3.1.4 13 - Backport MR21 to 6 branch

Id	13
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-03-06T20:26:40.170Z
Closed	2025-03-07T04:15:46.850Z
Updated	2025-03-07T04:15:46.863Z
Milestone	6.2
Labels	pkg::network-services
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/work_items/13
Merges	0

The following discussion from !21 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to 6 branch.

Author: Kinsey Moore 2025-03-06T20:26:40.355Z

assigned to @opticron

Author: Kinsey Moore 2025-03-06T20:26:40.754Z

Author: Kinsey Moore 2025-03-06T20:32:14.024Z

mentioned in merge request !22

2.3.1.5 11 - Backport NTP bug fixes to 6 branch

Id	11
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-02-25T15:56:42.985Z
Closed	2025-03-02T01:46:05.997Z
Updated	2025-03-02T01:46:06.032Z
Milestone	6.2
Labels	network, pkg::network-services
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/work_items/11
Merges	0

The following discussion from !18 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to 6 branch as well.

Author: Kinsey Moore	2025-02-25T15:56:43.186Z

  assigned to @opticron

Author: Kinsey Moore	2025-02-25T15:56:43.466Z

Author: Kinsey Moore	2025-02-25T16:04:00.728Z

  mentioned in merge request !19

2.3.2 Merge Requests

2.3.2.1 32 - netservices.py: Ensure that ttcp.h is installed

Id	32
State	merged
Merged by	Chris Johns
Merged at	2025-09-19T23:58:23.921Z
Assignee(s)	Kinsey Moore
Created	2025-08-26T18:49:13.199Z
Updated	2025-09-19T23:58:26.071Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/32
Commit	3381863ccf9f90f801fb16ad524a7fcff1301467

Summary

netservices.py: Ensure that ttcp.h is installed

This header was missing from the install.

Closes #18

Author: Kinsey Moore 2025-08-26T18:49:13.350Z

assigned to @opticron

Author: Chris Johns 2025-09-19T23:58:00.649Z

@opticron would nuttcp work on lwIP?

Author: Kinsey Moore 2025-09-19T23:58:00.649Z

I would assume so, but I haven't tested it. If it doesn't work, rtems-lwip needs to be fixed up for it to operate properly.

Author: Chris Johns 2025-09-19T23:58:00.668Z

resolved all threads

Author: Chris Johns 2025-09-19T23:58:18.881Z

approved this merge request

2.3.2.2 29 - bsd/ntpd: Add ntpd sys var query and sync status calls

Id	29
State	merged
Merged by	Kinsey Moore
Merged at	2025-05-23T01:03:36.311Z
Assignee(s)	Chris Johns
Created	2025-05-23T00:54:24.204Z
Updated	2025-05-23T01:03:38.282Z
Milestone	6.2
Labels	pkg::network-services
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/29
Commit	6182e638dae87017c9a2a9f97e393747de92b7e2

Add `ntpd` sys var query and sync status calls

- Provide calls to get the NTP status without using ntpq. The data returned is the same.

- Add a command `ntpsv` to print the status without using `ntpq`.

Update #17

Author: Chris Johns 2025-05-23T00:54:24.438Z

assigned to @chris

Author: Kinsey Moore 2025-05-23T01:03:30.195Z

approved this merge request

2.3.2.3 27 - legacy: Add missing include

Id	27
State	merged
Merged by	Joel Sherrill
Merged at	2025-05-08T22:50:33.575Z
Assignee(s)	Kinsey Moore
Created	2025-05-08T12:53:22.099Z
Updated	2025-05-08T23:31:34.608Z
Milestone	6.2
Labels	network::legacy
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/27
Commit	6214c7e283122c49a3c09c32e5e4011b24aa11ee

Summary

legacy: Add missing include

GCC was warning about implicit declaration of strcmp

Author: Kinsey Moore 2025-05-08T12:53:22.350Z

assigned to @opticron

Author: Joel Sherrill 2025-05-08T22:50:28.430Z

approved this merge request

2.3.2.4 24 - ntp: Avoid including broken (on Coldfire) ieeefp.h header

Id	24
State	merged
Merged by	Joel Sherrill
Merged at	2025-05-08T23:08:09.528Z
Assignee(s)	Kinsey Moore
Created	2025-03-19T17:24:00.778Z
Updated	2025-05-08T23:08:11.969Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/24
Commit	13f7dc2b3879b1dd5a83010894e2fb9974ac52cd

Summary

ntp: Avoid including broken (on Coldfire) ieeefp.h header

The LDBL_EQ_DBL define in newlib.h is determined at GCC/newlib configure time and is shared between all 68k targets. The default 68k target for GCC supports long double (12 bytes), while the Coldfire ISA does not. This results in LDBL_EQ_DBL being undefined for Coldfire targets, even though double and long double are indeed equal. ieeefp.h has sanity checks that fail if LDBL_EQ_DBL is not defined when sizeof(long double) == sizeof(double).

A workaround is to avoid including this header. In this case, it doesn't seem to be a necessary include anyway.

Closes #15

Author: Kinsey Moore 2025-03-19T17:24:01.177Z

assigned to @opticron

Author: Gedare Bloom 2025-05-08T23:06:23.395Z

This disables it for all targets. I'd like to get input from @chris

Author: Chris Johns 2025-05-08T23:06:23.395Z

I think we should to aim to have 3rd party code operate as close as possible to upstream. @jjl77 can the guard please be made conditional on `m68k` ?

Author: Jeremy Lorelli 2025-05-08T23:06:23.395Z

I've made the guard include __m68k__ in !25. Not sure if you also want me to apply an additional change to main, since !23 was merged there with this change.

Author: Kinsey Moore 2025-05-08T23:06:23.395Z

I have pulled that patch into this MR.

Author: Jeremy Lorelli 2025-04-08T00:24:07.391Z

mentioned in merge request !25

Author: Kinsey Moore 2025-05-08T12:59:05.252Z

added 1 commit

- 784f2a43 - ntp: Avoid including broken (on Coldfire) ieeefp.h header

Compare with previous version

Author: Joel Sherrill 2025-05-08T23:06:23.412Z

resolved all threads

Author: Joel Sherrill 2025-05-08T23:07:34.710Z

approved this merge request

Author: Joel Sherrill 2025-05-08T23:07:47.259Z

added 2 commits

- 6214c7e2 - 1 commit from branch `rtems/pkg:6`
- 13f7dc2b - ntp: Avoid including broken (on Coldfire) ieeefp.h header

Compare with previous version

2.3.2.5 22 - 6/ntp: Fix a hang with sleeping workers and bad behavior with reverse time jumps

Id	22
State	merged
Merged by	Chris Johns
Merged at	2025-03-07T00:28:11.062Z
Assignee(s)	Kinsey Moore
Created	2025-03-06T20:32:04.428Z
Updated	2025-03-07T00:28:12.362Z
Milestone	6.2
Labels	pkg::network-services
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/22
Commit	561098489278a1088e41eec04288a9e5540b5cc6

Summary

This fixes a pair of issues with NTP, one causing a hang and one causing the NTP client to ignore the server until the previous time rolls back over.

Updates #13

Author: Kinsey Moore 2025-03-06T20:32:04.742Z

assigned to @opticron

Author: Kinsey Moore 2025-03-06T20:32:53.742Z

changed title from **ntp: {-Ensure workers eventually process all request-}s** to **{+6/+}ntp: {+Fix a hang with sleeping workers and bad behavior with reverse time jump+}s**

Author: Kinsey Moore 2025-03-06T20:32:53.773Z

changed the description

Author: Chris Johns 2025-03-07T00:28:05.378Z

approved this merge request

2.3.2.6 19 - bsd/ntp: Fix inifinite loop and crash

Id	19
State	merged
Merged by	Chris Johns
Merged at	2025-02-25T22:22:19.843Z
Assignee(s)	Kinsey Moore
Created	2025-02-25T16:03:53.357Z
Updated	2025-02-25T22:22:20.910Z
Milestone	6.2
Labels	libbsd, pkg::network-services
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/19
Commit	a7a9fe9199586c878a5a3d9bf84273e8c6c3cded

Summary

This is the backport MR for 6 branch for the NTP hang and crash fixes.

Closes #11

Author: Kinsey Moore 2025-02-25T16:03:53.556Z

assigned to @opticron

Author: Kinsey Moore 2025-02-25T16:35:04.782Z

changed title from **bsd/ntp: {-Remove loop that can hang indefinitely-}** to **bsd/ntp: {+Fix inifinite loop and crash+}**

Author: Chris Johns 2025-02-25T22:22:14.665Z

approved this merge request

2.3.2.7 17 - gitlab: Add link to CI

Id	17
State	merged
Merged by	Kinsey Moore
Merged at	2025-02-14T16:33:57.210Z
Assignee(s)	Amar Takhar
Created	2025-02-14T10:36:00.719Z
Updated	2025-02-14T16:33:58.474Z
Milestone	6.2
Labels	ci
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/17
Commit	6aff71f77fbb083351978b305ff9f99d9b7ea2d7

Summary

gitlab: Add link to CI

This runs only the commit message and merge request checker.

Required so we can have 'all pipelines must pass' enabled due to a bug in GitLab.

Closes #6

Author: Amar Takhar 2025-02-14T10:36:00.918Z

assigned to @amar

Author: Kinsey Moore 2025-02-14T16:33:11.562Z

approved this merge request

Author: Kinsey Moore 2025-02-14T16:33:20.010Z

added 2 commits

- d3768be8 - 1 commit from branch `rtems/pkg:6`
- 6aff71f7 - gitlab: Add link to CI

Compare with previous version

2.3.2.8 25 - ntp: Avoid including broken (on Coldfire) ieeefp.h header (closed)

Id	25
State	closed
Closed by	Chris Johns
Created	2025-04-08T00:23:58.242Z
Closed	2025-04-18T22:25:07.783Z
Updated	2025-09-19T02:40:11.945Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/25
Commit	fce45f3caa2cf74ffa68a55562336625d07ec847

Summary

ntp: Avoid including broken (on Coldfire) ieeefp.h header

The LDBL_EQ_DBL define in newlib.h is determined at GCC/newlib configure time and is shared between all 68k targets. The default 68k target for GCC supports long double (12 bytes), while the Coldfire ISA does not. This results in LDBL_EQ_DBL being undefined for Coldfire targets, even though double and long double are indeed equal. ieeefp.h has sanity checks that fail if LDBL_EQ_DBL is not defined when sizeof(long double) == sizeof(double).

A workaround is to avoid including this header. In this case, it doesn't seem to be a necessary include anyway.

Closes #15

Supersedes !24

Applied changes per @chris's comment.

Author: Jeremy Lorelli 2025-04-08T00:24:58.195Z

mentioned in merge request !24

Author: Chris Johns 2025-04-25T19:34:29.023Z

I am confused about the need for this MR? You can force push to the branch used in !24 for any updates and a single MR tracks the evolution of the change. I prefer we do this so I will close this MR.

Author: Kinsey Moore 2025-04-25T19:34:28.989Z

Only users with elevated permissions can push to MR branches of other users.

Author: Jeremy Lorelli 2025-05-08T12:59:16.677Z

@chris That branch is on opticron's fork of rtems-net-services, I don't have push access to it.

Author: Kinsey Moore 2025-05-08T12:59:16.677Z

I have pushed this commit on to my MR.

2.4 RTEMS / Packages / lwIP

Go to *Issues* (page 834) or *Merge Requests* (page 841)

Issues Summary

10 - Backport to 6 branch: "zynq,zynqmp: Allow configuration of descriptor numbers and remove multicast listener limit" (page 368)
9 - Backport shared networking error passthrough (page 369)
7 - Backport "zynqmp: Unify default interface selection" to 6 (page 370)

Merge Requests Summary

33 - rtemslwip/zynqmp: Allow configuration of descriptor numbers (page 371)
27 - rtemslwip: Handle failure of shared networking startup (page 372)
19 - gitlab: Add link to CI (page 372)
18 - zynqmp: Unify default interface selection (page 373)

2.4.1 Issues

2.4.1.1 10 - Backport to 6 branch: "zynq,zynqmp: Allow configuration of descriptor numbers and remove multicast listener limit"

Id	10
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-12-02T20:49:54.405Z
Closed	2025-12-08T17:01:46.089Z
Updated	2025-12-08T17:01:46.384Z
Milestone	6.2
Labels	network::lwip
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/work_items/10
Merges	0

The following discussion from !32 should be addressed:

- [] @opticron started a discussion:

  The ZynqMP portion of this needs a backport to 6 branch.

  Author: Kinsey Moore 2025-12-02T20:49:54.616Z

  added rtems#10 as parent epic

Author: Kinsey Moore 2025-12-02T20:49:54.722Z

set status to **To do**

Author: Kinsey Moore 2025-12-02T20:49:54.876Z

assigned to @opticron

Author: Kinsey Moore 2025-12-02T20:51:52.984Z

mentioned in merge request !33

Author: Joel Sherrill 2025-12-05T01:00:30.056Z

mentioned in commit f334938421bd6baaa8c57dce75d81996a7a7f4d5

Author: Joel Sherrill 2025-12-05T01:00:30.116Z

mentioned in commit d80833e814e5743fa33d44ce6e9fb32193760d05

Author: Kinsey Moore 2025-12-08T17:01:46.180Z

set status to **Done**

2.4.1.2 9 - Backport shared networking error passthrough

Id	9
State	closed
Type	ISSUE
Author	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-08-26T18:42:08.168Z
Closed	2025-10-09T22:13:39.790Z
Updated	2025-10-09T22:13:39.875Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/work_items/9
Merges	0

Summary

MR !24 contained a bug fix that needs backporting to the 6 branch for error passthrough in the shared network startup code.

Steps to reproduce

2.4.1.2.2.1 Pre-set options

Author: Kinsey Moore	2025-08-26T18:42:08.349Z

added rtems#10 as parent epic

Author: Kinsey Moore	2025-08-26T18:42:08.441Z

set status to **To do**

Author: Kinsey Moore	2025-08-26T18:43:52.102Z

mentioned in merge request !27

Author: Kinsey Moore	2025-10-09T22:13:39.852Z

set status to **Done**

2.4.1.3 7 - Backport “zynqmp: Unify default interface selection” to 6

Id	7
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Gedare Bloom
Created	2025-02-07T17:56:31.196Z
Closed	2025-02-09T23:51:12.580Z
Updated	2025-02-09T23:51:12.592Z
Milestone	6.2
Labels	backport, network::lwip, version::6
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/work_items/7
Merges	0

Summary

Backport the patch in !13 since it does not alter behavior and allows more configurability.

Steps to reproduce

2.4.1.3.2.1 Pre-set options

Author: Kinsey Moore	2025-02-07T17:56:31.365Z

assigned to @opticron

Author: Kinsey Moore 2025-02-07T17:56:31.703Z

Author: Kinsey Moore 2025-02-07T17:57:47.242Z

mentioned in merge request !18

Author: Gedare Bloom 2025-02-09T23:51:02.744Z

mentioned in commit f867b5143396ca08746f64d3a11af04df7052267

2.4.2 Merge Requests

2.4.2.1 33 - rtemslwip/zynqmp: Allow configuration of descriptor numbers

Id	33
State	merged
Merged by	Joel Sherrill
Merged at	2025-12-05T01:00:29.125Z
Assignee(s)	Kinsey Moore
Created	2025-12-02T20:51:47.296Z
Updated	2025-12-05T01:00:29.116Z
Milestone	6.2
Labels	network::lwip
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/33
Commit	d80833e814e5743fa33d44ce6e9fb32193760d05

Summary

rtemslwip/zynqmp: Allow configuration of descriptor numbers

Allow configuration of the number of RX and TX descriptors that are allocated. This is important for higher performance systems.

Updates #10

Author: Kinsey Moore 2025-12-02T20:51:47.473Z

assigned to @opticron

Author: Joel Sherrill 2025-12-02T21:08:38.265Z

approved this merge request

Author: Joel Sherrill 2025-12-02T21:08:41.973Z

enabled an automatic merge when all merge checks for d80833e814e5743fa33d44ce6e9fb32193760d05 pass

2.4.2.2 27 - rtemslwip: Handle failure of shared networking startup

Id	27
State	merged
Merged by	Chris Johns
Merged at	2025-09-19T21:59:02.624Z
Assignee(s)	Kinsey Moore
Created	2025-08-26T18:43:46.128Z
Updated	2025-09-19T21:59:05.055Z
Milestone	6.2
Labels	network::lwip
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/27
Commit	661ecd573d8b968a6cf2f4bc98b3fb04bc63e57e

Summary

rtemslwip: Handle failure of shared networking startup

If shared networking startup fails, pass it up the call chain instead of ignoring it.

Closes #9

Author: Kinsey Moore 2025-08-26T18:43:46.327Z

assigned to @opticron

Author: Chris Johns 2025-09-19T21:58:57.744Z

approved this merge request

2.4.2.3 19 - gitlab: Add link to CI

Id	19
State	merged
Merged by	Kinsey Moore
Merged at	2025-02-14T16:33:53.335Z
Created	2025-02-14T10:25:36.195Z
Updated	2025-02-14T16:33:55.164Z
Milestone	6.2
Labels	ci
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/19
Commit	fde9a7b5411cb31d1ceb4fad44cfc5570c263293

Summary

gitlab: Add link to CI

This runs only the commit message and merge request checker.

Required so we can have 'all pipelines must pass' enabled due to a bug in GitLab.

Author: Kinsey Moore 2025-02-14T16:33:22.071Z

approved this merge request

Author: Kinsey Moore 2025-02-14T16:33:35.381Z

added 2 commits

- f867b514 - 1 commit from branch `rtems/pkg:6`
- fde9a7b5 - gitlab: Add link to CI

Compare with previous version

2.4.2.4 18 - zynqmp: Unify default interface selection

Id	18
State	merged
Merged by	Gedare Bloom
Merged at	2025-02-09T23:51:02.190Z
Assignee(s)	Kinsey Moore
Created	2025-02-07T17:57:41.725Z
Updated	2025-02-09T23:51:03.577Z
Milestone	6.2
Labels	backport, network::lwip, version::6
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/18
Commit	f867b5143396ca08746f64d3a11af04df7052267

Summary

zynqmp: Unify default interface selection

This makes a single instance of netstart.c common to all ZynqMP BSPs and makes a configuration option available to override the default interface for a given BSP.

Closes #7

Author: Kinsey Moore 2025-02-07T17:57:41.953Z

assigned to @opticron

Author: Gedare Bloom 2025-02-09T23:50:57.666Z

approved this merge request

2.5 RTEMS / Packages / Legacy Networking

Go to *Issues* (page 852) or *Merge Requests* (page 862)

Issues Summary

25 - Rename rtems_libio_fcntl_flags was renamed to rtems_libio_from_fcntl_flags (page 375)

Merge Requests Summary

26 - rtems_syscall.c: Use rtems_libio_from_fcntl_flags (page 376)
20 - gitlab: Add link to CI (page 377)

2.5.1 Issues

2.5.1.1 25 - Rename rtems_libio_fcntl_flags was renamed to rtems_libio_from_fcntl_flags

Id	25
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-10-07T01:39:53.302Z
Closed	2025-10-09T22:25:04.676Z
Updated	2025-10-09T22:25:04.681Z
Milestone	6.2
Labels	network::legacy
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/work_items/25
Merges	0

Back port https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/commit/a2276d9b6986437f23520e2b6a7308fc48509e8e to the 6 branch.

Author: Chris Johns 2025-10-07T01:39:53.550Z

added rtems#10 as parent epic

Author: Chris Johns 2025-10-07T01:39:53.652Z

set status to **In progress**

Author: Chris Johns 2025-10-07T01:39:53.843Z

assigned to @chris

Author: Chris Johns 2025-10-07T01:42:48.848Z

mentioned in merge request !26

Author: Chris Johns 2025-10-08T15:06:23.097Z

mentioned in commit e730c52123108524f968cf755a7e1d2648dfc2c7

Author: Chris Johns 2025-10-09T22:25:04.706Z

set status to **Done**

2.5.2 Merge Requests

2.5.2.1 26 - rtems_syscall.c: Use rtems_libio_from_fcntl_flags

Id	26
State	merged
Merged by	Chris Johns
Merged at	2025-10-08T15:06:22.039Z
Assignee(s)	Chris Johns
Created	2025-10-07T01:42:43.840Z
Updated	2025-10-08T15:06:22.031Z
Milestone	6.2
Labels	network::legacy
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/merge_requests/26
Commit	e730c52123108524f968cf755a7e1d2648dfc2c7

In RTEMS, `rtems_libio_fcntl_flags` was renamed to `rtems_libio_from_fcntl_flags`

Closes #25

Author: Chris Johns 2025-10-07T01:42:44.116Z

assigned to @chris

Author: Chris Johns 2025-10-07T01:42:52.262Z

enabled an automatic merge when all merge checks for e730c52123108524f968cf755a7e1d2648dfc2c7 pass

Author: Kinsey Moore 2025-10-08T15:06:18.698Z

approved this merge request

2.5.2.2 20 - gitlab: Add link to CI

Id	20
State	merged
Merged by	Kinsey Moore
Merged at	2025-03-13T22:46:36.091Z
Assignee(s)	Amar Takhar
Created	2025-02-14T10:34:06.090Z
Updated	2025-03-13T22:46:38.033Z
Milestone	6.2
Labels	ci
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/merge_requests/20
Commit	7fc097ecd8ada44d33386f33d6b5d193c4021456

Summary

gitlab: Add link to CI

This runs only the commit message and merge request checker.

Required so we can have 'all pipelines must pass' enabled due to a bug in GitLab.

Author: Amar Takhar 2025-02-14T10:34:06.420Z

assigned to @amar

Author: Kinsey Moore 2025-03-13T22:45:58.670Z

approved this merge request

2.6 RTEMS / Packages / LibBSD

Go to *Issues* (page 870) or *Merge Requests* (page 888)

Issues Summary

65 - dc net driver crashses on powerpc/mvme2700 (page 379)
63 - Support for DC_DEVICEID_21140A (0x0009) missing (page 380)
60 - powerpc/beatnik does not build on 6-freebsd-14 (page 384)
56 - Backport to 6-freebsd-14: MMCSD reads and writes are inconsistant (page 383)
51 - Backport update to releng/14.3 to 6-freebsd-14 (page 388)
49 - Media server is required to attach mmcsd on 6-freebsd-14 (page 391)
43 - Socket close fails when using kqueue (page 381)
35 - sendmsg() is not POSIX compliant (page 387)
28 - Install OFW driver headers (page 394)
24 - freebsd-to-rtems.py may need fixing (page 386)
23 - testsuite: Restore BSP-selected values and increase mbufs for ZynqMP for 6-freebsd-13 (page 392)
20 - testsuite: Restore BSP-selected values and increase mbufs for ZynqMP for 6-freebsd-14 (page 393)
18 - [zone: mbuf_cluster] kern.ipc.nmbclusters limit reached (page 389)
17 - Follow-up from "Misc 6-freebsd-12 fixes" (page 381)

Merge Requests Summary

113 - freebsd/dev/dc: Fix dc driver crash (page 395)
109 - bsp/motorola_powerpc: Add dc and ukphy support (page 395)
107 - freebsd/sys/sys/libkern.h: Disable conflicting macros (page 396)
103 - rtemsbsd/libio: Atomic set LIBIO_FLAGS_CLOSE_BUSY (page 397)
92 - Update 6-freebsd-14 to releng/14.3 (page 404)
91 - rtemsbsd/mmcsd: Fix inconsistent multi block read and writes (page 402)
89 - rtemsbsd/syscall: LibBSD files set CLOSE_BUSY (page 401)
85 - dev/mmc/mmcsd: Remove media server requirement for mmcsd (page 401)
82 - Update libbsd 6-freebsd-14 for GCC 15 (page 406)
77 - 6-freebsd-14: Beatnik BSP fixes (page 399)
69 - sys/kern/kern_event.c: Fix kqueue double hold (page 398)
67 - freebsd/sys_generic: Prevent multiple FD mappings (page 399)
64 - gitlab: Add link to CI (page 410)
63 - gitlab: Add link to CI (page 409)
62 - gitlab: Add link to CI (page 409)
54 - rtems/syscall: Return the data sent when calling sendmsg (page 411)
53 - rtems/syscall: Return the data sent when calling sendmsg (page 411)
49 - libbsd.py: Install dev/ofw header files (page 408)
31 - testsuite: Restore BSP-selected values and increase mbufs for ZynqMP (page 412)
30 - testsuite: Restore BSP-selected values and increase mbufs for ZynqMP (page 413)

97 - Draft: Use LIBIO_FLAGS_CLOSE_BUSY (opened) (page 422)
52 - rtems/syscall: Return the data sent when calling sendmsg (closed) (page 420)
51 - rtems/syscall: Return the data sent when calling sendmsg (closed) (page 421)
15 - Draft: Raspberrypi4b: Add Genet Ethernet driver (closed) (page 414)

2.6.1 Issues

2.6.1.1 65 - dc net driver crashses on powerpc/mvme2700

Id	65
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2025-10-17T01:45:56.358Z
Closed	2025-12-04T23:32:16.240Z
Updated	2025-12-04T23:32:16.436Z
Milestone	6.2
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/65
Merges	0

The dc net driver in FreeBSD crashes on the `powerpc/mvme2700` BSP due to a bug in the upstream FreeBSD driver.

I have raised a bug report .. https://bugs.freebsd.org/bugzilla/show_bug.cgi?id=290314

Author: Chris Johns 2025-10-17T01:45:56.433Z

cloned from #64

Author: Chris Johns 2025-10-17T01:46:19.997Z

added rtems#10 as parent epic

Author: Chris Johns 2025-11-11T03:19:01.616Z

mentioned in merge request !113

Author: Kinsey Moore 2025-12-04T23:32:16.319Z

set status to **Done**

2.6.1.2 63 - Support for DC_DEVICEID_21140A (0x0009) missing

Id	63
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Kinsey Moore
Created	2025-10-11T04:33:31.604Z
Closed	2025-12-04T23:32:07.225Z
Updated	2025-12-04T23:32:07.438Z
Milestone	6.2
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/63
Merges	0

The `6-freebsd-12` branch has support for `DC_DEVICEID_21140A`. The commit is f5c405ec05f58033cf2d74da4e989104423bf218. It is missing from `6-freebsd-14` and needs to be added back.

Author: Chris Johns 2025-10-11T04:33:31.713Z

cloned from #62

Author: Chris Johns 2025-10-11T04:34:03.949Z

added rtems#10 as parent epic

Author: Chris Johns 2025-10-11T04:34:07.362Z

changed the description

Author: Aaron Nyholm 2025-10-13T02:15:27.166Z

mentioned in merge request !109

Author: Kinsey Moore 2025-12-04T23:32:07.291Z

set status to **Done**

2.6.1.3 17 - Follow-up from “Misc 6-freebsd-12 fixes”

Id	17
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Amar Takhar
Created	2024-11-21T23:40:51.316Z
Closed	2025-10-11T18:18:22.224Z
Updated	2025-10-11T18:18:41.760Z
Milestone	6.2
Labels	libbsd
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/17
Merges	0

The following discussion from !27 should be addressed:

- [] @chris started a discussion: (+1 comment)

  We need to check this on 14 and current

Author: Amar Takhar	2025-10-11T18:18:22.252Z

  set status to **Done**

Author: Amar Takhar	2025-10-11T18:18:47.015Z

  Associated MR is merged and milestone set to 6.2 marking as done.

2.6.1.4 43 - Socket close fails when using kqueue

Id	43
State	closed
Type	ISSUE
Author	Aaron Nyholm
Assignee(s)	Aaron Nyholm
Closed by	Chris Johns
Created	2025-05-27T22:50:07.110Z
Closed	2025-10-09T22:47:48.314Z
Updated	2025-10-09T22:47:48.319Z
Milestone	6.2
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/43
Merges	0

Summary

Same issue as #41.

This ticket is for `6-freebsd-14` branch.

Author: Aaron Nyholm 2025-05-27T22:50:21.830Z

changed the description

Author: Aaron Nyholm 2025-05-27T22:53:41.727Z

mentioned in merge request !69

Author: Kinsey Moore 2025-05-28T00:54:38.524Z

Author: Aaron Nyholm 2025-09-02T22:49:59.141Z

mentioned in merge request !89

Author: Aaron Nyholm 2025-09-02T22:53:47.414Z

mentioned in issue #51

Author: Chris Johns 2025-10-02T22:33:14.609Z

assigned to @eagleirony

Author: Chris Johns 2025-10-02T22:33:47.623Z

added rtems#18 as parent epic

Author: Chris Johns 2025-10-09T22:47:48.343Z

set status to **Done**

Author: Sang Woo Kim 2026-07-28T06:46:24.946Z

mentioned in issue #102

2.6.1.5 56 - Backport to 6-freebsd-14: MMCSD reads and writes are inconsistant

Id	56
State	closed
Type	ISSUE
Author	Aaron Nyholm
Closed by	Chris Johns
Created	2025-09-04T23:59:39.676Z
Closed	2025-10-09T22:26:24.959Z
Updated	2025-10-09T22:26:25.016Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/56
Merges	0

Summary

In `6-freebsd-14` due to the `block_count` not always being zeroed the SDHCI driver would not set the auto stop bit causing the first read or write to never complete causing later commands to fail. This explicitly zeros the block count (used for CMD53 only). Brought across from `7-freebsd-14`

Steps to reproduce

2.6.1.5.2.1 Pre-set options

Author: Aaron Nyholm 2025-09-04T23:59:39.734Z

set status to **To do**

Author: Aaron Nyholm 2025-09-05T00:01:38.213Z

mentioned in merge request !91

Author: Aaron Nyholm 2025-09-18T21:33:10.144Z

mentioned in commit bd6ee145074d906eb266e2eee9fcb878cf80ea6b

Author: Chris Johns 2025-10-02T23:29:43.779Z

added rtems#18 as parent epic

Author: Chris Johns 2025-10-09T22:26:24.995Z

set status to **Done**

2.6.1.6 60 - powerpc/beatnik does not build on 6-freebsd-14

Id	60
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Chris Johns
Created	2025-10-07T02:38:55.216Z
Closed	2025-10-09T22:24:50.193Z
Updated	2025-10-09T22:24:50.244Z
Milestone	6.2
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/60
Merges	0

The `powerpc/beatnik` does not build on the `6-freerbsd-14` branch. The error is:

```
[1664/2432] Compiling linux/drivers/soc/fsl/qbman/qman_test_stash.c
In file included from ../../freebsd/sys/sys/systm.h:683,
from ../../rtemsbsd/powerpc/include/linux/slab.h:35,
from ../../linux/drivers/soc/fsl/qbman/dpaa_sys.h:35,
from ../../linux/drivers/soc/fsl/qbman/qman_priv.h:33,
from ../../linux/drivers/soc/fsl/qbman/qman_test.h:31,
from ../../linux/drivers/soc/fsl/qbman/qman_test_stash.c:35:
../../freebsd/sys/sys/libkern.h:279:35: error: expected identifier or '(' before
↪'__typeof'
279 | #define roundup_pow_of_two(n)   ((__typeof(n))1 << order_base_2(n))
|                                   ^~~~~~~~
../../rtemsbsd/powerpc/include/linux/log2.h:39:1: note: in expansion of macro
↪'roundup_pow_of_two'
39 | roundup_pow_of_two(unsigned long x)
| ^~~~~~~~~~~~~~~~~~
../../freebsd/sys/sys/libkern.h:279:47: error: expected ')' before numeric␣
↪constant
279 | #define roundup_pow_of_two(n)   ((__typeof(n))1 << order_base_2(n))
|                                               ^
../../rtemsbsd/powerpc/include/linux/log2.h:39:1: note: in expansion of macro
↪'roundup_pow_of_two'
39 | roundup_pow_of_two(unsigned long x)
| ^~~~~~~~~~~~~~~~~~
../../freebsd/sys/sys/libkern.h:277:35: error: expected identifier or '(' before
↪'__typeof'
277 | #define rounddown_pow_of_two(n) ((__typeof(n))1 << ilog2(n))
|                                   ^~~~~~~~
../../rtemsbsd/powerpc/include/linux/log2.h:51:1: note: in expansion of macro
↪'rounddown_pow_of_two'
51 | rounddown_pow_of_two(unsigned long x)
| ^~~~~~~~~~~~~~~~~~~~
../../freebsd/sys/sys/libkern.h:277:47: error: expected ')' before numeric␣
↪constant
```

(continues on next page)

(continued from previous page)

```
277 | #define rounddown_pow_of_two(n) ((__typeof(n))1 << ilog2(n))
|                                                  ^
../../rtemsbsd/powerpc/include/linux/log2.h:51:1: note: in expansion of macro
↪'rounddown_pow_of_two'
51 | rounddown_pow_of_two(unsigned long x)
| ^~~~~~~~~~~~~~~~~~~~
```

Author: Chris Johns 2025-10-07T02:38:55.381Z

added rtems#10 as parent epic

Author: Chris Johns 2025-10-07T02:38:55.474Z

set status to **To do**

Author: Jeremy Lorelli 2025-10-09T03:44:35.536Z

I believe I fixed this for 7-freebsd-14 in 60153b5616a40556cfc548531e306fd90bf27443 (!87)

Author: Chris Johns 2025-10-09T03:44:35.536Z

Thanks @jjl77 it looks like more of that MR should be back ported. I will use this issue to bring them back to `6-freebsd-14`.

Author: Chris Johns 2025-10-09T03:44:35.536Z

I can confirm back porting the patches in the MR !87 lets the MVME2700, Beatnik and the MVME3100 build.

Author: Chris Johns 2025-10-08T06:00:27.049Z

mentioned in merge request !107

Author: Chris Johns 2025-10-09T03:44:47.840Z

set status to **Done**

Author: Chris Johns 2025-10-09T03:46:44.367Z

set status to **In progress**

Author: Chris Johns 2025-10-09T22:24:50.223Z

set status to **Done**

2.6.1.7 24 - freebsd-to-rtems.py may need fixing

Id	24
State	closed
Type	ISSUE
Author	Ning Yang
Closed by	Chris Johns
Created	2024-12-07T12:05:47.394Z
Closed	2025-10-02T23:17:57.704Z
Updated	2025-10-02T23:17:57.709Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/24
Merges	0

Summary

The branch I'm using is 6-freebsd-14.

I followd the CONTRIBUTING.md to run:

```
./freebsd-to-rtems.py -R
./freebsd-to-rtems.py
```

The working directory is no longer clean, some files were changed.

The code `#include <machine/rtems-bsd-user-space.h>` is included twice in these files. !`image <https://gitlab.rtems.org/-/project/uploads/678794d818b67b4ae8454a08f5b376f5/image.png>`_

Author: Ning Yang 2024-12-07T12:06:47.590Z

changed the description

Author: Chris Johns 2025-10-02T23:17:57.733Z

set status to **Won't do**

Author: Chris Johns 2025-10-02T23:18:14.299Z

Please look at 7 for development.

2.6.1.8 35 - sendmsg() is not POSIX compliant

Id	35
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-02-03T03:10:25.789Z
Closed	2025-10-02T22:34:03.942Z
Updated	2025-10-02T22:34:03.997Z
Milestone	6.2
Labels	libbsd
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/35
Merges	0

I found a POSIX compliance bug. In file `rtems-bsd-syscall-api.c`,line 644.

https://pubs.opengroup.org/onlinepubs/009604599/functions/sendmsg.html Upon `successful completion, sendmsg() shall return the number of bytes sent.`

But in RTEMS `sendmsg()` only returns an errno.

This problem exists in `6-freebsd-12`

Author: Chris Johns 2025-02-03T03:10:26.130Z

cloned from #34

Author: Chris Johns 2025-02-03T03:10:25.962Z

assigned to @chris

Author: Chris Johns 2025-02-03T03:10:26.574Z

Author: Chris Johns 2025-02-03T04:26:55.887Z

mentioned in merge request !51

Author: Chris Johns 2025-02-03T04:52:16.521Z

mentioned in merge request !53

Author: Chris Johns 2025-10-02T22:34:03.977Z

set status to **Won't do**

2.6.1.9 51 - Backport update to releng/14.3 to *6-freebsd-14*

Id	51
State	closed
Type	ISSUE
Author	Aaron Nyholm
Closed by	Aaron Nyholm
Created	2025-08-28T00:20:01.623Z
Closed	2025-09-21T23:21:17.282Z
Updated	2025-09-25T22:52:24.313Z
Milestone	6.2
Labels	version::6
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/51
Merges	0

We should be using stable releases for our LibBSD development branches instead of checked out commits on `stable/14` which is not ensured to be stable. We should move to the latest minor release of Freebsd 14 on `6-freebsd-14`. This ensures that our stable branch is using both a stable version of RTEMS and FreeBSD.

Author: Aaron Nyholm 2025-08-28T00:20:01.675Z

set status to **To do**

Author: Aaron Nyholm 2025-09-02T01:05:44.211Z

I have a branch with this working that I will post after #50 closes.

Author: Aaron Nyholm 2025-09-02T22:53:46.866Z

This update requires #43 to be fixed before it can be put up.

Author: Aaron Nyholm 2025-09-04T21:05:36.368Z

mentioned in merge request !92

Author: Aaron Nyholm 2025-09-05T00:02:25.895Z

changed title from

Update 6-freebsd-14 to releng/14.3

to

Backport update to releng/14.3 to `6-freebsd-14`

Author: Aaron Nyholm 2025-09-21T23:21:17.326Z

set status to **Done**

Author: Chris Johns 2025-09-25T22:50:59.135Z

changed Version to

6

2.6.1.10 18 - [zone: mbuf_cluster] kern.ipc.nmbclusters limit reached

Id	18
State	closed
Type	ISSUE
Author	Ning Yang
Closed by	Ning Yang
Created	2024-11-22T05:40:47.810Z
Closed	2024-11-23T08:19:57.419Z
Updated	2025-09-19T00:45:26.232Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/18
Merges	0

Summary

When I tested the genet driver !15 , I encountered this issue.

1. I use the following command on my PC to test `tx`. It works very well.

```
yangn0@yangning-PC:~$ sudo curl -o /dev/null ftp://192.168.1.100/dev/zero
[sudo] password for yangn0:
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
Dload  Upload   Total   Spent    Left  Speed
0     0    0  987M    0     0  50.6M      0 --:--:--  0:00:19 --:--:-- 50.6M
```

2. I use the following command on my PC to test `rx`. After transmitting a small amount of data, the Current Speed drops to 0. And rtems shell printed `[zone: mbuf_cluster] kern.ipc.nmbclusters limit reached`.

```
yangn0@yangning-PC:~$ sudo curl -T /dev/zero ftp://192.168.1.100/dev/null
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
Dload  Upload   Total   Spent    Left  Speed
100 10.6M    0     0    0 10.6M      0   448k --:--:--  0:00:24 --:--:--     0
```

RTEMS Shell: !`image <https://gitlab.rtems.org/-/project/uploads/0ef79b49c59f5ef986fee38cd154912c/image.png>`_

Author: Ning Yang 2024-11-22T05:41:06.346Z

changed the description

Author: Ning Yang 2024-11-22T05:41:17.461Z

changed the description

Author: Ning Yang 2024-11-22T05:42:09.557Z

changed the description

Author: Kinsey Moore 2024-11-22T15:55:35.824Z

I just committed a change to 6-freebsd-12 to fix this issue for ZynqMP. It's likely the fix needs to be pulled forward into the other branches. I'll create MRs for those so you can add a configuration setting for RPi4/genet.

Author: Kinsey Moore 2024-11-23T08:19:44.799Z

Which branch of libbsd was this against?

Author: Ning Yang 2024-11-23T08:19:44.799Z

6-freebsd-14

Author: Kinsey Moore 2024-11-23T08:19:44.799Z

I have created a MR to cherry-pick this change: !31

Author: Kinsey Moore 2024-11-23T08:19:44.799Z

You'll have to update for the RPi4 platform once that goes in, but you should be able to test increasing the memory buffers.

Author: Ning Yang 2024-11-23T08:19:44.799Z

!`image <https://gitlab.rtems.org/-/project/uploads/dff3a04098942485d3bebd38b909759d/image.png>`_

It works good!

Thank you very much.

2.6.1.11 49 - Media server is required to attach mmcsd on 6-freebsd-14

Id	49
State	closed
Type	ISSUE
Author	Aaron Nyholm
Closed by	Aaron Nyholm
Created	2025-08-27T00:52:25.749Z
Closed	2025-09-02T22:50:30.483Z
Updated	2025-09-19T00:27:23.574Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/49
Merges	0

Summary

The RTEMS media server is required to attach mmcsd devices. We should remove this requirement and attach the devices by default but keep the option to be able to use the media server if chosen.

This is relevant to `6-freebsd-14`

Steps to reproduce

2.6.1.11.2.1 Pre-set options

Author: Aaron Nyholm 2025-08-27T00:52:25.804Z

set status to **To do**

Author: Aaron Nyholm 2025-08-27T00:52:55.485Z

changed title from

Media server is required to attach mmcsd

to

Media server is required to attach mmcsd

on 6-freebsd-14

Author: Aaron Nyholm 2025-08-27T00:52:55.522Z

changed the description

Author: Aaron Nyholm 2025-08-27T00:54:40.521Z

mentioned in merge request !85

Author: Aaron Nyholm 2025-09-02T22:50:30.521Z

set status to **Done**

2.6.1.12 23 - testsuite: Restore BSP-selected values and increase mbufs for ZynqMP for 6-freebsd-13

Id	23
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2024-12-06T22:40:35.216Z
Closed	2025-03-02T01:46:46.419Z
Updated	2025-03-02T01:46:46.432Z
Milestone	6.2
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/23
Merges	0

This issue is to backport the mbufs fix for ZynqMP to the 6-freebsd-13 branch.

Author: Kinsey Moore 2024-12-06T22:40:35.486Z

cloned from #20

Author: Kinsey Moore 2024-12-06T22:40:35.285Z

assigned to @opticron

Author: Kinsey Moore 2024-12-06T22:40:40.924Z

Author: Kinsey Moore 2024-12-06T22:41:23.348Z

changed title from **testsuite: Restore BSP-selected values and increase mbufs for ZynqMP for 6-freebsd-1{-4-}** to **testsuite: Restore BSP-selected values and increase mbufs for ZynqMP for 6-freebsd-1{+3+}**

Author: Kinsey Moore 2024-12-06T22:41:23.385Z

changed the description

Author: Kinsey Moore 2024-12-06T22:43:42.531Z

mentioned in merge request !30

Author: Joel Sherrill 2024-12-17T16:18:11.780Z

mentioned in commit 8b10b2e15ef4ea161e8ba3b922b2bf11a88aaef1

2.6.1.13 20 - testsuite: Restore BSP-selected values and increase mbufs for ZynqMP for 6-freebsd-14

Id	20
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2024-11-26T03:26:44.393Z
Closed	2025-03-02T01:46:42.666Z
Updated	2025-03-02T01:46:42.688Z
Milestone	6.2
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/20
Merges	0

Author: Chris Johns 2024-11-26T03:26:44.855Z

Author: Chris Johns 2024-11-26T03:28:30.659Z

assigned to @opticron

Author: Kinsey Moore 2024-11-26T15:38:15.961Z

This is handled in #31

Author: Kinsey Moore 2024-11-26T15:38:48.283Z

mentioned in merge request !31

Author: Gedare Bloom 2024-12-04T21:40:37.971Z

Author: Kinsey Moore 2024-12-06T22:40:35.531Z

cloned to #23

2.6.1.14 28 - Install OFW driver headers

Id	28
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Aaron Nyholm
Closed by	Chris Johns
Created	2025-01-31T06:08:30.887Z
Closed	2025-02-03T03:04:28.740Z
Updated	2025-02-03T03:04:28.754Z
Milestone	6.2
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/28
Merges	0

Install the OFW driver headers to make it easier to support custom drivers in applications.

Author: Chris Johns 2025-01-31T06:08:31.477Z

Author: Chris Johns 2025-01-31T06:10:28.520Z

@eagleirony can you please provide an MR?

Author: Chris Johns 2025-01-31T06:10:54.752Z

assigned to @eagleirony

Author: Chris Johns 2025-01-31T06:11:02.462Z

cloned to #29

Author: Aaron Nyholm 2025-01-31T06:18:16.890Z

mentioned in merge request !49

2.6.2 Merge Requests

2.6.2.1 113 - freebsd/dev/dc: Fix dc driver crash

Id	113
State	merged
Merged by	Amar Takhar
Merged at	2025-11-11T03:20:18.913Z
Assignee(s)	Chris Johns
Created	2025-11-11T03:18:56.696Z
Updated	2025-11-11T03:20:18.904Z
Milestone	6.2
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/113
Commit	c4fc20335820873346337140 9a73429d0b8f404e

Fix dc driver crash

This is the fix from FreeBSD CURRENT.

Closes #65

Author: Chris Johns 2025-11-11T03:18:56.876Z

assigned to @chris

Author: Amar Takhar 2025-11-11T03:20:15.663Z

enabled an automatic merge when all merge checks for c4fc20335820873346337140 9a73429d0b8f404e pass

Author: Amar Takhar 2025-11-11T03:20:16.322Z

approved this merge request

2.6.2.2 109 - bsp/motorola_powerpc: Add dc and ukphy support

Id	109
State	merged
Merged by	Chris Johns
Merged at	2025-10-13T02:18:13.648Z
Assignee(s)	Aaron Nyholm
Created	2025-10-13T02:15:21.800Z
Updated	2025-10-13T02:18:13.639Z
Milestone	6.2
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/109
Commit	52733df9a1c95e5c4b67593866e03d358579d901

Summary

bsp/motorola_powerpc: Add dc and ukphy support

- Add the dc net dev to the BSP
- Add the ukphy support

Closes #63

Author: Chris Johns 2025-10-13T02:16:02.616Z

enabled an automatic merge when all merge checks for 52733df9a1c95e5c4b67593866e03d358579d901 pass

Author: Chris Johns 2025-10-13T02:16:05.905Z

assigned to @eagleirony

Author: Chris Johns 2025-10-13T02:18:10.983Z

approved this merge request

2.6.2.3 107 - freebsd/sys/sys/libkern.h: Disable conflicting macros

Id	107
State	merged
Merged by	Chris Johns
Merged at	2025-10-08T13:30:48.204Z
Assignee(s)	Chris Johns
Created	2025-10-08T06:00:14.017Z
Updated	2025-10-09T22:23:33.582Z
Milestone	6.2
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/107
Commit	bd789ab265ee0c1ac57659e4f8de09818378c6e3

Backport of MR !87

Updates #60

Author: Chris Johns 2025-10-08T06:00:14.319Z

assigned to @chris

Author: Chris Johns 2025-10-08T06:01:18.730Z

enabled an automatic merge when all merge checks for bd789ab265ee0c1ac57659e4f8de09818378c6e3 pass

Author: Amar Takhar 2025-10-08T13:30:45.452Z

approved this merge request

Author: Chris Johns 2025-10-09T22:23:33.554Z

@jjl77 thanks for the mention in the issue for these changes as it allowed me to easily update the `6-freebsd-14` branch and to have the broken code fixed. Awesome to see this happening in the project. Again thanks.

2.6.2.4 103 - rtemsbsd/libio: Atomic set LIBIO_FLAGS_CLOSE_BUSY

Id	103
State	merged
Merged by	Kinsey Moore
Merged at	2025-09-22T14:32:45.702Z
Created	2025-09-21T23:23:23.884Z
Updated	2025-09-22T14:32:47.401Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/103
Commit	43d306c1b1c0638e5758e71bb792785b2d1b0805

Summary

rtemsbsd/libio: Atomic set LIBIO_FLAGS_CLOSE_BUSY

Closes #58

Author: Aaron Nyholm 2025-09-21T23:24:19.250Z

changed the description

Author: Kinsey Moore 2025-09-22T14:32:42.160Z

approved this merge request

2.6.2.5 69 - sys/kern/kern_event.c: Fix kqueue double hold

Id	69
State	merged
Merged by	Kinsey Moore
Merged at	2025-05-28T00:54:54.657Z
Created	2025-05-27T04:04:44.881Z
Updated	2025-09-19T02:41:25.870Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/69
Commit	f9950ed89779d9c2088a267f66582f1d426103bf

Summary

sys/kern/kern_event.c: Fix kqueue double hold

Closes #43

Author: Aaron Nyholm 2025-05-27T04:18:29.254Z

added 1 commit

- e2fc9e99 - sys/kern/kern_event.c: Fix kqueue double hold

Compare with previous version

Author: Kinsey Moore 2025-05-27T22:53:50.566Z

Backports need their own issue attached to the appropriate epic.

Author: Aaron Nyholm 2025-05-27T22:52:11.787Z

added 1 commit

- f9950ed8 - sys/kern/kern_event.c: Fix kqueue double hold

Compare with previous version

Author: Aaron Nyholm 2025-05-27T22:53:41.647Z

changed the description

Author: Aaron Nyholm 2025-05-27T22:53:50.583Z

resolved all threads

Author: Kinsey Moore 2025-05-28T00:54:44.037Z

approved this merge request

2.6.2.6 77 - 6-freebsd-14: Beatnik BSP fixes

Id	77
State	merged
Merged by	Chris Johns
Merged at	2025-06-17T05:54:38.217Z
Created	2025-06-17T05:12:04.843Z
Updated	2025-09-19T02:41:25.739Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/77
Commit	48eadd12c49d11a52f20b711c1e3ff7de93ad0a1

Summary

Backported changes from !76 to 6-freebsd-14

Author: Jeremy Lorelli 2025-06-17T05:16:19.819Z

mentioned in merge request !76

Author: Chris Johns 2025-06-17T05:54:24.356Z

approved this merge request

Author: Chris Johns 2025-06-17T05:55:27.759Z

@jjl77 thanks and appreciated

2.6.2.7 67 - freebsd/sys_generic: Prevent multiple FD mappings

Id	67
State	merged
Merged by	Gedare Bloom
Merged at	2025-05-22T00:17:33.334Z
Assignee(s)	Kinsey Moore
Created	2025-05-21T19:41:20.346Z
Updated	2025-09-19T02:41:25.519Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/67
Commit	0ac188a5cab1d48029265d07721be4a45edebb40

Summary

When the `selscan()` and `selrescan()` functions were modified for use with RTEMS, the already-mapped FD was stored in `selfd->sf_cookie` by `selscan()` contrary to the modified behavior of `pollscan()` which stores an unmapped FD (wrapped inside a struct) in `sf_cookie`. This stored mapped FD was then mapped again into libbsd FD space in `selrescan()` which resulted in `EBADF` since there was no open FD in the lower range that libbsd FD space FDs typically occupy compared to RTEMS FD space.

The fix is to only store unmapped FDs into `selfd->sf_cookie` by passing the unmapped FD into `selfdalloc()` instead of the already-mapped FD.

Closes #40

Author: Kinsey Moore 2025-05-21T19:41:20.699Z

assigned to @opticron

Author: Kinsey Moore 2025-05-21T19:41:52.435Z

changed target branch from `main` to `6-freebsd-14`

Author: Kinsey Moore 2025-05-21T19:43:03.677Z

changed title from **{-ping: fix initial and restart bug-}** to **{+freebsd/sys_generic: Prevent multiple FD mappings+}**

Author: Kinsey Moore 2025-05-21T19:43:03.707Z

changed the description

Author: Chris Johns 2025-05-21T23:52:45.377Z

changed the description

Author: Chris Johns 2025-05-21T23:53:47.399Z

approved this merge request

Author: Gedare Bloom 2025-05-22T00:16:46.273Z

approved this merge request

2.6.2.8 85 - dev/mmc/mmcsd: Remove media server requirement for mmcsd

Id	85
State	merged
Merged by	Gedare Bloom
Merged at	2025-09-02T16:21:16.722Z
Created	2025-08-27T00:54:34.142Z
Updated	2025-09-19T02:31:14.269Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/85
Commit	254b7174e264e29acf04ca7b1d5631717dc1d72d

Summary

dev/mmc/mmcsd: Remove media server requirement for mmcsd

Media server is not required to attach MMCSD device by default. To use the media server call rtems_mmcsd_use_media_server() before the device attaches.

Closes #49.

Author: Aaron Nyholm 2025-08-27T22:09:58.950Z

added 1 commit

- 254b7174 - dev/mmc/mmcsd: Remove media server requirement for mmcsd

Compare with previous version

Author: Gedare Bloom 2025-09-02T16:21:09.230Z

approved this merge request

2.6.2.9 89 - rtemsbsd/syscall: LibBSD files set CLOSE_BUSY

Id	89
State	merged
Merged by	Gedare Bloom
Merged at	2025-09-04T15:35:12.127Z
Created	2025-09-02T22:42:37.815Z
Updated	2025-09-19T02:30:12.485Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/89
Commit	0023d402a2469a23d7e26c94431fb873e78afca1

Summary

Closes #43

Author: Aaron Nyholm 2025-09-02T22:49:59.064Z

changed the description

Author: Gedare Bloom 2025-09-04T15:34:48.977Z

approved this merge request

2.6.2.10 91 - rtemsbsd/mmcsd: Fix inconsistent multi block read and writes

Id	91
State	merged
Merged by	Chris Johns
Merged at	2025-09-18T21:33:09.112Z
Reviewer(s)	Kinsey Moore
Created	2025-09-04T21:03:58.282Z
Updated	2025-09-19T02:29:47.608Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/91
Commit	bd6ee145074d906eb266e2eee9fcb878cf80ea6b

Summary

Due to the `block_count` not always being zeroed the SDHCI driver would not set the auto stop bit causing the first read or write to never complete causing later commands to fail. This explicitly zeros the block count (used for CMD53 only). Brought across from `7-freebsd-14`

Closes #56

Author: Kinsey Moore 2025-09-04T21:24:24.448Z

added 2 commits

- 0023d402 - 1 commit from branch `rtems/pkg:6-freebsd-14`
- d0225c66 - rtemsbsd/mmcsd: Fix inconsistent multi block read and writes

Compare with previous version

Author: Kinsey Moore 2025-09-04T21:24:42.510Z

approved this merge request

Author: Kinsey Moore 2025-09-04T21:24:45.751Z

unapproved this merge request

Author: Kinsey Moore 2025-09-05T00:03:11.384Z

This needs a backport issue attached to the appropriate epic.

Author: Kinsey Moore 2025-09-05T00:03:11.384Z

The issue also needs to be referenced in the commit message that's going into 6-freebsd-14 branch.

Author: Aaron Nyholm 2025-09-05T00:03:11.384Z

Created issue and added to commit and MR

Author: Kinsey Moore 2025-09-04T21:26:50.634Z

requested review from @opticron

Author: Aaron Nyholm 2025-09-05T00:00:39.790Z

added 1 commit

- 149ba275 - rtemsbsd/mmcsd: Fix inconsistent multi block read and writes

Compare with previous version

Author: Aaron Nyholm 2025-09-05T00:01:38.137Z

changed the description

Author: Aaron Nyholm 2025-09-05T00:02:42.637Z

resolved all threads

Author: Aaron Nyholm 2025-09-05T00:03:11.401Z

resolved all threads

Author: Kinsey Moore 2025-09-05T00:07:58.329Z

approved this merge request

Author: Kinsey Moore 2025-09-05T00:08:04.336Z

added 2 commits

- 0023d402 - 1 commit from branch `rtems/pkg:6-freebsd-14`
- 3401b617 - rtemsbsd/mmcsd: Fix inconsistent multi block read and writes

Compare with previous version

Author: Aaron Nyholm 2025-09-17T03:51:11.563Z

added 2 commits

- 6f86b438 - 1 commit from branch `rtems/pkg:6-freebsd-14`
- bd6ee145 - rtemsbsd/mmcsd: Fix inconsistent multi block read and writes

Compare with previous version

2.6.2.11 92 - Update 6-freebsd-14 to releng/14.3

Id	92
State	merged
Merged by	Kinsey Moore
Merged at	2025-09-05T02:19:02.248Z
Reviewer(s)	Kinsey Moore
Created	2025-09-04T21:04:54.650Z
Updated	2025-09-19T02:29:34.925Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/92
Commit	6f86b4389a0e014a71fd4dc2ffbf2f4acbe2f3f7

Summary

Update 6-freebsd-14 to releng/14.3 at 5982521fe3dd3f1627bbe29ee8c3b190a24e3963

Closes #51

Author: Kinsey Moore 2025-09-04T21:24:18.471Z

added 3 commits

- 7b002f62...0023d402 - 2 commits from branch `rtems/pkg:6-freebsd-14`
- 5b598e6a - Update 7-freebsd-14 to releng/14.3 at 5982521fe3dd3f1627bbe29ee8c3b190a24e3963

Compare with previous version

Author: Kinsey Moore 2025-09-05T00:05:59.550Z

The MR subject doesn't match the target branch. Also, this should have a backport issue attached to the appropriate epic and the commit(s) should reference the issue.

Author: Aaron Nyholm 2025-09-05T00:05:59.550Z

Attached backport issue and fixed MR subject

Author: Kinsey Moore 2025-09-04T21:26:53.577Z

requested review from @opticron

Author: Aaron Nyholm 2025-09-05T00:05:18.901Z

added 1 commit

- 3ff50271 - Update 6-freebsd-14 to releng/14.3 at 5982521fe3dd3f1627bbe29ee8c3b190a24e3963

Compare with previous version

Author: Aaron Nyholm 2025-09-05T00:05:40.318Z

changed title from

Update

7

-freebsd-14 to releng/14.3

at 5982521fe3dd3f1627bbe29ee8c3b190a24e3963

to

Update

6

-freebsd-14 to releng/14.3

Author: Aaron Nyholm 2025-09-05T00:05:59.568Z

resolved all threads

Author: Kinsey Moore 2025-09-05T02:15:29.124Z

approved this merge request

Author: Kinsey Moore 2025-09-05T02:17:57.483Z

added 1 commit

- 74464012 - freebsd: Update to releng/14.3 at 5982521fe3dd3f1627bbe29ee8c3b190a24e3963

Compare with previous version

Author: Kinsey Moore 2025-09-05T02:18:46.918Z

added 1 commit

- 6f86b438 - freebsd: Update to releng/14.3 5982521fe3dd3f1627bbe29ee8c3b190a24e3963

Compare with previous version

Author: Kinsey Moore 2025-09-05T02:18:59.149Z

enabled an automatic merge when all merge checks for 6f86b4389a0e014a71fd4dc2ffbf2f4acbe2f3f7 pass

Author: Jeremy Lorelli 2025-09-15T21:44:35.607Z

mentioned in merge request !87

2.6.2.12 82 - Update libbsd 6-freebsd-14 for GCC 15

Id	82
State	merged
Merged by	Chris Johns
Merged at	2025-07-29T05:59:29.381Z
Assignee(s)	Kinsey Moore
Created	2025-07-04T00:11:49.801Z
Updated	2025-07-29T05:59:31.366Z
Milestone	6.2
Labels	libbsd::freebsd-14, tool::gcc
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/82
Commit	8e22db4a259e9de392a4ed8db4bc5b5b5a1d76cd

Summary

This updates 6-freebsd-14 with the GCC 15 fixes to make future backports easier where necessary.

Closes #46

Author: Kinsey Moore 2025-07-04T00:11:49.931Z

assigned to @opticron

Author: Kinsey Moore 2025-07-04T00:21:40.342Z

added 6 commits

- f20d6eb8 - freebsd: Restore missing return type
- efd4f8f3 - freebsd/rtemsbsd: Resolve mismatched type errors
- 565d5641 - freebsd: Resolve incorrect return types
- 90ce2b89 - rtemsbsd: Fix incorrect function signatures
- 478214ca - bsd/dhcpcd/testsuite: Resolve missing prototypes
- 8e22db4a - rtemsbsd: Remove unused file

Compare with previous version

Author: Kinsey Moore 2025-07-04T00:21:58.228Z

changed the description

Author: Chris Johns 2025-07-27T01:58:51.197Z

The RSB does not build gcc-14 any more as `head` was moved to gcc-15. Please update this MR after testing with gcc-15. Also please reference https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/issues/116 to track what builds and testing as been done.

Thanks

Author: Kinsey Moore 2025-07-27T01:58:51.197Z

This has been tested with GCC 15 with no additional errors.

Author: Chris Johns 2025-07-25T04:51:25.506Z

requested changes

Author: Kinsey Moore 2025-07-27T01:58:34.430Z

changed title from

Update libbsd 6-freebsd-14 for GCC 1

4

to

Update libbsd 6-freebsd-14 for GCC 1

5

Author: Kinsey Moore 2025-07-27T01:58:34.456Z

changed the description

Author: Kinsey Moore 2025-07-27T01:58:51.219Z

resolved all threads

Author: Chris Johns 2025-07-29T05:59:23.893Z

approved this merge request

2.6.2.13 49 - libbsd.py: Install dev/ofw header files

Id	49
State	merged
Merged by	Amar Takhar
Merged at	2025-01-31T07:30:44.400Z
Created	2025-01-31T06:18:00.921Z
Updated	2025-05-08T23:46:41.428Z
Milestone	6.2
Labels	libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/49
Commit	844f01d4c687b549915cfd7b089f1b711b653166

Summary

libbsd.py: Install dev/ofw header files

Closes #28

Closes #6

Author: Amar Takhar 2025-01-31T07:30:33.759Z

approved this merge request

2.6.2.14 62 - gitlab: Add link to CI

Id	62
State	merged
Merged by	Kinsey Moore
Merged at	2025-03-13T22:47:31.667Z
Assignee(s)	Amar Takhar
Created	2025-02-14T09:38:52.268Z
Updated	2025-03-13T22:47:32.926Z
Milestone	6.2
Labels	ci
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/62
Commit	96319dbdbbd4a38244453e351a132bd728b27eb1

Summary

gitlab: Add link to CI

This runs only the commit message and merge request checker.

Required so we can have 'all pipelines must pass' enabled due to a bug in GitLab.

Author: Amar Takhar 2025-02-14T09:38:52.463Z

assigned to @amar

Author: Kinsey Moore 2025-03-13T22:47:08.435Z

approved this merge request

2.6.2.15 63 - gitlab: Add link to CI

Id	63
State	merged
Merged by	Kinsey Moore
Merged at	2025-03-13T22:47:11.125Z
Assignee(s)	Amar Takhar
Created	2025-02-14T09:39:44.871Z
Updated	2025-03-13T22:47:14.088Z
Milestone	6.2
Labels	ci
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/63
Commit	c442209c73217b7cada371d30dd9a8f110d21cba

Summary

gitlab: Add link to CI

This runs only the commit message and merge request checker.

Required so we can have ‘all pipelines must pass’ enabled due to a bug in GitLab.

Author: Amar Takhar 2025-02-14T09:39:45.115Z

assigned to @amar

Author: Kinsey Moore 2025-03-13T22:46:53.332Z

approved this merge request

2.6.2.16 64 - gitlab: Add link to CI

Id	64
State	merged
Merged by	Kinsey Moore
Merged at	2025-03-13T22:46:38.650Z
Assignee(s)	Amar Takhar
Created	2025-02-14T09:40:46.023Z
Updated	2025-03-13T22:46:41.978Z
Milestone	6.2
Labels	ci
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/64
Commit	9860a245377a9a20d9c041ee56292de517605841

Summary

gitlab: Add link to CI

This runs only the commit message and merge request checker.

Required so we can have ‘all pipelines must pass’ enabled due to a bug in GitLab.

Author: Amar Takhar 2025-02-14T09:40:46.210Z

assigned to @amar

Author: Kinsey Moore 2025-03-13T22:46:19.979Z

approved this merge request

2.6.2.17 54 - rtems/syscall: Return the data sent when calling sendmsg

Id	54
State	merged
Merged by	Kinsey Moore
Merged at	2025-02-03T13:30:43.190Z
Assignee(s)	Chris Johns
Created	2025-02-03T04:54:19.485Z
Updated	2025-02-03T13:30:51.569Z
Milestone	6.2
Labels	libbsd, libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/54
Commit	fc6e4a656da22557df76a1329b297bd69b418901

Return the data sent when calling `sendmsg`

Closes #34

Author: Chris Johns 2025-02-03T04:54:19.767Z

assigned to @chris

Author: Kinsey Moore 2025-02-03T13:30:26.599Z

approved this merge request

2.6.2.18 53 - rtems/syscall: Return the data sent when calling sendmsg

Id	53
State	merged
Merged by	Kinsey Moore
Merged at	2025-02-03T13:30:41.019Z
Assignee(s)	Chris Johns
Created	2025-02-03T04:52:02.056Z
Updated	2025-02-03T13:30:49.461Z
Milestone	6.2
Labels	libbsd
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/53
Commit	210718248d934d5ce7095bf52fe390b18dc910c9

Return the data sent when calling sendmsg

Closes #35

Author: Chris Johns 2025-02-03T04:52:02.858Z

assigned to @chris

Author: Kinsey Moore	2025-02-03T13:30:28.352Z

approved this merge request

2.6.2.19 31 - testsuite: Restore BSP-selected values and increase mbufs for ZynqMP

Id	31
State	merged
Merged by	Joel Sherrill
Merged at	2024-12-17T16:19:03.701Z
Assignee(s)	Kinsey Moore
Created	2024-11-22T16:19:01.369Z
Updated	2024-12-17T16:19:05.298Z
Milestone	6.2
Labels	arch:aarch64, libbsd, libbsd::freebsd-14
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/31
Commit	42cd064a76c12e21ae5028ed3eb336b64c718ae3

Summary

testsuite: Restore BSP-selected values and increase mbufs for ZynqMP

In cases where DHCP is selected, network-config.h is not used which is what provides the bsp.h include when static network configuraton is used. Adding the bsp.h include to default-network-init.h directly allows selection of default values based on BSP regardless of whether DHCP is in use.

Closes #16 Closes #20

Author: Kinsey Moore	2024-11-22T16:19:01.608Z

assigned to @opticron

Author: Kinsey Moore	2024-11-22T16:19:27.744Z

mentioned in issue #18

Author: Kinsey Moore	2024-11-26T15:34:41.147Z

mentioned in issue #19

Author: Kinsey Moore	2024-11-26T15:38:48.183Z

changed the description

Author: Kinsey Moore 2024-12-06T22:44:47.878Z

added 1 commit

- e399cd5e - testsuite: Restore BSP-selected values and increase mbufs for ZynqMP

Compare with previous version

Author: Joel Sherrill 2024-12-17T16:18:54.063Z

added 2 commits

- e355f774 - 1 commit from branch `rtems/pkg:6-freebsd-14`
- 42cd064a - testsuite: Restore BSP-selected values and increase mbufs for ZynqMP

Compare with previous version

Author: Joel Sherrill 2024-12-17T16:18:59.451Z

approved this merge request

2.6.2.20 30 - testsuite: Restore BSP-selected values and increase mbufs for ZynqMP

Id	30
State	merged
Merged by	Joel Sherrill
Merged at	2024-12-17T16:18:11.222Z
Assignee(s)	Kinsey Moore
Created	2024-11-22T16:14:44.929Z
Updated	2024-12-17T16:18:12.594Z
Milestone	6.2
Labels	arch:aarch64, libbsd, libbsd::freebsd-13
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/30
Commit	8b10b2e15ef4ea161e8ba3b922b2bf11a88aaef1

Summary

testsuite: Restore BSP-selected values and increase mbufs for ZynqMP

In cases where DHCP is selected, network-config.h is not used which is what provides the bsp.h include when static network configuraton is used. Adding the bsp.h include to default-network-init.h directly allows selection of default values based on BSP regardless of whether DHCP is in use.

Closes #23

Author: Kinsey Moore 2024-11-22T16:14:45.128Z

assigned to @opticron

Author: Kinsey Moore 2024-12-06T22:43:07.925Z

added 1 commit

- 8b10b2e1 - testsuite: Restore BSP-selected values and increase mbufs for Zynq-qMP

Compare with previous version

Author: Kinsey Moore 2024-12-06T22:43:42.458Z

changed the description

Author: Joel Sherrill 2024-12-17T16:18:06.321Z

approved this merge request

2.6.2.21 15 - Draft: Raspberrypi4b: Add Genet Ethernet driver (closed)

Id	15
State	closed
Closed by	Ning Yang
Created	2024-09-27T12:46:49.390Z
Closed	2025-07-09T16:30:09.774Z
Updated	2025-07-09T16:40:08.746Z
Milestone	6.2
Labels	arch:aarch64, network
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/15
Commit	ca9359f14022ddf775e78c23c3558cf6855c85c9

Summary

Author: Ning Yang 2024-09-27T12:50:35.345Z

I'm trying to port genet to libbsd. It compiles successfully. how should I test whether the network driver is working?

Author: Ning Yang 2024-10-06T13:44:04.748Z

added 1 commit

- 45d615a4 - if_genet.c latest

Compare with previous version

Author: Ning Yang 2024-10-06T14:16:39.519Z

added 1 commit

- 11ec3f7b - base

Compare with previous version

Author: Ning Yang 2024-10-10T13:43:05.377Z

added 1 commit

- dacd24a5 - genet earlist version

Compare with previous version

Author: Ning Yang 2024-10-18T08:08:19.084Z

added 3 commits

- b6b30616 - genet commit2
- 31175eb7 - tx and rx work well.
- 517538b5 - add __rtems__

Compare with previous version

Author: Ning Yang 2024-10-19T05:24:04.381Z

added 1 commit

- d5e5a05b - GENET

Compare with previous version

Author: Ning Yang 2024-10-23T05:14:53.208Z

mentioned in issue #11

Author: Ning Yang 2024-10-23T15:20:14.351Z

added 1 commit

- e1831858 - genet works good.

Compare with previous version

Author: Ning Yang 2024-10-26T04:14:28.050Z

added 2 commits

- 0931c9b1 - 1 commit from branch `rtems/pkg:main`
- 29d2ff27 - genet works good.

Compare with previous version

Author: Chris Johns 2024-11-08T00:32:11.692Z

I have moved this to 6.2. If this status changes please update the MR to reflect this.

Author: Ning Yang 2024-11-14T15:43:17.615Z

The reason currently blocking merge is dtb license issue. Genet driver works good.

Author: Ning Yang 2024-11-14T15:54:52.334Z

https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/313

fdt license issue has been resolved

Author: Ning Yang 2024-11-13T09:42:29.795Z

added 441 commits

- 29d2ff27...dc540af6 - 440 commits from branch `rtems/pkg:main`
- d7bc767d - genet works good

Compare with previous version

Author: Ning Yang 2024-11-14T15:37:07.997Z

marked this merge request as **ready**

Author: Ning Yang 2024-11-14T15:38:19.415Z

added 1 commit

- 85a07b62 - Raspberrypi4b: Add Genet Ethernet driver

Compare with previous version

Author: Ning Yang 2024-11-14T15:42:51.174Z

changed title from **{-r-}aspberrypi4: {-ge-}net driver** to **{+R+}aspberrypi4{+b+}: {+Add Genet Ether+}net driver**

Author: Ning Yang 2024-11-14T15:43:17.631Z

resolved all threads

Author: Ning Yang 2024-11-15T06:27:32.018Z

added 1 commit

- 9ea6d1f9 - Raspberrypi4b: Add Genet Ethernet driver

Compare with previous version

Author: Ning Yang 2024-11-20T05:27:54.009Z

added 3 commits

- 9ea6d1f9...3de45fac - 2 commits from branch `rtems/pkg:main`
- fe874657 - Raspberrypi4b: Add Genet Ethernet driver

Compare with previous version

Author: Ning Yang 2024-11-22T05:41:06.407Z

mentioned in issue #18

Author: Ning Yang 2024-11-22T05:45:59.570Z

changed target branch from `main` to `6-freebsd-14`

Author: Ning Yang 2024-11-22T05:48:25.704Z

added 1 commit

- b2d8ce77 - Raspberrypi4b: Add Genet Ethernet driver

Compare with previous version

Author: Ning Yang 2024-11-23T08:28:55.348Z

added 1 commit

- 3073bada - Raspberrypi4b: Add Genet Ethernet driver

Compare with previous version

Author: Ning Yang 2024-11-29T14:58:54.565Z

marked this merge request as **draft**

Author: Amar Takhar 2025-07-03T18:19:08.520Z

@yangn0 This needs to be rebased manually. We'll look at this during the meeting tomorrow thanks.

Author: Ning Yang 2025-07-03T18:19:08.520Z

ok. I will completed it today

Author: Amar Takhar 2025-07-03T18:19:08.520Z

Awesome thank you!

Author: Ning Yang 2025-07-03T18:19:08.520Z

Done.

Author: Ning Yang 2025-07-03T18:15:38.772Z

added 19 commits

- 3073bada...48eadd12 - 18 commits from branch `rtems/pkg:6-freebsd-14`
- b0d7dcaa - Raspberrypi4b: Add Genet Ethernet driver

Compare with previous version

Author: Ning Yang 2025-07-03T18:17:23.792Z

resolved all threads

Author: Ning Yang 2025-07-03T18:18:42.408Z

marked this merge request as **ready**

Author: Kinsey Moore 2025-07-03T18:19:08.540Z

resolved all threads

Author: Ning Yang 2025-07-03T18:21:27.870Z

added 1 commit

- a56541a9 - Raspberrypi4b: Add Genet Ethernet driver

Compare with previous version

Author: Amar Takhar 2025-07-03T18:40:03.671Z

This is for 6-freebsd-14 is there any plan to forward port this to 7? Or does it already exist there?

Author: Ning Yang 2025-07-03T18:40:03.671Z

When I ported genet, there was no 7-libbsd.

It will probably be easy to port genet to 7. I will port it later.

Author: Kinsey Moore 2025-07-03T18:29:44.665Z

Is this change intentional?

Author: Ning Yang 2025-07-03T18:29:44.665Z

No. It is an mistake. I have deleted it.

Author: Kinsey Moore 2025-07-03T18:25:48.632Z

64MB seems excessive given that ZynqMP with 4 interfaces only requires 16MB. Is 64MB the minimum required to run the LibBSD tests?

Author: Ning Yang 2025-07-03T18:42:18.761Z

I don't have a raspberrypi4 right now. I will test it tomorrow

Author: Kinsey Moore 2025-07-03T18:33:31.556Z

Please use lowercase hexadecimal to be consistent with the other constants here.

Author: Ning Yang 2025-07-03T18:33:15.841Z

changed this line in version 19 of the diff

Author: Ning Yang 2025-07-03T18:33:16.192Z

added 1 commit

- c8dcbcd0 - Raspberrypi4b: Add Genet Ethernet driver

Compare with previous version

Author: Ning Yang 2025-07-03T18:53:03.637Z

added 1 commit

- ca9359f1 - Raspberrypi4b: Add Genet Ethernet driver

Compare with previous version

Author: Ning Yang 2025-07-09T16:27:28.917Z

marked this merge request as **draft**

Author: Ning Yang 2025-07-09T16:40:29.793Z

rtems6 does not support the genet FDT, so the 6-freebsd-14 branch genet driver is useless. I will close this MR and submit a new one for 7-libbsd.

Author: Amar Takhar 2025-07-09T16:40:08.727Z

Okay, thank you!

Author: Ning Yang 2025-12-19T15:08:48.684Z

mentioned in merge request !106

2.6.2.22 52 - rtems/syscall: Return the data sent when calling sendmsg (closed)

Id	52
State	closed
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-02-03T04:37:08.113Z
Closed	2025-02-03T04:46:23.016Z
Updated	2025-02-03T04:46:23.001Z
Milestone	6.2
Labels	libbsd
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/52
Commit	ccdf6afb54e0e69b165080aeded7bdc9d1d6d681

Return the data sent when calling `sendmsg`

Closes #34

Author: Chris Johns 2025-02-03T04:37:08.324Z

assigned to @chris

Author: Chris Johns 2025-02-03T04:37:25.807Z

added 3 commits

- 98fe4752...844f01d4 - 2 commits from branch `rtems/pkg:6-freebsd-14`
- ccdf6afb - rtems/syscall: Return the data sent when calling sendmsg

Compare with previous version

2.6.2.23 51 - rtems/syscall: Return the data sent when calling sendmsg (closed)

Id	51
State	closed
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-02-03T04:26:49.998Z
Closed	2025-02-03T04:46:22.347Z
Updated	2025-02-03T04:46:22.329Z
Milestone	6.2
Labels	libbsd
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/51
Commit	513828c519dfc7b08d8b0abd036e690a52d6160a

Return the data sent when calling `sendmsg`

Closes #35

Author: Chris Johns 2025-02-03T04:26:50.209Z

assigned to @chris

Author: Chris Johns 2025-02-03T04:27:10.228Z

added 2 commits

- 41743b9a - 1 commit from branch `rtems/pkg:6-freebsd-12`
- 513828c5 - rtems/syscall: Return the data sent when calling sendmsg

Compare with previous version

2.6.2.24 97 - Draft: Use LIBIO_FLAGS_CLOSE_BUSY (opened)

Id	97
State	opened
Assignee(s)	Sebastian Huber
Created	2025-09-15T07:11:18.933Z
Updated	2025-12-18T21:17:32.143Z
Milestone	6.2
Labels	libbsd, libbsd::freebsd-12
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/97
Commit	8e56ccf45ff6e7877e3001afed7be17cc402cdaa

Summary

Use LIBIO_FLAGS_CLOSE_BUSY

Update due to libio API changes.

Related to https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/5311.

Author: Sebastian Huber 2025-09-15T07:11:19.055Z

requested review from @opticron

Author: Sebastian Huber 2025-09-15T07:11:19.092Z

assigned to @sebhub

Author: Sebastian Huber 2025-09-15T07:11:59.620Z

mentioned in issue rtems/rtos/rtems#5311

Author: Sebastian Huber 2025-09-15T07:30:25.479Z

added 1 commit

- 8e56ccf4 - rtems: Use LIBIO_FLAGS_CLOSE_BUSY

Compare with previous version

Author: Kinsey Moore 2025-12-18T21:17:32.101Z

removed review request for @opticron

2.7 RTEMS / Programs / Google Summer of Code

Go to *Issues* (page 68) or rtems/programs/gsoc-merges

Issues Summary

32 - Conversion to new test suite. (page 423)

Merge Requests Summary

2.7.1 Issues

2.7.1.1 32 - Conversion to new test suite.

Id	32
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Amar Takhar
Created	2017-03-02T19:19:19.000Z
Updated	2025-09-19T01:48:32.330Z
Milestone	6.2
Labels	gsoc, old-indefinite, priority::normal, resolution::invalid, rtems::testing, tickettype::project
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/32
Merges	0

[Contents, inline)]

Introduction

The current test suite is a combination of different methods and techniques which makes it difficult to maintain. It also relies on screen ouput to determine valid tests.

This project involves converting the current test suite to the new format which has already been setup and prepared.

You will learn about software and hardware testing in embedded computing. The abilities learned during this project will be transferable to any area within software engineering.

Requirements

Knowledge of testing is not required. The ideal candidate should have a firm grasp of the C language and enjoys the occasional challenge. Each test conversion has varied levels of difficulty ranging from 1-10. Some tests will require refactoring of code. Light knowledge of the Python programming language is an asset.

Preparation

It would also be beneficial for anyone applying to briefly familiarise themselves with the following topics:

- Unit tests.
- Mock tests.
- Temporal tests.
- Continuous Integration

2.7.1.1.3.1 New Build System

A new build system has been written for RTEMS using the Waf build system. In order to familiarise yourself with this please see the following email thread:

https://lists.rtems.org/pipermail/devel/2015-February/009837.html

2.7.1.1.3.2 Waf

Waf is a build system written in Python. Please read over the documents to get a rough idea of how it works. It is not necessary to learn it completely just get an idea of how it is put together.

http://waf.io/

Author: Amar Takhar 2024-04-26T01:34:34.484Z

assigned to @amar

Author: Amar Takhar 2017-03-02T19:32:05.000Z

Add SoC keyword.

Author: Amar Takhar 2017-03-20T17:21:40.000Z

Hello to everyone interested in this project. I will be updating with further details over the next few days. If you are interested in following please add yourself to the CC list after signing up to trac.

Author: Trac Migrate 2017-03-21T13:23:23.000Z

- **Cc** added @aadit0402@gmail.com

Author: Amar Takhar 2017-03-23T14:43:55.000Z

- **Description** changed

```
[[Contents, inline)](../wikis/PageOutline(1-5,)]


== Introduction ==

The current test suite is a combination of different methods and␣
↪techniques which makes it difficult to maintain.  It also relies on␣
↪screen ouput to determine valid tests.

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↪format which has already been setup and prepared.

You will learn about software and hardware testing in embedded␣
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↪transferable to any area within software engineering.



== Requirements ==

Knowledge of testing is not required. The ideal candidate should have a␣
↪firm grasp of the C language and enjoys the occasional challenge. ␣
↪Each test conversion has varied levels of difficulty ranging from 1-
↪10.  Some tests will require refactoring of code.  Light knowledge of␣
↪the Python programming language is an asset.


== Preparation ==

- It would be beneficial for anyone applying to briefly familiarise␣
↪themselves with the following topics:
+ It would also be beneficial for anyone applying to briefly␣
↪familiarise themselves with the following topics:
?          +++++


* Unit tests.
* Mock tests.
* Temporal tests.
* Continuous Integration
+
+
+ === New Build System ===
+
+ A new build system has been written for RTEMS using the Waf build␣
↪system.  In order to familiarise yourself with this please see the␣
↪following email thread:
+
+   https://lists.rtems.org/pipermail/devel/2015-February/009837.html
+
```

(continues on next page)

(continued from previous page)

```
38 + === Waf ===
39 +
40 + Waf is a build system written in Python.  Please read over the␣
   ↪documents to get a rough idea of how it works.  It is not necessary␣
   ↪to learn it completely just get an idea of how it is put together.
41 +
42 +   http://waf.io/
```

Apologies for the delay, bad timing with work I will have time now for the next few weeks to answer questions.

Author: Amar Takhar 2017-03-23T15:00:07.000Z

Please also refer to this email posted to the users list. I will add the content here for ease:

https://lists.rtems.org/pipermail/users/2017-March/031107.html

This project involves a near ground-up rewrite of the current testsuite harness. Most tests are trivial to convert but many will need refactoring. The new testsuite moves away from the 'screen' based testing we do currently to an internal, C-based approach. That is a very general and broad overview it's not as simple as it sounds.

I do have this working already and the tests have all been renamed.

All the tests have been renamed to use a more intuitive naming scheme no more hidden and random file names. The web portal to the test suite is up temporarily here:

https://test.rtems.org/

This project also involves going into the database to ensure they have been properly renamed and fixing any that need changing.

Feel free to drill down the site. I'm working on better documentation for this project by the 20th I was hoping for sooner but things have gotten in the way.

Anyone working on this project is not expected to convert the entire testsuite, just as much as possible the rest of the work will involve identifying what may be required to complete the rest which can involve refactoring of RTEMS itself.

Author: Trac Migrate 2017-03-29T06:11:00.000Z

The Unity testing framework is by no means good enough for the RTEMS testsuite. It lacks some important features like thread-safety at a basic level.

See also:

https://lists.rtems.org/pipermail/devel/2013-November/004965.html

Nothing changed in this respect since 2013.

I would rather use something like the Google C++ Testing Framework, however, it uses to much resources for our low level targets.

https://git.rtems.org/sebh/rtems-gtest.git/

I don't think there exists a ready to use testing framework which meets our requirements. What are our requirements by the way? This should be addressed first.

What is the specification input for the tests itself?

How is the output produced at the device level?

How it is ensured the output processing doesn't influence the test outcome in unexpected ways across targets?

How is the output produced for test suite status consumers? Maybe have a look at XO(1).

How is this synchronized with RTEMS qualification efforts?

How it is guaranteed that we don't drop test cases accidentally during the conversion? Some tests are hard to understand. Do we keep the existing test suite as is?

And so on.

It is a several man month project if you want to do this right.

Author: Chris Johns 2017-03-29T06:23:07.000Z

Replying to Sebastian Huber:

> How is the output produced for test suite status consumers? Maybe have a look at XO(1).
>
> The only consumer on the table at the moment is `rtems-test` and I would prefer we do not fragment how tests are run. The `rtems-test` tool is designed to provide a consistent user interface across varying ways we test RTEMS. What happens under the hood is flexible so I hope it can be updated to handle any new test data formats.

Author: Trac Migrate 2017-03-29T16:33:38.000Z

- **Cc** added @aadit0402@gmail.com, @cpodonnell8@gmail.com

Author: Amar Takhar 2018-10-21T04:20:12.000Z

- **Resolution** set to ~"invalid"
- **Status** changed from *assigned* to *closed*

Closing this due to it's irrelevance. There have been far too many chances to this I'll open a new ticket for the suite I am working on in the future.

Author: Amar Takhar 2024-04-25T20:45:24.909Z

changed the description

2.8 RTEMS / RTOS / RTEMS

Go to *Issues* (page 998) or *Merge Requests* (page 2535)

Issues Summary

5398 - Backport to 6 branch: "cpukit/jffs2: Add EBS (erase block summary) support" (page 446)
5397 - Backport "bsps/shared: Add XNandPsu flashdev backend" (page 445)
5396 - Backport JFFS2 CRC32 updates (page 444)
5392 - Backport to 6 branch: "Fixes for flashdev API and xqspi support" (page 447)
5380 - Backport to 6 branch "bsps/jffs2_flashdev: Return correct value for OOB size" (page 450)
5379 - Backport to 6 branch "bsps/jffs2_flashdev: Return correct value for OOB size" (page 449)
5372 - Backport Make flash config table static to 6 branch (page 455)
5371 - Backport ZynqMP XQspiPsu flashdev backend addition to 6 branch (page 454)
5369 - Backport jffs2 flashdev NAND support to 6 branch (page 452)
5365 - Backport live lock fix for split reads" (page 456)
5350 - Backport flashdev NAND support to 6 branch (page 457)
5348 - Backport libdebugger ARM SMP fixes (page 460)
5347 - Backport JFFS2 filesystem size enforcement to 6 branch (page 459)
5346 - Backport flashdev destructor changes to 6 branch (page 467)
5338 - Backport Doxygen changes for generated sources (page 448)
5337 - Backport storage class qualifier rearrangements (page 433)
5336 - Backport rtems_barrier_get_number_waiting() (page 451)
5313 - Backport use of generic TLS accessor (page 476)
5311 - Backport Chris's libio fix to 6 branch (page 438)
5309 - Backport missing header guard and extern declarations to 6 branch (page 475)
5303 - Deprecate and Remove Mongoose Web Server (page 462)
5302 - Backport pthread_sigmask return fixup to 6 branch (page 474)
5288 - Backport RISC-V Double Trap extension fix to 6 (page 481)
5284 - Backport mvme3100 fixes to 6 (!541) (page 453)
5283 - Backport 6.2: bsps/noelv: Fix using console in polled mode (page 482)
5281 - RTEMS 6.1 GR740 Multiprocessing build fails (page 434)
5273 - Backport libdebugger setjmp fix to 6 branch (page 480)
5271 - Backport libdebugger TLS support to the RTEMS 6 branch (page 479)
5254 - i386/pc BSP ATA driver asserts with node errors on FAT disk mount (page 483)
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5218 - RTEMS Release 6.1 build error texinfo-7.0.3 on arm64-apple-darwin24.3.0-1 (page 471)
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5205 - Back port "grlib/occan: Fix baud rate calculation" to 6 (page 489)
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Merge Requests Summary

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850 - bsps/shared: Add XNandPsu flashdev backend (page 498)
848 - cpukit,spec: Swap JFFS2 to zlib CRC32 (page 500)
830 - Fixes for flashdev API and xqspi support (page 501)
816 - bsps/shared/dev/flash/jffs2_flashdev.c: Fixed fatal heap error on failed mount (page 504)
814 - bsps/jffs2_flashdev: Return correct value for OOB size (page 506)
796 - cpukit/close.c: Open flag corrected for busy closes (page 502)
775 - cpukit/close.c: Fix reference counting under concurrent access. (page 507)
772 - bsps/dev/spi/xqspipsu_flash_config.h: Make flash config table static (page 510)
767 - spec/bsps/aarch64/xilinx-zynqmp: Add XQspiPsu flashdev backend (page 511)
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722 - rtems: Backport Doxygen changes (page 524)
721 - validation: Move storage class qualifier (page 517)
720 - rtems: Add rtems_barrier_get_number_waiting() (page 521)
637 - cpukit/libdebugger/server: Use generic TLS accessor (page 525)
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626 - bsps/include/dev/spi: Add missing extern and guard (page 529)
548 - cpu/riscv: Add Smdbltrp extension compatibility to 6 branch (page 530)
537 - bsps/noelv: Backport polled mode console to 6 (page 531)
532 - bsps/sparc/leon3: Backport GPTIMER timer index logic fix to 6 (page 532)
524 - cpukit/libdebugger: Prevent hang on memory access (page 534)

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518 - cpukit/libdebugger: Add support for TLS variables (page 526)
492 - bsps/shared/dev/ide: Initalise ATA request links as off chain (page 535)
461 - cpukit/libdl: Fix loading symbols from an object file at runtime (page 538)
459 - Backport "spec: Install missing header files for GRLIB and SPARC" to 6 branch (page 539)
418 - gitlab: Add link to CI (page 539)
416 - machine/timecounters: Add _Timecounter_Getboottime, _Timecounter_Getboottimebin decls (page 536)
413 - Revert "build: Provide LDFLAGS for pkg-config" (page 540)
404 - grlib/occan: Fix baud rate calculation (page 546)
381 - cpukit/termios: Fix ordering of baud rate table (page 547)
367 - cpukit/libdl/arm: Fix trampoline alignment (page 550)
365 - Backport 6.2: bsps/shared: NS16550 driver updates the line control register during operation (page 548)
361 - cpukit/libmisc: fix flag in capture.c (page 549)
354 - score: Fix RTEMS_DEBUG build (page 536)
345 - bsp/qoriq: Ignore spurious interrupts (page 541)
335 - build: Provide LDFLAGS for pkg-config (6.1) (page 544)
222 - posix/aio_misc.c/aio_init(): lock before accessing data (page 522)

348 - libmisc/stackchk: Add stack smashing protection (closed) (page 551)

2.8.1 Issues

2.8.1.1 4675 - sleep should be a thread cancellation point

Id	4675
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2022-07-07T10:17:28.000Z
Closed	2025-07-25T14:20:23.129Z
Updated	2026-03-13T01:42:42.539Z
Milestone	6.2
Labels	api::posix, priority::normal, qualification, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4675
Merges	1

Original author: aoliva

GCC has worked around, in the libstdc++ testsuite, the fact that nanosleep (as well as sleep and clock_nanosleep) should be thread cancellation points, per POSIX, but RTEMS may want to make them so. https://gcc.gnu.org/pipermail/gcc-patches/2022-June/597003.html

(I haven't checked that other functions that should be thread cancellation points are, I only noticed that this one wasn't, and decided to file this ticket because for other issues in which I explicitly identified RTEMS I got a request to do so)

Author: Trac Migrate 2022-07-07T12:40:48.000Z

Original author: aoliva

Thanks for reporting the issue. I think we have currently no cancellation points in RTEMS at all. I think this is intentional, so I would mark this bug as WONTFIX.

Author: Joel Sherrill 2023-03-18T17:43:07.000Z

Original author: aoliva

Do you have a test to show something isn't right? sleep() and nanosleep() ultimately call clock_nanosleep() and the requested blocking state is "STATES_WAITING_FOR_TIME | STATES_INTERRUPTIBLE_BY_SIGNAL"

https://git.rtems.org/rtems/tree/cpukit/posix/src/clocknanosleep.c#n77

RTEMS state bits consist of the type of object is being blocked on and attributes such as interruptible. It has been this way for a LONG time.

As a random thought, if you don't build RTEMS with POSIX enabled, then POSIX signals are disabled and then this likely wouldn't work.

Author: Joel Sherrill 2023-03-18T17:43:24.000Z

Original author: aoliva

- **Milestone** set to %"6.1"

Author: Trac Migrate 2023-04-22T05:32:10.000Z

Original author: aoliva

The unpatched libstdc++ testcase is a test that shows the problem. An explicit pthread_testcancel shouldn't be needed. Functions that are cancellation points should (as-if) call it implicitly.

Author: Joel Sherrill 2023-06-22T20:52:53.000Z

Original author: aoliva

- **Owner** set to @kinsey
- **Status** changed from *new* to *assigned*

Author: Amar Takhar 2024-05-17T00:42:51.649Z

Hi there Kinsey can this be moved to %6.2?

Author: Amar Takhar 2024-05-17T01:08:02.038Z

changed the description

Author: Kinsey Moore 2024-05-17T02:53:23.124Z

@joel Do you have opinions on this? It's in my backlog of things to get to, but I have many things that come before it.

Author: Amar Takhar 2024-05-17T03:23:52.870Z

@opticron this was already moved to %6.2 :) .. Joel asked to move it.

Author: Kinsey Moore 2024-05-17T03:23:52.870Z

I saw that it got moved, but not the rationale. I was driving at the time.

Author: Amar Takhar 2024-05-17T03:23:52.870Z

Ah, makes sense I should have noted that it was Joel that asked, too.

Author: Gedare Bloom 2024-12-04T21:40:37.120Z

Author: Kinsey Moore 2025-07-21T16:36:59.448Z

mentioned in merge request !616

Author: Kinsey Moore 2025-07-24T22:37:00.486Z

mentioned in merge request !623

2.8.1.2 5107 - timespecaddto.c: Use of 32-bit time_t

Id	5107
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Chris Johns
Created	2024-08-07T21:57:13.967Z
Closed	2024-11-08T00:40:35.581Z
Updated	2026-03-13T01:16:29.189Z
Milestone	6.2
Labels	qualification, rtems::score, scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5107
Merges	1

Summary

Coverity CID 1512527

Coverity spotted this where time_t variables/structure elements are assigned to uint32_t. Notice that the return type is uint32_t which propagates to callers of this such as rtems_timespec_add_to().

```
46 uint32_t _Timespec_Add_to(
47   struct timespec       *time,
48   const struct timespec *add
49)
50{

CID 1512527: (#1 of 1): Use of 32-bit time_t (Y2K38_SAFETY)
1. store_truncates_time_t: A time_t value is stored in an integer with too few␣
↪bits to accommodate it. The expression add->tv_sec is cast to uint32_t.
51   uint32_t seconds = add->tv_sec;
```

Steps to reproduce

Author: Joel Sherrill 2024-08-07T21:57:14.149Z

assigned to @joel

Author: Joel Sherrill 2024-08-07T22:01:06.155Z

mentioned in merge request !175

2.8.1.3 5337 - Backport storage class qualifier rearrangements

Id	5337
State	closed
Type	ISSUE
Author	Sebastian Huber
Assignee(s)	Sebastian Huber
Closed by	Kinsey Moore
Created	2025-09-12T01:18:00.904Z
Closed	2025-10-09T22:22:35.749Z
Updated	2026-03-13T01:14:57.320Z
Milestone	6.2
Labels	qualification, rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5337
Merges	1

Author: Sebastian Huber 2025-09-12T01:18:01.057Z

added rtems#10 as parent epic

Author: Sebastian Huber 2025-09-12T01:18:01.154Z

set status to **To do**

Author: Sebastian Huber 2025-09-12T01:18:01.299Z

assigned to @sebhub

Author: Sebastian Huber 2025-09-12T01:30:53.201Z

mentioned in merge request !721

Author: Kinsey Moore 2025-10-09T22:22:35.806Z

set status to **Done**

2.8.1.4 5281 - RTEMS 6.1 GR740 Multiprocessing build fails

Id	5281
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Matteo Concas
Closed by	Matteo Concas
Created	2025-06-24T20:26:51.026Z
Closed	2025-07-04T06:49:45.863Z
Updated	2026-03-12T06:46:34.024Z
Milestone	6.2
Labels	qualification
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5281
Merges	2

Summary

When building the GR740 BSP with `RTEMS_MULTIPROCESSING` set to `true` , the build will fail.

Steps to reproduce

The INI file contents are:

```
[DEFAULT]
RTEMS_POSIX_API = True

[sparc/gr740_mp]
INHERIT=gr740
RTEMS_MULTIPROCESSING=True
```

I configure the Waf system with:

```
./waf configure --prefix=$RTEMS_PREFIX --rtems-config=gr740.ini
```

And then `./waf` to build the BSP. I get the following output:

```
Waf: Entering directory `/scratch/matteo/rtems-build/src/rtems-6.1/build'
Waf: Leaving directory `/scratch/matteo/rtems-build/src/rtems-6.1/build'
'build' finished successfully (0.081s)
Waf: Entering directory `/scratch/matteo/rtems-build/src/rtems-6.1/build/sparc/
↪gr740_mp'
[ 167/1641] Compiling bsps/sparc/leon3/clock/ckinit.c
In file included from ../../../bsps/sparc/leon3/clock/ckinit.c:46:
../../../bsps/sparc/leon3/clock/ckinit.c: In function 'leon3_clock_initialize':
../../../bsps/sparc/leon3/include/bsp/leon3.h:221:5: error: 'leon3_timer_core_
↪index' undeclared (first use in this function); did you mean 'leon3_timecounter
↪'?
221 |   ( leon3_timer_core_index != 0 ? 0 : 2 * LEON3_Cpu_Index )
|     ^~~~~~~~~~~~~~~~~~~~~~
../../../bsps/sparc/leon3/clock/ckinit.c:181:36: note: in expansion of macro
```

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```
↪'LEON3_CLOCK_INDEX'
181 |   timer = &LEON3_Timer_Regs->timer[LEON3_CLOCK_INDEX];
|                                    ^~~~~~~~~~~~~~~~~
../../../bsps/sparc/leon3/include/bsp/leon3.h:221:5: note: each undeclared␣
↪identifier is reported only once for each function it appears in
221 |   ( leon3_timer_core_index != 0 ? 0 : 2 * LEON3_Cpu_Index )
|     ^~~~~~~~~~~~~~~~~~~~~
../../../bsps/sparc/leon3/clock/ckinit.c:181:36: note: in expansion of macro
↪'LEON3_CLOCK_INDEX'
181 |   timer = &LEON3_Timer_Regs->timer[LEON3_CLOCK_INDEX];
|                                    ^~~~~~~~~~~~~~~~~
../../../bsps/sparc/leon3/clock/../../../shared/dev/clock/clockimpl.h: In␣
↪function '_Clock_Initialize':
../../../bsps/sparc/leon3/include/bsp/leon3.h:221:5: error: 'leon3_timer_core_
↪index' undeclared (first use in this function); did you mean 'leon3_timecounter
↪'?
221 |   ( leon3_timer_core_index != 0 ? 0 : 2 * LEON3_Cpu_Index )
|     ^~~~~~~~~~~~~~~~~~~~~
../../../bsps/sparc/leon3/clock/ckinit.c:137:49: note: in expansion of macro
↪'LEON3_CLOCK_INDEX'
137 | #define Adjust_clkirq_for_node() do { clkirq += LEON3_CLOCK_INDEX; }␣
↪while(0)
|                                                 ^~~~~~~~~~~~~~~~~
../../../bsps/sparc/leon3/clock/ckinit.c:145:7: note: in expansion of macro
↪'Adjust_clkirq_for_node'
145 |       Adjust_clkirq_for_node(); \\
|       ^~~~~~~~~~~~~~~~~~~~~
../../../bsps/sparc/leon3/clock/../../../shared/dev/clock/clockimpl.h:249:3:␣
↪note: in expansion of macro 'Clock_driver_support_find_timer'
249 |   Clock_driver_support_find_timer();
|   ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Waf: Leaving directory `/scratch/matteo/rtems-build/src/rtems-6.1/build/sparc/
↪gr740_mp'
Build failed
-> task in '/bsps/sparc/leon3/obj' failed with exit status 1 (run with -v to␣
↪display more information)
```

Expected behaviour

Build should complete successfully.

Possible fix

From my own investigation this comes from `bsps/sparc/leon3/include/bsp/leon3.h` . `leon3_timer_core_index` is only declared if `LEON3_GPTIMER_BASE` is not defined but later in the file the `LEON3_CLOCK_INDEX` macro is defined in the following way:

```
/**
* @brief This constant defines the index of the GPTIMER timer used by the
*   clock driver.
*/
#if defined(RTEMS_MULTIPROCESSING)
#define LEON3_CLOCK_INDEX \\
( leon3_timer_core_index != 0 ? 0 : 2 * LEON3_Cpu_Index )
#else
#define LEON3_CLOCK_INDEX 0
#endif
```

So when `RTEMS_MULTIPROCESSING` is used the `LEON3_CLOCK_INDEX` will expand to use the `leon3_timer_core_index` variable which won't be declared as the GPTIMER base is defined for the GR740 BSP.

I don't fully understand why the `LEON3_CLOCK_INDEX` macro is defined this way but changing it's define conditional to:

```
#if defined(RTEMS_MULTIPROCESSING) && !defined(LEON3_GPTIMER_BASE)
```

Will make the BSP build successfully, I haven't had the time to test this fix, it might break something else at runtime.

Author: Gedare Bloom 2025-06-24T20:26:51.204Z

cloned from #5258

Author: Gedare Bloom 2025-06-24T20:28:54.720Z

Author: Gedare Bloom 2025-06-24T20:30:26.097Z

@matteo.concas

Author: Gedare Bloom 2025-06-24T20:30:46.754Z

assigned to @matteo.concas

Author: Gedare Bloom 2025-06-24T20:31:37.061Z

mentioned in merge request !532

2.8.1.5 5184 - cpukit/libmisc/capture: rtems_capture_flush incorrectly clears the RTEMS_CAPTURE_INIT flag

Id	5184
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Gedare Bloom
Created	2025-01-20T23:56:21.515Z
Closed	2026-01-22T21:11:58.626Z
Updated	2026-01-22T21:11:59.904Z
Milestone	6.2
Labels	cpukit::misc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5184
Merges	4

The following discussion from !337 should be addressed:

- [] @gedare started a discussion:

  The RTEMS_CAPTURE_OVERFLOW is an overflow flag for each CPU, and its value is the same as RTEMS_CAPTURE_INIT. Executing rtems_capture_flush will set the RTEMS_CAPTURE_INIT flag to 0 in the global flags.

  Author: Gedare Bloom 2025-01-20T23:56:21.693Z

  assigned to @gedare

  Author: Gedare Bloom 2025-01-20T23:56:22.093Z

  Author: Gedare Bloom 2025-01-21T00:00:30.526Z

  mentioned in merge request !361

  Author: Gedare Bloom 2025-01-21T02:25:29.025Z

  Author: Zhaoyue Wang 2025-02-11T05:38:22.745Z

  mentioned in commit 603c168a0ba828efc949b398d3623ebc9a0aafa3

  Author: Chris Johns 2025-10-02T23:29:24.240Z

  added rtems#15 as parent epic

Author: Gedare Bloom 2026-01-22T21:11:58.698Z

set status to **Done**

Author: Gedare Bloom 2026-01-22T21:11:59.794Z

Fixed in !361

2.8.1.6 5311 - Backport Chris's libio fix to 6 branch

Id	5311
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-07-25T01:54:35.008Z
Closed	2025-12-16T22:34:58.930Z
Updated	2025-12-16T22:34:59.236Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5311
Merges	1

The following discussion from !536 should be addressed:

- [] @opticron started a discussion: (+3 comments)

  I ran the added test without the fix and didn't get a crash on zynqmp_qemu. On what platform did you encounter this failure?

  Author: Kinsey Moore 2025-07-25T01:54:35.120Z

  set status to **To do**

  Author: Kinsey Moore 2025-07-25T01:54:46.677Z

  added rtems#10 as parent epic

  Author: Amar Takhar 2025-07-25T01:55:00.945Z

  mentioned in merge request !536

  Author: Kinsey Moore 2025-07-27T02:23:04.122Z

  This backports cleanly and builds without errors.

Author: Kinsey Moore 2025-07-27T02:26:28.377Z

mentioned in merge request !635

Author: Kinsey Moore 2025-07-31T01:42:11.816Z

assigned to @opticron

Author: Kinsey Moore 2025-07-31T01:42:26.171Z

set status to **Done**

Author: Kinsey Moore 2025-07-31T01:42:26.667Z

This has been merged.

Author: Sebastian Huber 2025-09-15T06:59:33.957Z

set status to **To do**

Author: Sebastian Huber 2025-09-15T07:00:44.260Z

The commit 0cf6de01df734c11212e63134551ee344a10ecec introduced a couple of issues:

- ABI changes on a release branch
- Redundant LIBIO_FLAGS_FREE flag: an iop is free if and only if it is on the free list.
- When the iop is freed, its reference count was set to zero. The iop reference count must never be set to a specific value after initialization at system start. The only valid operations are increments and decrements.
- In the iop free handling, there was a deadlock potential by obtaining the libio lock while owning a file system lock.
- The reference counting did not work at all under concurrent access. This was indicated by the failing spintrcritical24 test program.

The spintrcritical24 test was specifically added to test the file descriptor reference counting. It fails now on at least the sparc/gr740 and arm/xilinx_zynq_zc702 simulators. It fails since `rtems_libio_free()` may free the iop by looking at the current flags. This is plainly wrong, actions must be carried out when certain state changes happen. Consider this sequence of events:

```
int close(
int  fd
)
{
rtems_libio_t *iop;
unsigned int   flags;
int            rc;

if ( (uint32_t) fd >= rtems_libio_number_iops ) {
rtems_set_errno_and_return_minus_one( EBADF );
}

iop = rtems_libio_iop( fd );
flags = rtems_libio_iop_flags( iop );

while ( true ) {
unsigned int desired;
bool         success;

if ( ( flags & LIBIO_FLAGS_OPEN ) == 0 ) {
rtems_set_errno_and_return_minus_one( EBADF );
}

/* The expected flags depends on close when busy flag. If set
* there can be references held when calling the close handler */
if ( ( flags & LIBIO_FLAGS_CLOSE_BUSY ) == 0 ) {
flags &= LIBIO_FLAGS_FLAGS_MASK;
}

desired = flags & ~LIBIO_FLAGS_OPEN;
success = _Atomic_Compare_exchange_uint(
&iop->flags,
&flags,
desired,
ATOMIC_ORDER_ACQ_REL,
ATOMIC_ORDER_RELAXED
);

if ( success ) {
break;
}

if ( ( flags & LIBIO_FLAGS_REFERENCE_MASK ) != 0 ) {
rtems_set_errno_and_return_minus_one( EBUSY );
}
}

<--- Lets suppose LIBIO_FLAGS_CLOSE_BUSY is cleared. At this point we␣
↪cleared
LIBIO_FLAGS_OPEN above and the reference count is zero. Let an interrupt
```

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```
call for example fstat(fd). It will hold and drop the iop. The drop will
call rtems_libio_free() which will calle rtems_libio_free_iop() since the
iop is no longer open and has a zero reference count. This will clear the
iop->pathinfo.  This will lead to a NULL pointer access here:

rc = (*iop->pathinfo.handlers->close_h)( iop );

rtems_libio_free( iop );

return rc;
}
```

Author: Sebastian Huber 2025-09-15T07:03:54.174Z

mentioned in merge request !725

Author: Sebastian Huber 2025-09-15T07:11:59.522Z

The !725 changes the API which requires changes in libbsd:

https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/97

Author: Sebastian Huber 2025-09-15T07:11:25.591Z

mentioned in merge request rtems/pkg/rtems-libbsd!97

Author: Aaron Nyholm 2025-10-09T22:32:29.528Z

mentioned in merge request !774

Author: Aaron Nyholm 2025-10-09T22:42:02.675Z

mentioned in merge request !775

Author: Kinsey Moore 2025-10-10T00:02:36.096Z

set status to **Done**

Author: Kinsey Moore 2025-10-10T00:02:36.783Z

I believe the issue has been resolved with Aaron's recent fixes in !775 and !774.

Author: Sebastian Huber 2025-10-13T03:40:41.097Z

set status to **To do**

Author: Sebastian Huber 2025-10-13T16:28:49.550Z

There are more issues associated with the reference counting change.

1. There is an API change on a release branch (`rtems_libio_fcntl_flags()` was renamed).
2. There are ABI changes (`LIBIO_FLAGS_FREE` and related flags).
3. With reference counting you must never set the count to a specific value. The only valid operations are increments and decrements. This leads to problems:

```
void rtems_libio_free_iop(
rtems_libio_t *iop
)
{
size_t zero;

rtems_libio_lock();

if ( !rtems_libio_iop_is_free( iop ) ) {
<- Lets assume someone calls rtems_libio_iop_hold() here and gets a reference count of 1.
/*
* Clear the flags. All references should have been dropped.
*/
_Atomic_Store_uint( &iop->flags, LIBIO_FLAGS_FREE, ATOMIC_ORDER_RELAXED );
<- This sets the reference count to zero. Lets assume the caller of rtems_libio_iop_hold() notices that the file descriptor is bad. It calls rtems_libio_iop_drop(). The reference count is now -1.

rtems_filesystem_location_free( &iop->pathinfo );
```

4. Calling `rtems_filesystem_location_free( &iop->pathinfo )` while owning the libio lock (`rtems_libio_lock()`) may cause lock order reversal issues (deadlock).
5. You should not use snapshots of the flags, actions should be based on state changes. For example:

```
@@ -226,7 +226,10 @@ static int vfcntl(

if (ret >= 0) {
int err = (*iop->pathinfo.handlers->fcntl_h)( iop, cmd );
-    if (err) {

```

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```
<-- Here you started with a valid open file descriptor. The higher
↪level code cannot decide the outcome of the fcntl_h handler.

+    if (err == 0 && !rtems_libio_iop_is_open( iop ) ) {
+      err = EBADF;
+    }
+    if (err != 0) {
errno = err;
ret = -1;
}
```

6. I think there is an issue with the recent fixes.
7. My patch doesn't work also.

The reference counting state machine has to work on paper. The previous state machine was pretty simple. Now that you want to have the busy close feature, you have to somehow figure out at each place which decrements the reference count, if the node has to be freed. Using a 1 to 0 transition is not enough, since file descriptors are always visible and some actor might just work with a bad file descriptor. Here actually the `LIBIO_FLAGS_FREE` could be useful, but not how it is currently used. Maybe this works: if the reference count transitions from 1 to 0, call a maybe free function. This function tries to set a closed, not free, reference count 0 file descriptor to free. If this was successful, it frees the node. I would do this exercise not on the RTEMS 6 release branch and go back to the previous implementation. This busy close feature is something for RTEMS 7.

Author: Aaron Nyholm 2025-10-14T02:11:18.169Z

mentioned in merge request !795

Author: Aaron Nyholm 2025-10-14T03:37:43.308Z

mentioned in merge request !796

Author: Kinsey Moore 2025-10-14T19:27:15.650Z

assigned to @chris and unassigned @opticron

Author: Sebastian Huber 2025-10-19T21:30:09.866Z

On the main branch, the fsclose01.exe fails currently:

```
*** BEGIN OF TEST FSCLOSE 1 ***
*** TEST VERSION: 7.0.0.955d36ea4753a48b9d96ae541ffdf1af373def61
*** TEST STATE: EXPECTED_PASS
*** TEST BUILD:
```

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```
*** TEST TOOLS: 13.4.0 20250605 (RTEMS 7, RSB_
↪21446e6af24b170f0ad18fd960661d4e5d7249de, Newlib 038afec1)
../../../testsuites/fstests/fsclose01/init.c: 551 flags == expected_
↪flags
```

On the main branch, when I revert commits 62bbd05a319115dc86a7ca5daf9d0a6f525554c7 and a347ce10482c1a29caee04b500f0ea2bfee0cf7c, the fsclose01.exe passes. On which target are the tests run and checked for regressions before changes like this are merged?

Author: Aaron Nyholm 2025-10-19T21:30:09.823Z

Thanks for picking this up. I missed adding a change to test. Now that `close` holds a reference the expected flags have changed. I tested on a microzed but forgot to include the updated test. I've posted !811 to resolve this.

Author: Aaron Nyholm 2025-10-19T23:58:18.787Z

mentioned in merge request !811

Author: Chris Johns 2025-12-16T22:34:59.010Z

set status to **Done**

2.8.1.7 5396 - Backport JFFS2 CRC32 updates

Id	5396
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-11-24T21:46:19.658Z
Closed	2025-12-04T23:28:40.329Z
Updated	2025-12-04T23:28:40.468Z
Milestone	6.2
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5396
Merges	0

The following discussion from !847 should be addressed:

- [] @opticron started a discussion:

  This can be backported to 6 branch to get these improvements there.

Author: Kinsey Moore 2025-11-24T21:46:19.864Z

added rtems#10 as parent epic

Author: Kinsey Moore 2025-11-24T21:46:19.976Z

set status to **To do**

Author: Kinsey Moore 2025-11-24T21:46:20.118Z

assigned to @opticron

Author: Kinsey Moore 2025-11-24T21:50:24.716Z

mentioned in merge request !848

Author: Kinsey Moore 2025-12-02T15:01:51.003Z

mentioned in commit dd210293e00042ebfeb5069f7977cb818a3485ba

Author: Kinsey Moore 2025-12-04T23:28:40.384Z

set status to **Done**

2.8.1.8 5397 - Backport “bsps/shared: Add XNandPsu flashdev backend”

Id	5397
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-11-24T22:26:36.196Z
Closed	2025-12-04T23:28:37.440Z
Updated	2025-12-04T23:28:37.648Z
Milestone	6.2
Labels	device::flash
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5397
Merges	0

The following discussion from !849 should be addressed:

- [] @opticron started a discussion:

  This should be backported to 6 branch. The flashdev support is purely additive and the new configuration parameter improves usability.

Author: Kinsey Moore 2025-11-24T22:26:36.391Z

added rtems#10 as parent epic

Author: Kinsey Moore 2025-11-24T22:26:36.508Z

set status to **To do**

Author: Kinsey Moore 2025-11-24T22:26:36.649Z

assigned to @opticron

Author: Kinsey Moore 2025-11-24T22:29:15.230Z

mentioned in merge request !850

Author: Kinsey Moore 2025-12-04T23:28:37.503Z

set status to **Done**

2.8.1.9 5398 - Backport to 6 branch: “cpukit/jffs2: Add EBS (erase block summary) support”

Id	5398
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-11-24T23:23:34.322Z
Closed	2025-12-04T23:28:32.912Z
Updated	2025-12-04T23:28:33.082Z
Milestone	6.2
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5398
Merges	0

The following discussion from !851 should be addressed:

- [] @opticron started a discussion:

  I’d like to backport this to 6 branch, so I’ll create the issue to do so and rebase the patch set.

  Author: Kinsey Moore 2025-11-24T23:23:34.605Z

  added rtems#10 as parent epic

Author: Kinsey Moore	2025-11-24T23:23:34.710Z

set status to **To do**

Author: Kinsey Moore	2025-11-24T23:23:34.843Z

assigned to @opticron

Author: Kinsey Moore	2025-11-24T23:30:22.918Z

mentioned in merge request !852

Author: Kinsey Moore	2025-12-04T23:28:32.980Z

set status to **Done**

2.8.1.10 5392 - Backport to 6 branch: “Fixes for flashdev API and xqspi support”

Id	5392
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-11-10T18:34:44.611Z
Closed	2025-11-13T16:39:11.285Z
Updated	2025-11-13T16:39:11.374Z
Milestone	6.2
Labels	device::flash
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5392
Merges	0

The following discussion from !829 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to the 6 branch.

Author: Kinsey Moore	2025-11-10T18:34:44.799Z

added rtems#10 as parent epic

Author: Kinsey Moore	2025-11-10T18:34:44.903Z

set status to **To do**

Author: Kinsey Moore 2025-11-10T18:34:45.056Z

assigned to @opticron

Author: Kinsey Moore 2025-11-10T18:38:34.052Z

mentioned in merge request !830

Author: Chris Johns 2025-11-12T16:19:14.164Z

mentioned in commit 2c8973005d5c188beb72038346c94e24d9339c84

Author: Chris Johns 2025-11-12T16:19:14.187Z

mentioned in commit 23accdc0bbcec53ee8ebce9babcb46d42400ebe0

Author: Kinsey Moore 2025-11-13T16:39:11.350Z

set status to **Done**

2.8.1.11 5338 - Backport Doxygen changes for generated sources

Id	5338
State	closed
Type	ISSUE
Author	Sebastian Huber
Assignee(s)	Sebastian Huber
Closed by	Kinsey Moore
Created	2025-09-12T01:28:38.255Z
Closed	2025-10-09T22:22:49.588Z
Updated	2025-10-30T23:10:15.987Z
Milestone	6.2
Labels	api, rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5338
Merges	1

The conversion to Markdown for the documentation sources resulted in changes of Doxygen comments of generated sources. Backport these changes.

Author: Sebastian Huber 2025-09-12T01:28:38.391Z

added rtems#10 as parent epic

Author: Sebastian Huber 2025-09-12T01:28:38.480Z

set status to **To do**

Author: Sebastian Huber 2025-09-12T01:28:38.612Z

assigned to @sebhub

Author: Sebastian Huber 2025-09-12T01:32:20.394Z

mentioned in merge request !722

Author: Sebastian Huber 2025-09-15T17:27:27.589Z

mentioned in commit d27c444b8dd5caa8416fd1b0d040d4009641169e

Author: Chris Johns 2025-09-25T22:45:00.485Z

changed Version to

6

Author: Kinsey Moore 2025-10-09T22:22:49.639Z

set status to **Done**

2.8.1.12 5379 - Backport to 6 branch “bsps/jffs2_flashdev: Return correct value for OOB size”

Id	5379
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-10-23T20:35:17.792Z
Closed	2025-10-30T17:12:35.738Z
Updated	2025-10-30T17:12:35.870Z
Milestone	6.2
Labels	device::flash, filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5379
Merges	0

The following discussion from !813 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to 6 branch.

Author: Kinsey Moore 2025-10-23T20:35:18.508Z

  added rtems#10 as parent epic

Author: Kinsey Moore 2025-10-23T20:35:18.762Z

  set status to **To do**

Author: Kinsey Moore 2025-10-23T20:35:19.361Z

  assigned to @opticron

Author: Kinsey Moore 2025-10-23T20:36:26.605Z

  mentioned in issue #5380

Author: Kinsey Moore 2025-10-23T20:44:21.349Z

  mentioned in merge request !814

Author: Kinsey Moore 2025-10-30T17:12:35.818Z

  set status to **Done**

2.8.1.13 5380 - Backport to 6 branch “bsps/jffs2_flashdev: Return correct value for OOB size”

Id	5380
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-10-23T20:35:40.666Z
Closed	2025-10-23T20:36:20.237Z
Updated	2025-10-23T20:36:26.401Z
Milestone	6.2
Labels	device::flash, filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5380
Merges	0

The following discussion from !813 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to 6 branch.

Author: Kinsey Moore 2025-10-23T20:35:41.150Z

  added rtems#10 as parent epic

Author: Kinsey Moore 2025-10-23T20:35:41.882Z

  set status to **To do**

Author: Kinsey Moore 2025-10-23T20:35:42.371Z

  assigned to @opticron

Author: Kinsey Moore 2025-10-23T20:36:20.469Z

  set status to **Done**

Author: Kinsey Moore 2025-10-23T20:36:24.975Z

  Duplicate of #5379 created due to site overloading.

Author: Kinsey Moore 2025-10-23T20:36:56.564Z

  set status to **Duplicate**

2.8.1.14 5336 - Backport rtems_barrier_get_number_waiting()

Id	5336
State	closed
Type	ISSUE
Author	Sebastian Huber
Assignee(s)	Sebastian Huber
Closed by	Kinsey Moore
Created	2025-09-12T01:03:03.539Z
Closed	2025-10-09T22:22:44.564Z
Updated	2025-10-09T22:22:44.636Z
Milestone	6.2
Labels	api::classic
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5336
Merges	1

Author: Sebastian Huber 2025-09-12T01:03:03.661Z

added rtems#10 as parent epic

Author: Sebastian Huber 2025-09-12T01:03:03.754Z

set status to **To do**

Author: Sebastian Huber 2025-09-12T01:03:03.876Z

assigned to @sebhub

Author: Sebastian Huber 2025-09-12T01:12:45.882Z

mentioned in merge request !720

Author: Kinsey Moore 2025-10-09T22:22:44.615Z

set status to **Done**

Author: Sebastian Huber 2026-06-19T02:48:55.953Z

mentioned in merge request !1317

2.8.1.15 5369 - Backport jffs2 flashdev NAND support to 6 branch

Id	5369
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-10-03T14:19:52.181Z
Closed	2025-10-09T22:21:44.062Z
Updated	2025-10-09T22:21:44.138Z
Milestone	6.2
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5369
Merges	0

The following discussion from !764 should be addressed:

- [] @opticron started a discussion:

  This is should be backported to 6 branch.

Author: Kinsey Moore	2025-10-03T14:19:52.321Z

added rtems#10 as parent epic

Author: Kinsey Moore	2025-10-03T14:19:52.389Z

set status to **To do**

Author: Kinsey Moore	2025-10-03T14:19:52.474Z

assigned to @opticron

Author: Kinsey Moore	2025-10-03T14:21:32.091Z

mentioned in merge request !765

Author: Kinsey Moore	2025-10-09T22:21:44.118Z

set status to **Done**

2.8.1.16 5284 - Backport mvme3100 fixes to 6 (!541)

Id	5284
State	closed
Type	ISSUE
Author	Jeremy Lorelli
Closed by	Kinsey Moore
Created	2025-06-30T01:03:53.061Z
Closed	2025-10-09T22:20:25.201Z
Updated	2025-10-09T22:20:25.290Z
Milestone	6.2
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5284
Merges	0

Summary

Backport !541 to RTEMS 6, once it's merged.

2.8.1.16.1.1 Pre-set options

Author: Jeremy Lorelli	2025-06-30T01:04:28.988Z

mentioned in merge request !541

Author: Gedare Bloom 2025-06-30T14:54:49.549Z

changed type from task to issue

Author: Gedare Bloom 2025-06-30T14:56:00.396Z

added rtems#10 as parent epic

Author: Chris Johns 2025-10-02T23:32:01.362Z

Ping. Are you able to make an MR for the 6 branch for the 6.2 release?

Author: Jeremy Lorelli 2025-10-03T04:01:33.198Z

I've opened !762

Author: Jeremy Lorelli 2025-10-06T17:51:23.035Z

mentioned in merge request !762

Author: Kinsey Moore 2025-10-09T22:20:25.268Z

set status to **Done**

2.8.1.17 5371 - Backport ZynqMP XQspiPsu flashdev backend addition to 6 branch

Id	5371
State	closed
Type	ISSUE
Author	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-10-03T14:44:41.411Z
Closed	2025-10-09T22:13:30.563Z
Updated	2025-10-09T22:13:30.646Z
Milestone	6.2
Labels	device::flash
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5371
Merges	0

The following discussion from !766 should be addressed:

- [] @opticron started a discussion:

  This functionality is present in 6 branch and this should be backported.

Author: Kinsey Moore	2025-10-03T14:44:41.552Z

added rtems#10 as parent epic

Author: Kinsey Moore	2025-10-03T14:44:41.619Z

set status to **To do**

Author: Kinsey Moore	2025-10-03T14:47:01.916Z

mentioned in merge request !767

Author: Kinsey Moore	2025-10-09T22:13:30.624Z

set status to **Done**

2.8.1.18 5372 - Backport Make flash config table static to 6 branch

Id	5372
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-10-08T20:36:16.877Z
Closed	2025-10-09T15:23:18.862Z
Updated	2025-10-09T15:23:18.941Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5372
Merges	0

The following discussion from !771 should be addressed:

- [] @opticron started a discussion:

  This patch needs to be backported to 6 branch.

Author: Kinsey Moore	2025-10-08T20:36:17.054Z

added rtems#10 as parent epic

Author: Kinsey Moore	2025-10-08T20:36:17.150Z

set status to **To do**

Author: Kinsey Moore	2025-10-08T20:36:17.297Z

assigned to @opticron

Author: Kinsey Moore	2025-10-08T20:37:18.692Z

mentioned in merge request !772

Author: Kinsey Moore	2025-10-09T15:23:18.919Z

set status to **Done**

2.8.1.19 5365 - Backport live lock fix for split reads”

Id	5365
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-09-29T16:43:21.615Z
Closed	2025-10-03T14:00:17.725Z
Updated	2025-10-03T14:00:17.803Z
Milestone	6.2
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5365
Merges	0

The following discussion from !757 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to 6 branch.

Author: Kinsey Moore	2025-09-29T16:43:21.769Z

added rtems#10 as parent epic

Author: Kinsey Moore	2025-09-29T16:43:21.869Z

set status to **To do**

Author: Kinsey Moore	2025-09-29T16:43:21.959Z

assigned to @opticron

Author: Kinsey Moore 2025-09-29T16:45:51.149Z

mentioned in merge request !758

Author: Joel Sherrill 2025-10-02T14:26:16.030Z

mentioned in merge request !759

Author: Kinsey Moore 2025-10-03T14:00:17.781Z

set status to **Done**

2.8.1.20 5350 - Backport flashdev NAND support to 6 branch

Id	5350
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-09-23T19:36:41.159Z
Closed	2025-10-03T13:58:08.487Z
Updated	2025-10-03T13:58:08.565Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5350
Merges	0

The following discussion from !740 should be addressed:

- [] @eagleirony started a discussion: (+5 comments)

  Looks good to me. :))

Author: Kinsey Moore 2025-09-23T19:36:41.302Z

added rtems#10 as parent epic

Author: Kinsey Moore 2025-09-23T19:36:41.362Z

set status to **To do**

Author: Kinsey Moore 2025-09-23T19:36:41.454Z

assigned to @opticron

Author: Kinsey Moore	2025-09-23T19:38:37.009Z

mentioned in merge request !743

Author: Kinsey Moore	2025-10-03T13:58:08.543Z

set status to **Done**

2.8.1.21 5187 - Backport 6.2: bsps/shared: NS16550 driver updates the line control register during operation

Id	5187
State	closed
Type	ISSUE
Author	Jan Sommer
Assignee(s)	Jan Sommer
Closed by	Chris Johns
Created	2025-01-23T14:04:11.055Z
Closed	2025-10-02T23:36:12.856Z
Updated	2025-10-02T23:36:12.861Z
Milestone	6.2
Labels	device::serial, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5187
Merges	0

Backport of https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/5179

Summary

Calling `tcsetattr` even with only changes to the timeout conditions will reset the line control register temporary which can corrupt ongoing data transfers.

Steps to reproduce

- Continuously write data to the serial port (ideally with high baud rates like 921600 bps).
- Change the timing settings like `VMIN` or `VTIME`
- Receive corrupted data

Expected behaviour

- Data transfer is not corrupted.

2.8.1.21.3.1 Pre-set options

Author: Jan Sommer	2025-01-23T14:04:37.307Z

Author: Jan Sommer 2025-01-23T14:12:26.017Z

@opticron I could assign the epic via the quick action, but not the milestone or labels. Could please do it and also assign the issue to me?

Author: Kinsey Moore 2025-01-23T14:12:26.017Z

Done!

Author: Kinsey Moore 2025-01-23T14:11:07.723Z

assigned to @thesummer

Author: Jan Sommer 2025-01-23T14:26:27.685Z

mentioned in merge request !365

Author: Chris Johns 2025-10-02T23:36:12.885Z

set status to **Done**

2.8.1.22 5347 - Backport JFFS2 filesystem size enforcement to 6 branch

Id	5347
State	closed
Type	ISSUE
Author	Kinsey Moore
Closed by	Chris Johns
Created	2025-09-23T01:46:11.963Z
Closed	2025-10-02T23:32:51.282Z
Updated	2025-10-02T23:32:51.286Z
Milestone	6.2
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5347
Merges	0

The following discussion from !735 should be addressed:

- [] @opticron started a discussion:

  This will need a backport to 6 branch as it's a bug fix.

  Author: Kinsey Moore 2025-09-23T01:46:12.300Z

  added rtems#10 as parent epic

Author: Kinsey Moore 2025-09-23T01:46:12.455Z

set status to **To do**

Author: Kinsey Moore 2025-09-23T01:49:29.270Z

mentioned in merge request !742

Author: Chris Johns 2025-09-24T13:56:59.480Z

mentioned in commit b05ae8a6d49327225abfc202b8dcbb1bb97c88a3

Author: Chris Johns 2025-10-02T23:32:51.311Z

set status to **Done**

2.8.1.23 5348 - Backport libdebugger ARM SMP fixes

Id	5348
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-09-23T03:17:54.786Z
Closed	2025-10-02T23:32:29.609Z
Updated	2025-10-02T23:32:29.660Z
Milestone	6.2
Labels	cpukit::debugger
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5348
Merges	0

Backport the ARM SMP fix (https://gitlab.rtems.org/rtems/rtos/rtems/-/commit/f30157f988df3c9f75c201124573520c03edf6a3).

Author: Chris Johns 2025-09-23T03:17:54.919Z

added rtems#15 as parent epic

Author: Chris Johns 2025-09-23T03:17:54.983Z

set status to **In progress**

Author: Chris Johns 2025-09-23T03:17:55.157Z

assigned to @chris

Author: Chris Johns 2025-09-25T04:26:25.896Z

mentioned in merge request !748

Author: Chris Johns 2025-09-26T02:14:55.726Z

added rtems#10 as parent epic

Author: Chris Johns 2025-10-02T23:32:29.639Z

set status to **Done**

2.8.1.24 5180 - Backport stack-smash-protect feature to the 6 branch

Id	5180
State	closed
Type	ISSUE
Author	Mohamed Hassan
Closed by	Chris Johns
Created	2024-12-19T06:41:58.704Z
Closed	2025-10-02T23:30:44.368Z
Updated	2025-10-02T23:30:44.416Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5180
Merges	0

Summary

This issue tracks the backporting of the feature `stack protection` to the 6 branch to ensure consistency and availability of this feature in the 6.1 release.

Reference

- Merge request for main branch
- Merge request for 6 branch

Author: Gedare Bloom 2024-12-19T16:34:05.516Z

Author: Gedare Bloom 2024-12-19T16:36:31.672Z

mentioned in merge request !348

Author: Chris Johns 2025-10-02T23:30:44.395Z

set status to **Won't do**

2.8.1.25 5303 - Deprecate and Remove Mongoose Web Server

Id	5303
State	closed
Type	ISSUE
Author	Joel Sherrill
Closed by	Chris Johns
Created	2025-07-18T13:42:50.921Z
Closed	2025-10-02T23:27:50.696Z
Updated	2025-10-02T23:27:50.743Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5303
Merges	0

Summary

The Mongoose webserver (mghttpd) in RTEMS is old and pre-dates the change to GPL. The project forked and the permissive licensed code lives on as Civitweb. The mghttpd code in RTEMS is from before the split and is unmaintained upstream.

Civitweb can be built using the RSB. It is an active project.

It is recommended that users migrate to Civitweb.

The mghttd code is deprecated in RTEMS 6 and will be removed before RTEMS 7 branches.

2.8.1.25.1.1 Pre-set options

Author: Joel Sherrill 2025-07-18T13:44:44.807Z

changed the description

Author: Joel Sherrill 2025-07-18T13:45:29.487Z

mentioned in issue #5304

Author: Joel Sherrill 2025-07-24T22:55:11.149Z

mentioned in issue #5310

Author: Chris Johns 2025-10-02T23:24:55.117Z

added rtems#10 as parent epic

Author: Chris Johns 2025-10-02T23:26:11.606Z

added rtems#15 as parent epic

Author: Chris Johns 2025-10-02T23:26:36.234Z

added rtems#10 as parent epic

Author: Chris Johns 2025-10-02T23:27:00.486Z

cloned to #5367

Author: Chris Johns 2025-10-02T23:27:50.723Z

set status to **Done**

Author: Chris Johns 2025-10-02T23:28:08.428Z

The notice is given in the generated release notes.

2.8.1.26 5216 - Deprecate powerpc/mvme5500 in favor of powerpc/beatnik

Id	5216
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Chris Johns
Created	2025-02-14T22:36:47.150Z
Closed	2025-10-02T23:24:39.324Z
Updated	2025-10-02T23:24:39.329Z
Milestone	6.2
Labels	arch:powerpc, bsp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5216
Merges	0

The beatnik primarily targets the mvme6100 but it also supports the mvme5500. This issue notices that the `powerpc/mvme5500` is deprecated in the 6 release series and will be removed in 7.

Author: Gedare Bloom 2025-02-14T22:36:47.351Z

cloned from #4160

Author: Gedare Bloom 2025-02-14T22:36:47.239Z

assigned to @gedare

Author: Gedare Bloom 2025-02-14T22:38:04.310Z

changed title from **{-Obsolete -}mvme5500 in favor of {-B-}eatnik** to **{+Deprecate powerpc/+}mvme5500 in favor of {+powerpc/b+}eatnik**

Author: Gedare Bloom 2025-02-14T22:38:04.339Z

changed the description

Author: Gedare Bloom 2025-02-14T22:38:13.212Z

Author: Gedare Bloom 2025-02-14T22:57:48.491Z

- [x] add this to the release notes
- [x] add a note in Beatnik documentation

Author: Gedare Bloom 2025-02-14T22:57:48.491Z

https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/25

Author: Gedare Bloom 2025-02-14T22:57:48.491Z

https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/153

Author: Gedare Bloom 2025-02-14T22:53:43.694Z

mentioned in commit gedare/rtems-docs@72286dba503c0879486b8877c2e88522b146bad0

Author: Gedare Bloom 2025-02-14T22:54:05.231Z

mentioned in merge request rtems/docs/rtems-docs!153

Author: Gedare Bloom 2025-02-20T23:18:23.121Z

mentioned in commit gedare/rtems-docs@3ec35416774b6a7baf9106ebc0ac4a935e84cb48

Author: Amar Takhar 2025-05-08T23:16:06.202Z

mentioned in commit amar/rtems-docs@38a25aad78332ef1f507620040c3e8541a1ab048

Author: Amar Takhar 2025-05-08T23:19:01.833Z

mentioned in commit gedare/rtems-docs@701f0230e962b7d559dd7bb55b4443c37b82d67f

Author: Chris Johns 2025-10-02T23:24:39.352Z

set status to **Done**

2.8.1.27 5222 - RTEMS Priority range API change (regression)

Id	5222
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-02-27T21:44:09.559Z
Closed	2025-10-02T22:52:45.561Z
Updated	2025-10-02T22:52:45.635Z
Milestone	6.2
Labels	api
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5222
Merges	0

The following discussion from !436 should be addressed:

- [] @chris started a discussion: (+4 comments)

  > Yes I could add `CONFIGURE_MAXIMUM_PRIORITY` with `255` to resolve the problem in my application. Why should I? The code base that brought this problem to my attention was originally developed on RTEMS 4 on a Zynq and the user wants to use SMP?
  >
  > My investigation to understand the problem has raised a number of concerns and I do not think this MR is the place to discuss them. The MR may in the end be a suitable resolution however we need to first have a wider discussion.
  >
  > I believe the changing of the priority range is a **_regression_** with respect to the historical user interfaces until we decide otherwise. I do not remember a specific discussion about the range changing in regards to this context, the effects, other possible options or how we convey this to users? I believe a number of separate changes over a period of time have come together to bring about my concerns. Each piece on its own makes sense and seems reasonable however together there are issues. We need to respect our users, existing code and the need to make things as simple as possible simple configurations.

> I am also using this specific example to bring about a policy change. API changes needs to be announced and a specific discussion happen for the change to accepted. Approval and merging of changes in isolation does not mean an acceptable of change. If this happens we need to discuss the impact, look at solutions I have labelled this MR API however I wonder if we need an `api-change` label as well?
>
> —
>
> A discourse topic discussing this issue can be found at https://users.rtems.org/t/scheduler-maximum-regression-in-rtems-6/78

Author: Chris Johns 2025-02-27T21:44:09.713Z

assigned to @chris

Author: Chris Johns 2025-02-27T21:45:07.643Z

changed the description

Author: Chris Johns 2025-02-28T02:19:24.550Z

changed the description

Author: Sebastian Huber 2025-03-05T13:15:56.927Z

The default SMP scheduler is an EDF scheduler. This has other implications. For example, the use of rate-monotonic objects changes drastically. If you want maximum backward compatibility, the default SMP scheduler could be changed back to deterministic priority.

Author: Chris Johns 2025-10-02T22:52:45.602Z

set status to **Won't do**

2.8.1.28 5346 - Backport flashdev destructor changes to 6 branch

Id	5346
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-09-23T00:00:31.514Z
Closed	2025-09-23T00:07:02.358Z
Updated	2025-09-23T19:36:15.569Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5346
Merges	0

Summary

The destructor changes were a critical bug fix that needs to be applied to 6 branch to allow for flashdev device destruction to occur correctly.

Steps to reproduce

2.8.1.28.2.1 Pre-set options

Author: Kinsey Moore 2025-09-23T00:00:31.691Z

added rtems#10 as parent epic

Author: Kinsey Moore 2025-09-23T00:00:31.806Z

set status to **To do**

Author: Kinsey Moore 2025-09-23T00:01:33.931Z

mentioned in merge request !741

Author: Kinsey Moore 2025-09-23T00:07:02.438Z

set status to **Done**

Author: Kinsey Moore 2025-09-23T19:36:15.537Z

assigned to @opticron

2.8.1.29 5130 - aarch64/raspberrypi: improve UART

Id	5130
State	closed
Type	ISSUE
Author	Ning Yang
Closed by	Kinsey Moore
Created	2024-09-20T07:33:39.925Z
Closed	2024-10-28T15:12:37.664Z
Updated	2025-09-19T00:51:12.909Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5130
Merges	1

- Add support for four new ports, UART2-UART5.
- Add build options to allow console device configuration.
- Segregate device-specific definitions from the device family files. X macros

are used to maintain a single source of truth and have the configuration done at compile-time * Add raspberrypi_uart_init() to make it convenient for users to install uart devices

Author: Ning Yang	2024-09-20T07:38:15.123Z

changed the description

Author: Ning Yang	2024-09-20T07:38:53.845Z

mentioned in merge request !234

2.8.1.30 5198 - Connect interrupt to gpio Input Pin on beaglebone black (bsps/shared/dev/gpio/gpio-support.c)

Id	5198
State	closed
Type	ISSUE
Author	Heinz Junkes
Assignee(s)	Gedare Bloom, Heinz Junkes
Closed by	Heinz Junkes
Created	2025-01-30T07:27:21.044Z
Closed	2025-09-12T10:04:53.626Z
Updated	2025-09-19T00:39:55.638Z
Milestone	6.2
Labels	bsp:beaglebone
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5198
Merges	0

Summary

I am currently testing the RTEMS Release 6.1. I have taken a Beaglebonblack board for this purpose because was referred to in the Quick-Start Manual.

It looks good as it is. But what I can't do is connect an interrupt to a GPIO pin. I have already worked my way through all the banks (different GPIOs on P8, P9) but always without success. I can follow the level change on the pin but I can't see that the generic_bank_isr (bsps/shared/dev/gpio/gpio-support.c) gets called. I have tried debugging and it looks good so far. The interrupt is registered and also the interrupt enabled:

```
sc = rtems_gpio_bsp_enable_interrupt(bank, pin, interrupt);
(e.g. enable interrupt bank : 0, pin : 27 interrupt : 1)
```

But unfortunately I can't get any further. If I remember correctly, I have always failed in the last 2-3 years. Have anybody ever managed to generate an interrupt on this board on a gpio input pin?

Is there a test code for this?

Author: Gedare Bloom 2025-01-30T16:46:54.343Z

assigned to @gedare

Author: Heinz Junkes 2025-01-31T19:22:26.275Z

I just wanted to let you know that I'm working on it myself. I replaced the bsps/arm/beagle.gpio/bbb-gpio.c with the variant from ketul93 (https://gist.github.com/ketul93/d717555951174a74c8b4). Unfortunately, the interrupt handling is not fully implemented there. By adding

```
+  mmio_set((gpio_bank_addrs[bank] + AM335X_GPIO_IRQSTATUS_SET_0), BIT(pin));
+  mmio_set((gpio_bank_addrs[bank] + AM335X_GPIO_IRQSTATUS_SET_1), BIT(pin));
```

I have managed to call the generic_isr. I am now struggling through the Reference Manual of the AM335x (4156 pages) to understand the GPIO support ...

Author: Gedare Bloom 2025-01-31T19:22:26.123Z

That should be the same baseline as the code in the tree, starting at 151e53feabbe8ebdcbb491f06afeee8ea596ed6c

then there were additional fixes made. See: `git log --follow bsps/arm/beagle/gpio/bbb-gpio.c`

Author: Gedare Bloom 2025-01-31T19:22:47.689Z

assigned to @junkes

Author: Heinz Junkes 2025-02-07T20:57:38.216Z

Interrupts enabled for BBB. ACQUIRE/RELEASE locks tidied up so that the gpio calls can also be used in other threads.

I haven't quite got through the section with threaded interrupts yet. I am also unsure whether I am following the code guidelines of RTEMS.

patch

Author: Heinz Junkes 2025-05-09T14:47:09.205Z

mentioned in issue #5235

Author: Heinz Junkes 2025-05-09T14:48:24.152Z

Some improvements. Allows more GPIO Pins to run in Mode7. Interrupts connected to the GPIOs patch_2

Author: Heinz Junkes 2025-09-03T14:11:07.617Z

Add adc-section patch3.patch

Author: Amar Takhar 2025-09-03T14:11:07.617Z

Can you submit this as a merge request please? It'll be easy for others to review it that way no worries if it's still a draft. :)

Author: Heinz Junkes 2025-09-03T14:06:39.352Z

mentioned in merge request !697

Author: Heinz Junkes 2025-09-03T14:11:32.539Z

I have made a merge request. However, this is still based on version 6.1:

```
Merge request !697 can no longer be merged due to conflict.

Project:Branches: junkes/rtems:6 to rtems/rtos/rtems:main

Author: Heinz Junkes

Assignees:

Reviewers:
```

Author: Amar Takhar 2025-09-03T14:11:32.499Z

The merge request is opened against the main branch (7) you'll want to open it against 6.1 if that's the branch it's for which is why you're getting a bunch of conflicts.

Author: Amar Takhar 2025-09-03T14:12:41.863Z

I have edited the merge request and set the branch target to 6

Author: Heinz Junkes 2025-09-12T10:04:53.675Z

set status to **Done**

2.8.1.31 5218 - RTEMS Release 6.1 build error texinfo-7.0.3 on arm64-apple-darwin24.3.0-1

Id	5218
State	closed
Type	ISSUE
Author	Heinz Junkes
Closed by	Heinz Junkes
Created	2025-02-16T12:47:08.095Z
Closed	2025-02-18T16:24:10.787Z
Updated	2025-09-19T00:38:52.644Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5218
Merges	0

Summary

```
RTEMS Tools Project - Source Builder Error Report
Build: error: building texinfo-7.0.3-arm64-apple-darwin24.3.0-1
Command Line: ../source-builder/sb-set-builder --prefix=/Volumes/Epics/RTEMS_
↪MVME6100_legacy_stack/rtems/6.1 6/rtems-powerpc
Python: 3.12.8 (main, Feb  9 2025, 14:26:38) [Clang 16.0.0 (clang-1600.0.26.4)]
RSB: not a valid repo
Darwin Mac.fritz.box 24.3.0 Darwin Kernel Version 24.3.0: Thu Jan  2 20:24:23 PST␣
↪2025; root:xnu-11215.81.4~3/RELEASE_ARM64_T6020 arm64
Tail of the build log:
/opt/homebrew/opt/perl/lib/perl5/5.40/darwin-thread-multi-2level/CORE/XSUB.
↪h:340:38: note: expanded from macro 'XSRETURN_EMPTY'
340 | #define XSRETURN_EMPTY    STMT_START {                    XSRETURN(0); } STMT_
↪END
...
/opt/homebrew/opt/perl/lib/perl5/5.40/darwin-thread-multi-2level/CORE/XSUB.
↪h:325:5: note: expanded from macro 'XSRETURN'
```

(continues on next page)

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```
325 |     STMT_START {                                                \\
|     ^~~~~~~~~~
../../../../texinfo-7.0.3/tp/Texinfo/XS/ppport.h:4001:28: note: expanded from␣
↪macro 'STMT_START'
4001 | #  define STMT_START    (void)( /* gcc supports ``({ STATEMENTS; })'' */
|                             ^
parsetexi/Parsetexi.c:626:5: note: '{' token is here
626 |     XSRETURN_EMPTY;
junkes@Mac rtems % tail rsb-report-texinfo-7.0.3-arm64-apple-darwin24.3.0-1.txt
mv -f parsetexi/.deps/Parsetexi_la-context_stack.Tpo parsetexi/.deps/Parsetexi_la-
↪context_stack.Plo
mv -f parsetexi/.deps/Parsetexi_la-debug.Tpo parsetexi/.deps/Parsetexi_la-debug.
↪Plo
mv -f parsetexi/.deps/Parsetexi_la-convert.Tpo parsetexi/.deps/Parsetexi_la-
↪convert.Plo
make[4]: *** [all-recursive] Error 1
make[3]: *** [all] Error 2
make[2]: *** [all-recursive] Error 1
make[1]: *** [all-recursive] Error 1
make: *** [all] Error 2
shell cmd failed: /bin/sh -ex  /Volumes/Epics/RTEMS_MVME6100_legacy_stack/rtems-
↪source-builder-6.1/rtems/build/texinfo-7.0.3-arm64-apple-darwin24.3.0-1/do-build
error: building texinfo-7.0.3-arm64-apple-darwin24.3.0-1%
```

Steps to reproduce

```
#!/bin/bash
#RTEMS development
export RTEMS_VERSION=6
export RTEMS_RELEASE=6.1
export RTEMS_CPU=powerpc
export RTEMS_BSP=beatnik
export RTEMS_ARCH=${RTEMS_CPU}-rtems${RTEMS_VERSION}
SCRIPT=$(readlink -f $0)
export RTEMS_ROOT=`dirname $SCRIPT`/rtems/${RTEMS_RELEASE}

#install rsb
wget https://ftp.rtems.org/pub/rtems/releases/6/6.1/sources/rtems-source-builder-
↪6.1.tar.xz
tar Jxf rtems-source-builder-6.1.tar.xz

#build the tools, kernel and all packages for the beatnik board
cd rtems-source-builder-6.1/rtems
../source-builder/sb-set-builder \\
--prefix=${RTEMS_ROOT} \\
6/rtems-${RTEMS_CPU}
```

do-build in rtems-source-builder-6.1/rtems/build/texinfo-7.0.3-arm64-apple-darwin24.3.0-1

```
...
libtool: link: ( cd ".libs" && rm -f "MiscXS.la" && ln -s "../MiscXS.la" "MiscXS.la" )
/bin/sh ./libtool  --tag=CC   --mode=compile cc -DHAVE_CONFIG_H -I. -I../../../../texinfo-7.0.3/tp/Texinfo/XS  -I../../../../texinfo-7.0.3/tp/Texinfo/XS/parsetexi -I../../../../texinfo-7.0.3/tp/Texinfo/XS -I../../../../texinfo-7.0.3/tp/Texinfo/XS/gnulib/lib -I./gnulib/lib -DDATADIR=\\"/Volumes/Epics/RTEMS_MVME6100_legacy_stack/rtems-source-builder-6.1/rtems/build/tmp/sb-501-internal/share\\"  -fno-common -DPERL_DARWIN -mmacosx-version-min=15.2 -DNO_THREAD_SAFE_QUERYLOCALE -DNO_POSIX_2008_LOCALE -fno-strict-aliasing -pipe -fstack-protector-strong -O3 -DVERSION=\\"0\\" -DXS_VERSION=\\"0\\" -I/opt/homebrew/opt/perl/lib/perl5/5.40/darwin-thread-multi-2level/CORE  -MT parsetexi/Parsetexi_la-api.lo -MD -MP -MF parsetexi/.deps/Parsetexi_la-api.Tpo -c -o parsetexi/Parsetexi_la-api.lo `test -f 'parsetexi/api.c' || echo '../../../../texinfo-7.0.3/tp/Texinfo/XS/'`parsetexi/api.c
libtool: compile:  cc -DHAVE_CONFIG_H -I. -I../../../../texinfo-7.0.3/tp/Texinfo/XS -I../../../../texinfo-7.0.3/tp/Texinfo/XS/parsetexi -I../../../../texinfo-7.0.3/tp/Texinfo/XS -I../../../../texinfo-7.0.3/tp/Texinfo/XS/gnulib/lib -I./gnulib/lib -DDATADIR=\\"/Volumes/Epics/RTEMS_MVME6100_legacy_stack/rtems-source-builder-6.1/rtems/build/tmp/sb-501-internal/share\\" -fno-common -DPERL_DARWIN -mmacosx-version-min=15.2 -DNO_THREAD_SAFE_QUERYLOCALE -DNO_POSIX_2008_LOCALE -fno-strict-aliasing -pipe -fstack-protector-strong -O3 -DVERSION=\\"0\\" -DXS_VERSION=\\"0\\" -I/opt/homebrew/opt/perl/lib/perl5/5.40/darwin-thread-multi-2level/CORE -MT parsetexi/Parsetexi_la-api.lo -MD -MP -MF parsetexi/.deps/Parsetexi_la-api.Tpo -c ../../../../texinfo-7.0.3/tp/Texinfo/XS/parsetexi/api.c␣
↪ -fno-common -DPIC -o parsetexi/.libs/Parsetexi_la-api.o
../../../../texinfo-7.0.3/tp/Texinfo/XS/parsetexi/api.c:33:10: fatal error: 'libintl.h' file not found
33 | #include <libintl.h>
|          ^~~~~~~~~~~
1 error generated.
```

homebrew gettext is installed:

```
junkes@Mac rtems % /opt/homebrew/bin/xgettext -V
xgettext (GNU gettext-tools) 0.23.1
Copyright (C) 1995-2024 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <https://gnu.org/licenses/gpl.html>
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.
Written by Ulrich Drepper.
```

Author: Heinz Junkes 2025-02-18T16:24:10.427Z

Fixed by ‘brew install texinfo”

Author: Chris Johns 2025-02-18T20:39:56.622Z

@junkes I built a set of tools on MacOs ARM64 yesterday without any brew packages

without error.

2.8.1.32 5302 - Backport pthread_sigmask return fixup to 6 branch

Id	5302
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-07-17T14:12:12.223Z
Closed	2025-07-31T01:42:54.897Z
Updated	2025-07-31T01:42:54.909Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5302
Merges	0

The following discussion from !546 should be addressed:

- [] @gedare started a discussion: (+2 comments)

  https://pubs.opengroup.org/onlinepubs/9699919799/functions/pthread_sigmask.html Upon successful completion, pthread_sigmask() shall return 0; otherwise, it shall return the corresponding error number. @joel do you want to backport this ?

  Author: Kinsey Moore 2025-07-17T14:12:12.373Z

  added rtems#10 as parent epic

  Author: Joel Sherrill 2025-07-18T21:38:29.442Z

  It wasn't captured but... yes, please backport to 6

  Author: Kinsey Moore 2025-07-31T01:42:52.074Z

  assigned to @opticron

  Author: Kinsey Moore 2025-07-31T01:42:54.944Z

  set status to **Done**

2.8.1.33 5309 - Backport missing header guard and extern declarations to 6 branch

Id	5309
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-07-23T20:14:31.002Z
Closed	2025-07-31T01:42:35.960Z
Updated	2025-07-31T01:42:35.972Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5309
Merges	2

The following discussion from !625 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to 6 branch.

  Author: Kinsey Moore 2025-07-23T20:14:31.163Z

  set status to **To do**

  Author: Kinsey Moore 2025-07-23T20:19:07.237Z

  mentioned in merge request !626

  Author: Kinsey Moore 2025-07-23T20:19:17.777Z

  added rtems#10 as parent epic

  Author: Kinsey Moore 2025-07-25T01:11:53.050Z

  mentioned in commit 84d4c11c3062d9773774e6a7465028dce4e94377

  Author: Kinsey Moore 2025-07-25T01:11:53.235Z

  mentioned in commit b1dbd9eeae9ad1c1dbc1b9593039e41e1101a4ce

  Author: Kinsey Moore 2025-07-31T01:42:32.387Z

  assigned to @opticron

Author: Kinsey Moore	2025-07-31T01:42:36.006Z

set status to **Done**

2.8.1.34 5313 - Backport use of generic TLS accessor

Id	5313
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-07-27T22:41:21.386Z
Closed	2025-07-31T01:41:04.759Z
Updated	2025-07-31T01:41:04.772Z
Milestone	6.2
Labels	cpukit::debugger
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5313
Merges	2

The following discussion from !636 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to 6 branch.

Author: Kinsey Moore	2025-07-27T22:41:21.564Z

  added rtems#10 as parent epic

Author: Kinsey Moore	2025-07-27T22:41:21.664Z

  set status to **To do**

Author: Kinsey Moore	2025-07-27T22:46:50.224Z

  mentioned in merge request !637

Author: Kinsey Moore	2025-07-31T01:40:49.540Z

  assigned to @opticron

Author: Kinsey Moore	2025-07-31T01:41:04.807Z

  set status to **Done**

Author: Kinsey Moore 2025-07-31T01:41:05.354Z

The associated MR has been merged.

2.8.1.35 4956 - Deadlock caused by locking inversion in JFFS2

Id	4956
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2023-09-20T16:58:43.000Z
Closed	2025-07-30T18:52:51.774Z
Updated	2025-07-30T18:52:51.787Z
Milestone	6.2
Labels	priority::normal, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4956
Merges	0

When the code for delayed writes was added to support JFFS2 on NAND, it introduced a possible locking inversion when managing the delayed write work queue.

This has been partially addressed by fa85760c99a72b8186c70c896b98efe0d7cde2b6, but there are other issues with this code that need to be addressed as well.

First is that when not compiling with RTEMS_DEBUG, nodes are not automatically set as off the chain upon extraction and this behavior is depended upon.

~~Second is that protected (ISR-locked) chain calls are used when they are not necessary due to already being locked.~~ This code has been restructured and this component is no longer relevant.

Third is that the bug fixed by the referenced commit needs a test that verifies the fix.

Author: Trac Migrate 2023-09-26T00:41:07.000Z

Hey i'm interested working on this ticket would the nodes be set off only if

Author: Kinsey Moore 2023-09-26T13:16:46.000Z

Hey, thanks for the interest. I actually have a patch on the mailing list that just got approved for fixing this, so it should be going into the codebase shortly. I still need to write a test that produces the original issue, though.

Author: Trac Migrate 2023-09-26T13:38:00.000Z

In [changeset:"99c637fbd973a3d2f6e5adf38aac8f3f588cbb7e/rtems" 99c637f/rtems]:

```
cpukit/jffs2: Avoid use of off-chain semantics

This reworks the JFFS2 delayed work queue to avoid use of
on-chain/off-chain semantics since they vary in behavior under
RTEMS_DEBUG and are not guaranteed to be safe to use in SMP systems.
This adds all delayed work structs to the chain on FS init and does not
remove them until umount.

Updates #4956
```

Author: Kinsey Moore 2024-02-16T00:35:11.000Z

- **Owner** set to @kinsey
- **Status** changed from *new* to *assigned*

Author: Kinsey Moore 2024-05-02T23:19:35.303Z

A baseline set of tests has been added to the RTEMS testsuite to test JFFS2 on a simulated NAND device. This baseline set of tests does not trigger the original condition that necessitated this ticket and I have thus far been unable to trigger the deadlock from a test with rolled-back code.

Author: Kinsey Moore 2024-05-17T02:59:17.993Z

changed the description

Author: Gedare Bloom 2024-12-04T21:40:37.334Z

Author: Kinsey Moore 2025-07-30T18:51:59.645Z

changed the description

Author: Kinsey Moore 2025-07-30T18:52:51.829Z

set status to **Done**

Author: Kinsey Moore 2025-07-30T18:52:52.583Z

This issue has been resolved by rolling back to global locking.

2.8.1.36 5271 - Backport libdebugger TLS support to the RTEMS 6 branch

Id	5271
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-06-17T19:15:41.599Z
Closed	2025-07-30T18:29:43.508Z
Updated	2025-07-30T18:29:43.582Z
Milestone	6.2
Labels	arch:aarch64, cpukit::debugger
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5271
Merges	2

The following discussion from !517 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to the 6 branch.

Author: Kinsey Moore	2025-06-17T19:15:42.193Z

  assigned to @opticron

Author: Kinsey Moore	2025-06-17T19:15:42.692Z

Author: Kinsey Moore	2025-06-17T19:19:46.270Z

  mentioned in merge request !518

Author: Kinsey Moore	2025-07-30T18:29:43.561Z

  set status to **Done**

2.8.1.37 5273 - Backport libdebugger setjmp fix to 6 branch

Id	5273
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-06-18T18:52:51.524Z
Closed	2025-07-30T18:29:36.664Z
Updated	2025-07-30T18:29:36.746Z
Milestone	6.2
Labels	arch:aarch64, cpukit::debugger
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5273
Merges	2

The following discussion from !523 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to 6.

Author: Kinsey Moore	2025-06-18T18:52:52.066Z

  assigned to @opticron

Author: Kinsey Moore	2025-06-18T18:52:53.254Z

Author: Kinsey Moore	2025-06-18T18:55:47.388Z

  mentioned in merge request !524

Author: Kinsey Moore	2025-06-19T22:52:52.933Z

  mentioned in commit 3d8b56f10c9cabe8cc731ada636af59f71e8e10b

Author: Kinsey Moore	2025-07-30T18:29:36.723Z

  set status to **Done**

2.8.1.38 5288 - Backport RISC-V Double Trap extension fix to 6

Id	5288
State	closed
Type	ISSUE
Author	Matteo Concas
Closed by	Matteo Concas
Created	2025-07-03T08:07:26.897Z
Closed	2025-07-04T06:48:43.417Z
Updated	2025-07-04T06:48:43.431Z
Milestone	6.2
Labels	arch:riscv
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5288
Merges	2

If the Double Trap Extension is implemented, the MDT bit of the mstatus (or mstatush in RV32) register will be set when a trap is to be taken.

The MIE (Machine Interrupt Enable) bit can only be set to 1 if the MDT bit is zero.

Thus, we need to clear MDT first if we want to enable interrupts when dispatching a thread.

MDT is also cleared in register `a1` before restoring the interrupt frame as writing 1 to MDT will cause MIE to be set to 0. In RV64 this happens regardless of the value written to MIE in the same write.

In RV32, MDT is in mstatush so we do not need to clear during restore as this register is not restored.

With this change all 60 SMP tests pass (compared to 20/60 before the fix). The tests have been run on hardware using two RV64 CPUs that implement the double trap extension.

Author: Matteo Concas 2025-07-03T08:10:45.328Z

mentioned in merge request !548

Author: Kinsey Moore 2025-07-03T13:10:32.134Z

added rtems#10 as parent epic

2.8.1.39 5283 - Backport 6.2: bsps/noelv: Fix using console in polled mode

Id	5283
State	closed
Type	ISSUE
Author	Matteo Concas
Closed by	Gedare Bloom
Created	2025-06-27T07:40:58.098Z
Closed	2025-06-28T15:36:17.903Z
Updated	2025-06-28T15:36:17.916Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5283
Merges	2

Summary

bsps/noelv: Fix using console in polled mode

The console driver needs `BSP_CONSOLE_USE_INTERRUPTS` to be defined or it does not build. The intent was to use polled mode if the macro was equal to zero but not using interrupt means the macro won't be defined instead.

This is the faulty code:

```
if (BSP_CONSOLE_USE_INTERRUPTS) {
handler = &apbuart_handler_interrupt;
}
```

In `bsps/riscv/noel/console/console-config.c` .

Steps to reproduce

Create a INI with the following contents:

```
[riscv/noel64imafd_polling]
INHERIT = noel64imafd
RTEMS_SMP = True
BSP_CONSOLE_USE_INTERRUPTS = 0
```

Build the RTEMS kernel, it will fail to build due to `BSP_CONSOLE_USE_INTERRUPTS` being undefined.

Expected behaviour

BSP should build successfully.

> **Author:** Matteo Concas 2025-06-27T07:43:21.023Z
>
> mentioned in merge request !537
>
> **Author:** Kinsey Moore 2025-06-27T12:59:09.680Z

Author: Matteo Concas 2025-06-28T15:35:42.404Z

mentioned in commit dd490c5c2d02e472c83b7052612b554e8b74358f

Author: Gedare Bloom 2025-06-28T15:36:18.541Z

fixed in https://gitlab.rtems.org/rtems/rtos/rtems/-/commit/dd490c5c2d02e472c83b7052612b554e8b74358f

2.8.1.40 5254 - i386/pc BSP ATA driver asserts with node errors on FAT disk mount

Id	5254
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2025-05-28T02:54:29.731Z
Closed	2025-05-30T13:34:36.579Z
Updated	2025-05-30T13:34:36.593Z
Milestone	6.2
Labels	arch:i386
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5254
Merges	2

Summary

With `RTEMS_DEBUG` enabled the PC ATA driver asserts with a failure because a node's link pointer is not set to `NULL`. The assert is:

```
assertion "_Chain_Is_node_off_chain( the_node )" failed: file "../../../cpukit/
↪include/rtems/score/chainimpl.h", line 691, function: _Chain_Append_unprotected
```

A back trace is:

```
(gdb) bt
#0  0x00162c55 in bsp_reset (source=source@entry=RTEMS_FATAL_SOURCE_ASSERT,␣
↪code=code@entry=1872624) at ../../../bsps/i386/pc386/start/bspreset.c:39
#1  0x00161b15 in bsp_fatal_extension (source=RTEMS_FATAL_SOURCE_ASSERT, always_
↪set_to_false=false, code=1872624) at ../../../bsps/shared/start/bspfatal-
↪default.c:213
#2  0x001189b3 in _User_extensions_Iterate (arg=arg@entry=0x1c92b8,␣
↪visitor=0x118900 <_User_extensions_Fatal_visitor>, direction=CHAIN_ITERATOR_
↪FORWARD) at ../../../cpukit/score/src/userextiterate.c:194
#3  0x0011321f in _User_extensions_Fatal (error=1872624, source=RTEMS_FATAL_
↪SOURCE_ASSERT) at ../../../cpukit/include/rtems/score/userextimpl.h:467
#4  _Terminate (the_source=the_source@entry=RTEMS_FATAL_SOURCE_ASSERT, the_
↪error=the_error@entry=1872624) at ../../../cpukit/score/src/interr.c:66
```

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```
#5  0x001077ec in rtems_fatal (fatal_code=1872624, fatal_source=RTEMS_FATAL_
↪SOURCE_ASSERT) at ../../../cpukit/include/rtems/fatal.h:160
#6  __assert_func (file=file@entry=0x189a64 "../../../cpukit/include/rtems/score/
↪chainimpl.h", line=691, func=0x1a0378 <__func__.0> "_Chain_Append_unprotected",␣
↪failedexpr=0x189a3c "_Chain_Is_node_off_chain( the_node )") at ../../../cpukit/
↪libcsupport/src/__assert.c:71
#7  0x0016c03d in _Chain_Append_unprotected (the_node=0x1cbbc0, the_
↪chain=0x1aae4c <ata_ide_ctrls+44>) at ../../../cpukit/include/rtems/score/
↪chainimpl.h:691
#8  0x0016c0dc in _Chain_Append_unprotected (the_node=0x1cbbc0, the_
↪chain=0x1aae4c <ata_ide_ctrls+44>) at ../../../cpukit/sapi/src/chainprotected.
↪c:99
#9  rtems_chain_append (chain=chain@entry=0x1aae4c <ata_ide_ctrls+44>,␣
↪node=0x1cbbc0) at ../../../cpukit/sapi/src/chainprotected.c:97
#10 0x00160cb9 in ata_add_to_controller_queue (ctrl_minor=0, areq=0x1cbbc0) at ../
↪../../bsps/shared/dev/ide/ata.c:540
#11 0x00160ea1 in ata_io_data_request (ata_dev=<optimized out>, req=0x1c9450) at .
↪./../../bsps/shared/dev/ide/ata.c:228
#12 ata_ioctl (dd=0x1bee44, cmd=3222815233, argp=0x1c9450) at ../../../bsps/
↪shared/dev/ide/ata.c:949
#13 0x00102f5e in rtems_bdbuf_execute_transfer_request (dd=dd@entry=0x1bee44,␣
↪req=req@entry=0x1c9450, cache_locked=cache_locked@entry=true) at ../../../
↪cpukit/libblock/src/bdbuf.c:1878
#14 0x001032c9 in rtems_bdbuf_execute_read_request (dd=dd@entry=0x1bee44, bd=
↪<optimized out>, bd@entry=0x1bbe2c, transfer_count=transfer_count@entry=1) at ..
↪/../../cpukit/libblock/src/bdbuf.c:1994
#15 0x001044df in rtems_bdbuf_read (dd=dd@entry=0x1bee44, block=block@entry=0, bd_
↪ptr=bd_ptr@entry=0x1c9558) at ../../../cpukit/libblock/src/bdbuf.c:2094
#16 0x00131f67 in rtems_bdpart_read_record (dd=0x1bee44, index=0, block=0x1c9558)␣
↪at ../../../cpukit/libblock/src/bdpart-read.c:220
#17 0x00132190 in rtems_bdpart_read (disk_name=disk_name@entry=0x1ca62e "/dev/hda
↪", format=format@entry=0x1c95dc, pt=pt@entry=0x1c9630,␣
↪count=count@entry=0x1c95d4) at ../../../cpukit/libblock/src/bdpart-read.c:273
#18 0x00119a5e in rtems_bdpart_shell_main (argc=2, argv=0x1c9b30) at ../../../
↪cpukit/libmisc/shell/fdisk.c:236
#19 0x0012dacd in shell_main_loop (shell_env=shell_env@entry=0x1c9ec8,␣
↪interactive=interactive@entry=true, line_editor_output=<optimized out>) at ../..
↪/../cpukit/libmisc/shell/shell.c:1215
#20 0x0012ed18 in rtems_shell_main_loop (shell_env=shell_env@entry=0x1c9ec8) at ..
↪/../../cpukit/libmisc/shell/shell.c:1383
#21 0x0012ed38 in rtems_shell_task (task_argument=1875656) at ../../../cpukit/
↪libmisc/shell/shell.c:1038
#22 0x00115adb in _Thread_Handler () at ../../../cpukit/score/src/threadhandler.
↪c:164
#23 0xa5a5a5a5 in ?? ()
```

Steps to reproduce

INI file:

```
[DEFAULT]
RTEMS_DEBUG = True
RTEMS_POSIX_API = True

[i386/pc686]
BUILD_TESTS = True
```

Run the `fileio.exe` test, enter the shell and then enter the following command:

```
fdisk /dev/hda
```

The shell session is:

```
*** BEGIN OF TEST FILE I/O ***
*** TEST VERSION: 7.0.0.34c362fee100659e36a6945204f77e71cb1c2f7e
*** TEST STATE: USER_INPUT
*** TEST BUILD: RTEMS_DEBUG RTEMS_POSIX_API
*** TEST TOOLS: 13.3.0 20240521 (RTEMS 7, RSB␣
↪170160cb918e7c68b4b35d8f0a42db6df81168e7, Newlib 1b3dcfd)
Press any key to start file I/O sample (20s remaining)
=========================
RTEMS FILE I/O Test Menu
=========================
p -> part_table_initialize
f -> mount all disks in fs_table
l -> list  file
r -> read  file
w -> write file
s -> start shell
Enter your selection ==>s
Creating /etc/passwd and group with four useable accounts:
root/pwd
test/pwd
rtems/NO PASSWORD
chroot/NO PASSWORD
Only the root user has access to all available commands.
=========================
starting shell
=========================

Welcome to rtems-7.0.0 (Intel i386/Pentium/pc686)
Copyright (C) 1989, 2021 RTEMS Project and contributors
Login into RTEMS
/dev/foobar login: root
Password:

RTEMS Shell on /dev/foobar. Use 'help' to list commands.
```

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```
SHLL [/] # fdisk /dev/hda
assertion "_Chain_Is_node_off_chain( the_node )" failed: file "../../../cpukit/
↪include/rtems/score/chainimpl.h", line 691, function: _Chain_Append_unprotected
```

2.8.1.40.2.1 Pre-set options

Author: Chris Johns 2025-05-28T02:54:30.004Z

cloned from #5253

Author: Chris Johns 2025-05-28T02:54:43.589Z

assigned to @chris

Author: Chris Johns 2025-05-28T02:54:53.933Z

Author: Chris Johns 2025-05-28T02:56:00.050Z

changed title from **i38{-p-}/pc BSP ATA driver asserts with node errors on FAT disk mount** to **i38{+6+}/pc BSP ATA driver asserts with node errors on FAT disk mount**

Author: Chris Johns 2025-05-28T03:02:54.791Z

mentioned in merge request !492

Author: Chris Johns 2025-05-30T13:34:27.984Z

mentioned in commit cb3fba044770f0bb6a96bd2b93e09df90d1e2e34

2.8.1.41 5232 - Backport “spec: Install missing header files for GRLIB and SPARC” to 6 branch

Id	5232
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-03-26T15:53:40.588Z
Closed	2025-03-26T16:50:40.530Z
Updated	2025-03-26T16:50:40.542Z
Milestone	6.2
Labels	grlib
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5232
Merges	3

The following discussion from !458 should be addressed:

- [] @joel started a discussion: (+1 comment)

  1. Is this also being applied to the 6 branch?

Author: Kinsey Moore	2025-03-26T15:53:40.797Z

assigned to @opticron

Author: Kinsey Moore	2025-03-26T15:53:41.118Z

Author: Kinsey Moore	2025-03-26T15:54:02.665Z

Author: Kinsey Moore	2025-03-26T16:00:38.727Z

changed the description

Author: Matteo Concas	2025-03-26T16:48:52.616Z

mentioned in merge request !459

2.8.1.42 5173 - powerpc/qoriq: Avoid spurious interrupt fatal errors

Id	5173
State	closed
Type	ISSUE
Author	Sebastian Huber
Assignee(s)	Sebastian Huber
Closed by	Gedare Bloom
Created	2024-12-05T23:47:28.576Z
Closed	2025-02-07T23:22:10.064Z
Updated	2025-02-11T05:38:23.897Z
Milestone	6.2
Labels	arch:powerpc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5173
Merges	4

Summary

The interrupt dispatching routine erroneously invokes the fatal error handler if a spurious interrupt is acknowledged.

2.8.1.42.1.1 Pre-set options

Author: Sebastian Huber 2024-12-05T23:47:28.686Z

assigned to @sebhub

Author: Sebastian Huber 2024-12-05T23:47:36.803Z

cloned to #5174

Author: Sebastian Huber 2024-12-05T23:47:47.386Z

Author: Sebastian Huber 2024-12-06T10:22:32.171Z

mentioned in merge request !345

Author: Chris Johns 2024-12-22T03:38:40.991Z

Author: Gedare Bloom 2025-02-07T23:22:09.483Z

Fixed in e421c922a87842f0613a269054acd041e46c91cd

Author: Sebastian Huber 2025-02-11T05:38:23.477Z

mentioned in commit e421c922a87842f0613a269054acd041e46c91cd

2.8.1.43 5205 - Back port “grlib/occan: Fix baud rate calculation” to 6

Id	5205
State	closed
Type	ISSUE
Author	Joel Sherrill
Closed by	Gedare Bloom
Created	2025-02-07T15:07:07.522Z
Closed	2025-02-07T20:37:37.624Z
Updated	2025-02-11T05:38:23.820Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5205
Merges	4

The following discussion from !340 should be addressed:

- [] @gedare started a discussion: (+1 comment)

  @thesummer Should this be back-ported to 6?

  Yes. @thesummer please use this issue to back port the fix to 6.

  Author: Joel Sherrill 2025-02-07T15:07:26.994Z

  Author: Gedare Bloom 2025-02-07T15:51:54.551Z

  mentioned in merge request !404

  Author: Jan Sommer 2025-02-11T05:38:23.247Z

  mentioned in commit a0e4be53f4e30ee02d6d0c9221d613d18c72f426

2.8.1.44 5189 - Backport libdl ARM trampoline crash fix

Id	5189
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Chris Johns
Created	2025-01-23T22:24:29.147Z
Closed	2025-01-24T00:10:34.134Z
Updated	2025-02-11T05:38:23.668Z
Milestone	6.2
Labels	arch:arm, cpukit::dl
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5189
Merges	4

Summary

When a trampoline is not aligned on a word boundary and a ldr.w pc,[pc] instruction is generated, the address loaded is not pc+4, but instead pc+2.

Author: Kinsey Moore	2025-01-23T22:24:29.300Z

assigned to @opticron

Author: Kinsey Moore	2025-01-23T22:24:29.649Z

Author: Kinsey Moore	2025-01-23T22:26:00.055Z

mentioned in merge request !367

Author: Chris Johns	2025-01-24T00:10:28.724Z

changed title from **Backpor{-r-}t libdl ARM trampoline crash fix** to **Backport libdl ARM trampoline crash fix**

Author: Ranulfo Raphael	2025-02-11T05:38:23.161Z

mentioned in commit 84c2cf3da9983ef7eadb11d4a676449d6b3ef875

2.8.1.45 4958 - NTP broadcast client fails to open sockets on lwIP

Id	4958
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2023-10-04T19:42:57.000Z
Closed	2025-01-31T18:30:49.585Z
Updated	2025-01-31T18:30:49.660Z
Milestone	6.2
Labels	network::lwip, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4958
Merges	0

Reproduction: * Install lwIP on top of a compatible BSP * Modify the existing ntp01 test to use the broadcast client * Set NTP_DEBUG to 1 * Replace the first two lines of etc_ntp_conf with: * broadcastclient * disable auth * Build rtems-net-services against the installed BSP with lwIP network stack * Run the modified ntp01 test

Expected result: NTP opens broadcast listener successfully.

Actual result: NTP fails to open broadcast listener with error message: bind(37) AF_INET 0.0.0.0#123 flags 0x409 failed: Address already in use

Workaround: In open_socket() in bsd/freebsd/contrib/ntp/ntpd/ntp_io.c, there is a test for wildcard addresses inside a OS_NEEDS_REUSEADDR_FOR_IFADDRBIND conditional. If the set_wildcard_reuse() call is made unconditional, the socket creation succeeds.

The root cause is that behavior differs between LibBSD and lwIP. On lwIP, early-bound wildcard and non-wildcard address bindings succeed, but late-bound wildcard address bindings fail. Once any any address is bound, lwIP will fail to bind any further wildcard sockets. Either we can change lwIP's behavior to be closer to LibBSD or we can alter the NTP client to check for lwIP or blindly apply the address reuse flags.

Author: Kinsey Moore 2023-10-04T19:44:27.000Z

- **Description** changed

```
Reproduction:
* Install lwIP on top of a compatible BSP
* Modify the existing ntp01 test to use the broadcast client
- ** Set NTP_DEBUG to 1
?  -

+  * Set NTP_DEBUG to 1
? +

- ** Replace the first two lines of etc_ntp_conf with:
?  -

+  * Replace the first two lines of etc_ntp_conf with:
? +

- *** broadcastclient
?  --

+   * broadcastclient
? ++

- *** disable auth
?  --

+   * disable auth
? ++

* Build rtems-net-services against the installed BSP with lwIP network␣
↪stack
* Run the modified ntp01 test

Expected result:
NTP opens broadcast listener successfully.

```

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```
Actual result:
NTP fails to open broadcast listener with error message:
bind(37) AF_INET 0.0.0.0#123 flags 0x409 failed: Address already in use

Workaround:
In open_socket() in bsd/freebsd/contrib/ntp/ntpd/ntp_io.c, there is a test for wildcard addresses inside a OS_NEEDS_REUSEADDR_FOR_IFADDRBIND conditional. If the set_wildcard_reuse() call is made unconditional, the socket creation succeeds.

The root cause is that behavior differs between LibBSD and lwIP. On lwIP, early-bound wildcard and non-wildcard address bindings succeed, but late-bound wildcard address bindings fail. Once any any address is bound, lwIP will fail to bind any further wildcard sockets. Either we can change lwIP's behavior to be closer to LibBSD or we can alter the NTP client to check for lwIP or blindly apply the address reuse flags.
```

Author: Chris Johns 2023-10-04T21:30:43.000Z

I think NTP is using _normal_ behavior so lwIP is not compliant in this case. Adding a work around to NTP solves this problem but leaves the issue present other packages may trip over.

Have you asked lwIP about this?

Author: Kinsey Moore 2023-10-05T17:08:40.000Z

I haven't. This was an issue I noticed and wanted to document that it existed with current thoughts, but I hadn't moved beyond that yet since the broadcast client isn't on my priority list at the moment. I'll agree with you that fixing lwIP to be more "normal" is probably the right solution. I'll get more context from lwIP.

Author: Gedare Bloom 2024-12-04T21:40:36.490Z

changed the description

Author: Gedare Bloom 2024-12-04T21:40:37.588Z

Author: Kinsey Moore 2025-01-31T18:30:49.722Z

moved to rtems/pkg/rtems-net-services#10

2.8.1.46 5146 - Follow-up from “Draft: timespec.h, etc.: Eliminate use of 32-bit for time_t”

Id	5146
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Joel Sherrill
Closed by	Kinsey Moore
Created	2024-11-08T00:37:24.402Z
Closed	2025-01-24T01:08:51.602Z
Updated	2025-01-24T01:08:52.058Z
Milestone	6.2
Labels	rtems::score
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5146
Merges	1

The following discussion from !175 should be addressed:

- [] @sebhub started a discussion: (+2 comments)

  Add test case to sptchimespec01 which uses a > 32-bit time?

  Author: Chris Johns 2024-11-08T00:37:24.525Z

  assigned to @joel

  Author: zack liang 2024-11-09T22:19:35.699Z

  hey @joel would like to work on this just tell me where the tests file is

  Author: zack liang 2024-11-15T01:43:13.170Z

  mentioned in merge request !314

  Author: Joel Sherrill 2024-12-04T00:56:31.646Z

  Author: Gedare Bloom 2024-12-04T21:40:37.917Z

2.8.1.47 4964 - rtems-test can hang indefinitely

Id	4964
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Created	2023-11-07T15:20:21.000Z
Updated	2023-11-07T21:06:51.000Z
Milestone	6.2
Labels	priority::low, resolution::duplicate, tickettype::defect, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4964
Merges	0

When using the RTEMS automated tester configured with TFTP, there is a state that can occur in which the tester never times out a test. This was discovered when testing with the AArch64 Xilinx ZynqMP BSP where the board did not actually power on even though it was instructed to do so. This left the tester running the TFTP server waiting more than 4 full days (left to run over a long weekend) for the target to start without progressing to the next test.

The failure to start on the target side was due to a missing minimum settling time between off and on states that is apparently influenced by the environment.

Author: Chris Johns 2023-11-07T20:52:08.000Z

Can you please try https://lists.rtems.org/pipermail/devel/2023-October/076519.html ?

Looks like I forgot to push it.

Author: Chris Johns 2023-11-07T21:06:51.000Z

- **Resolution** set to ~"duplicate"
- **Status** changed from *new* to *closed*

This is a duplicate of #4959

2.8.2 Merge Requests

2.8.2.1 635 - cpukit/libio: Support close with IOP references held

Id	635
State	merged
Merged by	Kinsey Moore
Merged at	2025-07-28T15:48:17.842Z
Assignee(s)	Kinsey Moore
Created	2025-07-27T02:26:15.605Z
Updated	2025-12-26T19:02:19.421Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/635
Commit	0cf6de01df734c11212e63134551ee344a10ecec

Summary

cpukit/libio: Support close with IOP references held

- Provide an option for a file system to support close wtih

references held. This can happen in more complex file systems and file descriptor handling with more complete reference handling implementations where an fd can hold other fds and close can be call on any fd and succeed.

- Fix open IOP leaks in the error paths.
- Provide better definition of the IOP flags to help clarify

the code.

Fixes #5201

Closes #5311

Author: Kinsey Moore 2025-07-27T02:26:15.925Z

assigned to @opticron

Author: Kinsey Moore 2025-07-28T14:40:32.587Z

changed the description

Author: Joel Sherrill 2025-07-28T15:33:45.080Z

approved this merge request

Author: Kinsey Moore 2025-07-28T15:45:22.096Z

enabled an automatic merge when all merge checks for 0cf6de01df734c11212e63134551ee344a10ecec pass

Author: Amar Takhar 2025-07-28T15:48:05.408Z

This is a really nice change

Author: Amar Takhar 2025-07-28T15:48:08.501Z

approved this merge request

Author: Kinsey Moore 2025-12-26T19:02:47.563Z

@chris This appears to have broken the newlib01 test on at least zynqmp_qemu.

Author: Kinsey Moore 2025-12-26T19:02:47.768Z

created #5411 to continue this discussion

Author: Kinsey Moore 2025-12-26T19:02:47.581Z

resolved all threads

Author: Kinsey Moore 2025-12-26T19:02:48.287Z

mentioned in issue #5411

2.8.2.2 852 - cpukit/jffs2: Add erase block summary (EBS) support

Id	852
State	merged
Merged by	Kinsey Moore
Merged at	2025-12-03T21:51:31.922Z
Assignee(s)	Kinsey Moore
Created	2025-11-24T23:30:08.985Z
Updated	2025-12-03T21:51:31.912Z
Milestone	6.2
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/852
Commit	fa6c222bdcef3c06502ea5abc539cc982ba922f7

Summary

cpukit/jffs2: Import summary support and direct write helpers

This imports the unmodified summary.c and writev.c support files from upstream matching the current version of other imports.

Updates #5398

Author: Kinsey Moore 2025-11-24T23:30:10.041Z

assigned to @opticron

Author: Kinsey Moore 2025-11-24T23:30:42.409Z

enabled an automatic merge when all merge checks for f654a9894f3a943f8a405b936b3249b4cf5c9475 pass

Author: Kinsey Moore 2025-12-02T15:01:52.034Z

aborted the automatic merge because target branch was updated

Author: Joel Sherrill 2025-12-02T15:10:28.358Z

approved this merge request

Author: Joel Sherrill 2025-12-02T15:10:39.538Z

added 3 commits

- dd210293 - 1 commit from branch `rtems/rtos:6`
- 80edeaee - cpukit/jffs2: Import summary support and direct write helpers
- d514b259 - cpukit/jffs2,spec: Add summary support to the build

Compare with previous version

Author: Joel Sherrill 2025-12-02T15:10:51.816Z

reset approvals from @joel by pushing to the branch

Author: Joel Sherrill 2025-12-02T15:11:03.346Z

enabled an automatic merge when all merge checks for d514b2598174813f5807d9393d70e3abb8229860 pass

Author: Chris Johns 2025-12-03T04:18:38.727Z

approved this merge request

Author: Joel Sherrill 2025-12-03T21:42:30.223Z

aborted the automatic merge because target branch was updated

Author: Kinsey Moore 2025-12-03T21:49:10.871Z

added 4 commits

- d514b259...7860fc41 - 2 commits from branch `rtems/rtos:6`
- d0974e6b - cpukit/jffs2: Import summary support and direct write helpers
- fa6c222b - cpukit/jffs2,spec: Add summary support to the build

Compare with previous version

Author: Kinsey Moore 2025-12-03T21:49:34.255Z

enabled an automatic merge when all merge checks for fa6c222bdcef3c06502ea5abc539cc982ba922f7 pass

Author: Joel Sherrill 2025-12-03T21:51:25.277Z

approved this merge request

2.8.2.3 850 - bsps/shared: Add XNandPsu flashdev backend

Id	850
State	merged
Merged by	Joel Sherrill
Merged at	2025-12-03T21:42:26.607Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Chris Johns
Created	2025-11-24T22:29:08.672Z
Updated	2025-12-03T21:42:26.592Z
Milestone	6.2
Labels	device::flash
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/850
Commit	7860fc419aa8e22bd0b18c7a51f157a92974e289

Summary

bsps/shared: Add XNandPsu flashdev backend

Add a flashdev backend supporting the XNandPsu peripheral on ZynqMP systems.

Updates #5397

Author: Kinsey Moore 2025-11-24T22:29:08.935Z

assigned to @opticron

Author: Kinsey Moore 2025-12-02T19:44:40.329Z

requested review from @chris

Author: Joel Sherrill 2025-12-03T16:00:51.262Z

Missing @file block.

Author: Joel Sherrill 2025-12-03T16:00:39.379Z

Not Doxygen comment block.

Author: Kinsey Moore 2025-12-03T14:19:14.897Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2025-12-02T20:10:02.279Z

left review comments

Author: Chris Johns 2025-12-03T04:19:03.699Z

approved this merge request

Author: Kinsey Moore 2025-12-03T14:19:15.593Z

added 2 commits

- 431d8939 - bsps/shared: Add XNandPsu flashdev backend
- f6ef07e9 - bsps/shared/xnandpsu: Parameterize number of active chipselects

Compare with previous version

Author: Kinsey Moore 2025-12-03T14:19:32.416Z

reset approvals from @chris by pushing to the branch

Author: Kinsey Moore 2025-12-03T14:26:05.533Z

added 3 commits

- dd210293 - 1 commit from branch `rtems/rtos:6`
- f4b34af0 - bsps/shared: Add XNandPsu flashdev backend

- 7860fc41 - bsps/shared/xnandpsu: Parameterize number of active chipselects

Compare with previous version

Author: Joel Sherrill 2025-12-03T16:00:51.281Z

resolved all threads

Author: Joel Sherrill 2025-12-03T16:01:13.664Z

enabled an automatic merge when all merge checks for 7860fc419aa8e22bd0b18c7a51f157a92974e289 pass

Author: Joel Sherrill 2025-12-03T16:01:15.694Z

approved this merge request

Author: Chris Johns 2025-12-03T21:39:55.025Z

approved this merge request

2.8.2.4 848 - cpukit,spec: Swap JFFS2 to zlib CRC32

Id	848
State	merged
Merged by	Kinsey Moore
Merged at	2025-12-02T15:01:49.381Z
Assignee(s)	Kinsey Moore
Created	2025-11-24T21:50:12.109Z
Updated	2025-12-02T15:01:49.372Z
Milestone	6.2
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/848
Commit	dd210293e00042ebfeb5069f7977cb818a3485ba

Summary

cpukit,spec: Swap JFFS2 to zlib CRC32

Move JFFS2 from the Cygwin implementation of CRC32 to the zlib implementation which can take advantage of hardware acceleration and reduces code duplication. Synthetic benchmarks on AArch64 hardware show approximately a 17x improvement in CRC32 calculation speed and real-world testing with JFFS2 shows a 1% improvement in mount times, a 5% improvement in data write times, and a 9% improvement in garbage collection times.

A test was written to compare hash generation between the two algorithms and a partition was created with one and then remounted with the other with no errors.

Closes #5396

Author: Kinsey Moore 2025-11-24T21:50:13.051Z

assigned to @opticron

Author: Kinsey Moore 2025-11-24T21:50:36.783Z

enabled an automatic merge when all merge checks for dd210293e00042ebfeb5069f7977cb818a3485ba pass

Author: Chris Johns 2025-11-24T22:01:53.021Z

approved this merge request

Author: Joel Sherrill 2025-12-02T15:01:46.691Z

approved this merge request

2.8.2.5 830 - Fixes for flashdev API and xqspi support

Id	830
State	merged
Merged by	Chris Johns
Merged at	2025-11-12T16:19:12.929Z
Assignee(s)	Kinsey Moore
Created	2025-11-10T18:38:28.465Z
Updated	2025-11-12T16:19:12.841Z
Milestone	6.2
Labels	device::flash
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/830
Commit	23accdc0bbcec53ee8ebce9babcb46d42400ebe0

Summary

cpukit/flashdev: Return error for missing callbacks

When a callback does not exist, the Flashdev API should return error where possible instead of success. When the API returns success for missing callbacks, the Flashdev API client code may end up using uninitialized variables as if they were filled by the API.

bsps/shared/xqspi_flash.c: Add support for sector information

Author: Kinsey Moore 2025-11-10T18:38:28.991Z

assigned to @opticron

Author: Kinsey Moore 2025-11-10T18:39:02.581Z

changed title from

bsps/shared/xqspi_flash.c: Add support for sector information

to

Fixes for flashdev API and xqspi support

Author: Kinsey Moore 2025-11-10T18:39:02.606Z

changed the description

Author: Chris Johns 2025-11-10T20:10:12.555Z

approved this merge request

Author: Chris Johns 2025-11-10T20:10:15.299Z

enabled an automatic merge when all merge checks for 23accdc0bbcec53ee8ebce9babcb46d42400ebe0 pass

Author: Joel Sherrill 2025-11-12T16:19:09.457Z

approved this merge request

2.8.2.6 796 - cpukit/close.c: Open flag corrected for busy closes

Id	796
State	merged
Merged by	Gedare Bloom
Merged at	2025-11-05T19:50:50.313Z
Assignee(s)	Aaron Nyholm
Created	2025-10-14T03:37:39.935Z
Updated	2025-11-05T19:50:50.302Z
Milestone	6.2
Labels	backport, cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/796
Commit	e82e11ff4a0472679b77e068edcaffcde566a890

Summary

cpukit/close.c: Open flag corrected for busy closes

Fix closing while busy. Previously open flag in the iop would be unset despite close returning EBUSY. Updates #5311

SPINTRCRITICAL24 passes on a Microzed with SMP.

Author: Aaron Nyholm 2025-10-14T03:38:12.568Z

changed the description

Author: Chris Johns 2025-10-14T03:39:32.940Z

assigned to @eagleirony

Author: Chris Johns 2025-10-14T03:39:54.139Z

enabled an automatic merge when all merge checks for 3649b2936c4071a0eba428f5ea078d5c02cd2d62 pass

Author: Kinsey Moore 2025-10-14T12:07:26.557Z

approved this merge request

Author: Aaron Nyholm 2025-10-19T23:59:06.405Z

added 1 commit

- 0d6c77f4 - testsuites/fstests/fsclose01: Fix expected flags

Compare with previous version

Author: Aaron Nyholm 2025-10-19T23:59:21.962Z

reset approvals from @opticron by pushing to the branch

Author: Kinsey Moore 2025-10-20T14:39:24.778Z

approved this merge request

Author: Kinsey Moore 2025-10-20T14:39:26.230Z

enabled an automatic merge when all merge checks for 0d6c77f42b7947c1c731b12ab56e70bb16ea2a72 pass

Author: Chris Johns 2025-10-20T14:42:08.328Z

aborted the automatic merge because target branch was updated

Author: Gedare Bloom 2025-11-05T19:50:19.975Z

approved this merge request

Author: Gedare Bloom 2025-11-05T19:50:24.118Z

added 5 commits

- 0d6c77f4...48274618 - 3 commits from branch `rtems/rtos:6`
- 6b86b9fd - cpukit/close.c: Open flag corrected for busy closes
- e82e11ff - testsuites/fstests/fsclose01: Fix expected flags

Compare with previous version

2.8.2.7 816 - bsps/shared/dev/flash/jffs2_flashdev.c: Fixed fatal heap error on failed mount

Id	816
State	merged
Merged by	Chris Johns
Merged at	2025-10-28T04:49:57.723Z
Assignee(s)	Aaron Nyholm
Created	2025-10-28T03:34:54.905Z
Updated	2025-10-28T04:49:57.713Z
Milestone	6.2
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/816
Commit	482746182f3f0a443bebf8d8961f0efc03c68773

Summary

bsps/shared/dev/flash/jffs2_flashdev.c: Fixed fatal heap error on failed mount

Removed double free of mount_data and instance. Closes #5382

Author: Aaron Nyholm 2025-10-28T03:35:07.915Z

added 1 commit

- b88d9275 - bsps/shared/dev/flash/jffs2_flashdev.c: Fixed fatal heap error on failed mount

Compare with previous version

Author: Aaron Nyholm 2025-10-28T03:35:44.123Z

restored source branch `5382-fix-jffs2-flashdev-double-free`

Author: Chris Johns 2025-10-28T03:35:46.059Z

assigned to @eagleirony

Author: Chris Johns 2025-10-28T03:36:13.865Z

approved this merge request

Author: Chris Johns 2025-10-28T03:36:15.830Z

enabled an automatic merge when all merge checks for b88d92753cf629f8e5d66e3b069699c015a0e746 pass

Author: Amar Takhar 2025-10-28T03:55:16.084Z

approved this merge request

Author: Amar Takhar 2025-10-28T04:02:46.947Z

aborted the automatic merge because merge request was closed

Author: Chris Johns 2025-10-28T04:09:07.849Z

approved this merge request

Author: Chris Johns 2025-10-28T04:09:10.287Z

enabled an automatic merge when all merge checks for b88d92753cf629f8e5d66e3b069699c015a0e746 pass

Author: Aaron Nyholm 2025-10-28T04:16:54.794Z

added 1 commit

- 48274618 - bsps/shared/jffs2_flashdev.c: Fixed fatal heap error on failed mount

Compare with previous version

Author: Chris Johns 2025-10-28T04:21:49.986Z

enabled an automatic merge when all merge checks for 482746182f3f0a443bebf8d8961f0efc03c68773 pass

Author: Amar Takhar 2025-10-28T04:49:53.109Z

approved this merge request

2.8.2.8 814 - bsps/jffs2_flashdev: Return correct value for OOB size

Id	814
State	merged
Merged by	Kinsey Moore
Merged at	2025-10-26T20:53:56.069Z
Assignee(s)	Kinsey Moore
Created	2025-10-23T20:43:06.949Z
Updated	2025-10-26T20:53:56.060Z
Milestone	6.2
Labels	device::flash, filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/814
Commit	665b09e692b2c4f46c1fac38ca1db0c0a4a64e82

Summary

bsps/jffs2_flashdev: Return correct value for OOB size

Return the actual out of bounds size per page instead of the ioctl return status. JFFS2 will happily operate with an OOB size of 0 and instead put cleanmarkers in the normal page space of the flash.

Closes #5379

Author: Kinsey Moore 2025-10-23T20:43:10.104Z

assigned to @opticron

Author: Joel Sherrill 2025-10-24T14:46:01.579Z

approved this merge request

Author: Chris Johns 2025-10-26T20:53:53.531Z

approved this merge request

2.8.2.9 775 - cpukit/close.c: Fix reference counting under concurrent access.

Id	775
State	merged
Merged by	Kinsey Moore
Merged at	2025-10-09T22:43:21.889Z
Created	2025-10-09T22:41:58.587Z
Updated	2025-10-13T04:04:24.157Z
Milestone	6.2
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/775
Commit	f4328001c71f32cd8500d67afea5f1969e3f36aa

Summary

cpukit/close.c: Fix reference counting under concurrent access.

Fixes issue with IOP being freed during close call. Updates #5311

Author: Kinsey Moore 2025-10-09T22:42:20.704Z

approved this merge request

Author: Kinsey Moore 2025-10-09T22:42:22.492Z

enabled an automatic merge when all merge checks for f4328001c71f32cd8500d67afea5f1969e3f36aa pass

Author: Joel Sherrill 2025-10-09T22:42:55.413Z

approved this merge request

Author: Kinsey Moore 2025-10-10T00:02:38.555Z

mentioned in issue #5311

Author: Sebastian Huber 2025-10-13T04:04:24.137Z

Here you stop the `close()` if the open flag is not set.

Author: Sebastian Huber 2025-10-13T04:04:26.530Z

At this point, the open flag is cleared.

Author: Sebastian Huber 2025-10-13T04:04:28.936Z

Here you return from the `close()` with an error and the open flag is cleared. When is the close handler called eventually?

2.8.2.10 762 - Backport: cpukit: Raise internal error if we cannot open stdin with fileno 0

Id	762
State	merged
Merged by	Kinsey Moore
Merged at	2025-10-09T22:20:12.419Z
Created	2025-10-03T03:52:06.475Z
Updated	2025-10-11T00:56:03.657Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/762
Commit	074cb8f33735e4383992542a17b8d8725214114c

Summary

cpukit: Raise internal error if we cannot open stdin with fileno 0

If someone manages to open a file before rtems_libio_post_driver is run, open() may allocate a file number other than 0 for stdin. This leads to a silent failure of the logic in rtems_libio_post_driver, and confusing behavior because your BSP behaves as if it doesn't have a console.

Instead of failing silently, raise an internal error if open() succeeds but gives us an unexpected file number for stdin.

Updates #5284

Closes #5284

Author: Jeremy Lorelli 2025-10-03T04:01:33.932Z

mentioned in issue #5284

Author: Gedare Bloom 2025-10-09T22:19:57.555Z

Can you please add `Updates #5284` and `Closes #5284` to the commit messages?

Author: Gedare Bloom 2025-10-09T22:19:57.555Z

Sorry for being unclear, but we also want these in the commit messages. Please edit the commit messages and then force push. The first commit should update, the second should close.

Author: Kinsey Moore 2025-10-09T22:19:57.555Z

Fixed

Author: Jeremy Lorelli 2025-10-11T00:56:03.629Z

Thanks for taking care of this for me!

Author: Jeremy Lorelli 2025-10-06T17:51:22.932Z

changed the description

Author: Kinsey Moore 2025-10-09T22:19:37.104Z

added 6 commits

- abaec266...cdcc886d - 4 commits from branch `rtems/rtos:6`
- 7d44e6de - cpukit: Raise internal error if we cannot open stdin with fileno 0
- 074cb8f3 - libchip/ds1375: Refactor to use i2c-rtc driver

Compare with previous version

Author: Kinsey Moore 2025-10-09T22:19:57.583Z

resolved all threads

Author: Kinsey Moore 2025-10-09T22:20:02.010Z

enabled an automatic merge when all merge checks for 074cb8f33735e4383992542a17b8d8725214114c pass

Author: Kinsey Moore 2025-10-09T22:20:03.104Z

approved this merge request

Author: Chris Johns 2025-10-09T22:20:05.940Z

approved this merge request

2.8.2.11 772 - bsps/dev/spi/xqspipsu_flash_config.h: Make flash config table static

Id	772
State	merged
Merged by	Kinsey Moore
Merged at	2025-10-09T15:02:25.983Z
Assignee(s)	Kinsey Moore
Created	2025-10-08T20:37:13.509Z
Updated	2025-10-09T15:02:25.975Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/772
Commit	cdcc886ddc7c0672756e258f043b7c3fe4b4ad57

Summary

bsps/dev/spi/xqspipsu_flash_config.h: Make flash config table static

This is now used by multiple files and can cause a multiple definitions error when linking. Make the structure static to avoid this problem.

Closes #5372

Author: Kinsey Moore 2025-10-08T20:37:13.675Z

assigned to @opticron

Author: Kinsey Moore 2025-10-08T20:38:34.897Z

enabled an automatic merge when all merge checks for cdcc886ddc7c0672756e258f043b7c3fe4b4ad57 pass

Author: Chris Johns 2025-10-09T06:19:25.186Z

approved this merge request

Author: Amar Takhar 2025-10-09T14:50:09.359Z

approved this merge request

2.8.2.12 767 - spec/bsps/aarch64/xilinx-zynqmp: Add XQspiPsu flashdev backend

Id	767
State	merged
Merged by	Gedare Bloom
Merged at	2025-10-08T16:45:47.943Z
Assignee(s)	Kinsey Moore
Created	2025-10-03T14:46:57.726Z
Updated	2025-10-08T16:45:47.934Z
Milestone	6.2
Labels	device::flash
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/767
Commit	b19119212da0f3036153334713258b9342fbc6d5

Summary

spec/bsps/aarch64/xilinx-zynqmp: Add XQspiPsu flashdev backend

Closes #5371

Author: Kinsey Moore 2025-10-03T14:46:57.886Z

assigned to @opticron

Author: Joel Sherrill 2025-10-03T20:03:47.785Z

approved this merge request

Author: Gedare Bloom 2025-10-08T16:45:33.922Z

added 3 commits

- f4d80b47...32e76ed9 - 2 commits from branch `rtems/rtos:6`
- b1911921 - spec/bsps/aarch64/xilinx-zynqmp: Add XQspiPsu flashdev backend

Compare with previous version

Author: Gedare Bloom 2025-10-08T16:45:39.138Z

enabled an automatic merge when all merge checks for b19119212da0f3036153334713258b9342fbc6d5 pass

Author: Gedare Bloom 2025-10-08T16:45:41.429Z

approved this merge request

2.8.2.13 765 - bsps/shared/dev/flash/jffs2: Add support for NAND

Id	765
State	merged
Merged by	Gedare Bloom
Merged at	2025-10-08T16:44:35.013Z
Assignee(s)	Kinsey Moore
Created	2025-10-03T14:21:27.471Z
Updated	2025-10-08T16:44:34.989Z
Milestone	6.2
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/765
Commit	32e76ed96d30ceecc1cf7f3993107f0dac15728f

Summary

bsps/shared/dev/flash/jffs2: Add support for NAND

This adds support for NAND to the JFFS2 flashdev adapter.

Closes #5369

Author: Kinsey Moore 2025-10-03T14:21:27.612Z

assigned to @opticron

Author: Joel Sherrill 2025-10-03T20:05:42.403Z

approved this merge request

Author: Gedare Bloom 2025-10-08T16:44:15.622Z

added 2 commits

- 10154a6e - 1 commit from branch `rtems/rtos:6`
- 32e76ed9 - bsps/shared/dev/flash/jffs2: Add support for NAND

Compare with previous version

Author: Gedare Bloom 2025-10-08T16:44:21.868Z

approved this merge request

Author: Gedare Bloom 2025-10-08T16:44:23.187Z

enabled an automatic merge when all merge checks for 32e76ed96d30ceecc1cf7f3993107f0dac15728f pass

2.8.2.14 758 - cpukit/jffs2/gc.c: Prevent live lock for split reads

Id	758
State	merged
Merged by	Kinsey Moore
Merged at	2025-10-03T00:16:10.537Z
Assignee(s)	Kinsey Moore
Created	2025-09-29T16:44:51.381Z
Updated	2025-10-03T00:16:10.435Z
Milestone	6.2
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/758
Commit	df40ffa9dcb21dba1e81403b2eb33ae83c98814e

Summary

cpukit/jffs2/gc.c: Prevent live lock for split reads

In some cases a file read is not completed in a single call into the JFFS2 layer and the inode is left in the READING state. When this happens, it's possible for a garbage collection pass to be initiated before completion of the read. In some such cases, the garbage collection pass is executed in a tight loop that expects granular locking to allow forward progress of the read between collection passes. With RTEMS monolithic locking of the JFFS2 layer, forward progress is not possible in this situation since the monolithic lock is never released inside the loop.

The solution is to have the garbage collection pass return failure when no progress is possible due to a bad inode state. This allows the read to complete and the collection pass can be attempted at a later time.

Closes #5365

Author: Kinsey Moore 2025-09-29T16:44:51.526Z

assigned to @opticron

Author: Kinsey Moore 2025-09-29T16:45:32.028Z

changed title from

cpukit/jffs2/

rtime: Fix off-by-one error in decompression check

to

cpukit/jffs2/

gc.c: Prevent live lock for split reads

Author: Kinsey Moore 2025-09-29T16:45:32.053Z

changed the description

Author: Kinsey Moore 2025-09-29T16:45:32.086Z

changed target branch from `main` to `6`

Author: Kinsey Moore 2025-09-29T16:45:51.078Z

changed the description

Author: Kinsey Moore 2025-09-29T16:46:56.242Z

enabled an automatic merge when all merge checks for 3dd8fa79e905686301962a26a8c3035a60889ee6 pass

Author: Kinsey Moore 2025-09-29T17:39:15.016Z

added 1 commit

- 6b98c717 - cpukit/jffs2/gc.c: Prevent live lock for split reads

Compare with previous version

Author: Kinsey Moore 2025-09-29T17:39:24.970Z

enabled an automatic merge when all merge checks for 6b98c71755867df648275b78bfe21b5961f7e263 pass

Author: Chris Johns 2025-10-02T23:42:29.833Z

approved this merge request

Author: Kinsey Moore 2025-10-02T23:45:55.290Z

aborted the automatic merge because target branch was updated

Author: Amar Takhar 2025-10-03T00:14:00.669Z

approved this merge request

Author: Kinsey Moore 2025-10-03T00:15:15.737Z

added 3 commits

- 6b98c717...1c3cd25e - 2 commits from branch `rtems/rtos:6`
- df40ffa9 - cpukit/jffs2/gc.c: Prevent live lock for split reads

Compare with previous version

Author: Kinsey Moore 2025-10-03T00:15:25.751Z

enabled an automatic merge when all merge checks for df40ffa9dcb21dba1e81403b2eb33ae83c98814e pass

2.8.2.15 743 - cpukit/flashdev: Add full support for NAND devices

Id	743
State	merged
Merged by	Amar Takhar
Merged at	2025-10-03T00:13:51.425Z
Assignee(s)	Kinsey Moore
Created	2025-09-23T19:37:24.824Z
Updated	2025-10-03T00:13:51.417Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/743
Commit	1c3cd25ebd1458cb4e81e67adf0684b237501e53

Summary

This extends the flashdev API to support the additional calls required by NAND device backends. This also adds region-relative IOCTLs to prevent reimplementation of offset logic in top-end flashdev/filesystem adapters.

Closes #5350

Author: Kinsey Moore 2025-09-23T19:37:25.131Z

assigned to @opticron

Author: Kinsey Moore 2025-09-23T19:37:38.187Z

changed target branch from `main` to `6`

Author: Kinsey Moore 2025-09-23T19:38:17.117Z

changed title from

cpukit/

jffs2/rtime: Fix off-by-one error in decompression check

to

cpukit/

flashdev: Add full support for NAND devices

Author: Kinsey Moore 2025-09-23T19:38:17.141Z

changed the description

Author: Kinsey Moore 2025-09-23T19:38:36.930Z

changed the description

Author: Kinsey Moore 2025-09-23T19:39:10.357Z

enabled an automatic merge when all merge checks for 8b49c7ec2f03fbb4bf68e08e2819ba5903aea3e2 pass

Author: Chris Johns 2025-09-24T13:56:59.751Z

aborted the automatic merge because target branch was updated

Author: Kinsey Moore 2025-09-29T16:39:16.609Z

added 3 commits

- 8b49c7ec...d45d353a - 2 commits from branch `rtems/rtos:6`
- 7b3808f2 - cpukit/flashdev: Add full support for NAND devices

Compare with previous version

Author: Kinsey Moore 2025-09-29T16:39:23.201Z

enabled an automatic merge when all merge checks for 7b3808f28239f147baa382ec2310e6e303388eb5 pass

Author: Chris Johns 2025-10-02T23:43:41.466Z

approved this merge request

Author: Kinsey Moore 2025-10-02T23:45:55.587Z

aborted the automatic merge because target branch was updated

Author: Amar Takhar 2025-10-03T00:12:32.784Z

approved this merge request

Author: Amar Takhar 2025-10-03T00:13:33.832Z

added 2 commits

- f42ad920 - 1 commit from branch `rtems/rtos:6`
- 1c3cd25e - cpukit/flashdev: Add full support for NAND devices

Compare with previous version

Author: Amar Takhar 2025-10-03T00:13:40.429Z

enabled an automatic merge when all merge checks for 1c3cd25ebd1458cb4e81e67adf0684b237501e53 pass

2.8.2.16 721 - validation: Move storage class qualifier

Id	721
State	merged
Merged by	Kinsey Moore
Merged at	2025-10-02T23:45:52.526Z
Assignee(s)	Sebastian Huber
Created	2025-09-12T01:30:42.791Z
Updated	2025-10-02T23:45:52.513Z
Milestone	6.2
Labels	backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/721
Commit	f42ad92071d3111bf9edc8715fad37ca387b4b0e

Summary

validation: Move storage class qualifier

Backport storage class qualifier rearrangment required by more recent C language standard revisions.

Close #5337.

Author: Sebastian Huber 2025-09-12T01:30:42.937Z

assigned to @sebhub

Author: Sebastian Huber 2025-09-12T01:31:05.006Z

enabled an automatic merge when all merge checks for 4b7498ac0e4b03bebcacb40104dea5f62280427b pass

Author: Gedare Bloom 2025-09-15T16:23:28.758Z

approved this merge request

Author: Amar Takhar 2025-09-15T17:27:29.335Z

aborted the automatic merge because target branch was updated

Author: Chris Johns 2025-10-02T23:45:27.539Z

approved this merge request

Author: Chris Johns 2025-10-02T23:45:35.399Z

added 6 commits

- 4b7498ac...d45d353a - 5 commits from branch `rtems/rtos:6`
- f42ad920 - validation: Move storage class qualifier

Compare with previous version

Author: Kinsey Moore 2025-10-02T23:45:36.838Z

approved this merge request

Author: Kinsey Moore 2025-10-02T23:45:40.620Z

enabled an automatic merge when all merge checks for f42ad92071d3111bf9edc8715fad37ca387b4b0e pass

2.8.2.17 748 - libdebugger: Add SMP support for ARM

Id	748
State	merged
Merged by	Gedare Bloom
Merged at	2025-09-26T00:20:25.481Z
Assignee(s)	Chris Johns
Created	2025-09-25T04:26:20.023Z
Updated	2025-09-26T00:20:25.473Z
Milestone	6.2
Labels	cpukit::debugger
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/748
Commit	d45d353abb18e14538a005e3f5addc5358cbf3dd

Add SMP support for ARM

Make the `aarch64` SMP support a separate file and share it between `aarch64` and `arm`.

Closes #5348

Author: Chris Johns 2025-09-25T04:26:20.180Z

assigned to @chris

Author: Kinsey Moore 2025-09-25T12:29:49.711Z

approved this merge request

Author: Kinsey Moore 2025-09-25T12:29:56.912Z

added 2 commits

- b05ae8a6 - 1 commit from branch `rtems/rtos:6`
- d45d353a - libdebugger: Add SMP support for ARM

Compare with previous version

Author: Gedare Bloom 2025-09-26T00:20:22.125Z

approved this merge request

2.8.2.18 742 - bsps/shared/dev/flash: Enforce maximum JFFS2 filesystem size

Id	742
State	merged
Merged by	Chris Johns
Merged at	2025-09-24T13:56:57.076Z
Assignee(s)	Kinsey Moore
Created	2025-09-23T01:49:22.625Z
Updated	2025-09-24T13:56:57.067Z
Milestone	6.2
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/742
Commit	b05ae8a6d49327225abfc202b8dcbb1bb97c88a3

Summary

bsps/shared/dev/flash: Enforce maximum JFFS2 filesystem size

The maximum size of JFFS2 is 4GB minus the block size of the flash. Enforce this limitation when setting up a filesystem on a flashdev region that is larger than the maximum.

This also resolves some off-nominal memory leaks.

Closes #5347

Author: Kinsey Moore 2025-09-23T01:49:22.777Z

assigned to @opticron

Author: Chris Johns 2025-09-23T03:20:37.714Z

approved this merge request

Author: Chris Johns 2025-09-23T03:20:45.154Z

enabled an automatic merge when all merge checks for b05ae8a6d49327225abfc202b8dcbb1bb97c88a3 pass

Author: Gedare Bloom 2025-09-23T20:53:18.302Z

approved this merge request

2.8.2.19 741 - cpukit/flashdev: Add unregister call and private data destructor

Id	741
State	merged
Merged by	Joel Sherrill
Merged at	2025-09-23T00:06:39.419Z
Assignee(s)	Kinsey Moore
Created	2025-09-23T00:01:25.972Z
Updated	2025-09-23T00:06:39.410Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/741
Commit	d0190f0718fb7466af0e296248c6ac3967544073

Summary

cpukit/flashdev: Add unregister call and private data destructor

This adds an API call allowing for unregistration to include destruction of private data that is not managed by the flashdev framework. This also updates the existing consumers of flashdev to use the new private data destructor callback.

Closes #5346

Author: Kinsey Moore 2025-09-23T00:01:26.113Z

assigned to @opticron

Author: Chris Johns 2025-09-23T00:02:49.434Z

approved this merge request

Author: Joel Sherrill 2025-09-23T00:06:33.937Z

approved this merge request

2.8.2.20 720 - rtems: Add rtems_barrier_get_number_waiting()

Id	720
State	merged
Merged by	Chris Johns
Merged at	2025-09-19T22:06:38.366Z
Assignee(s)	Sebastian Huber
Created	2025-09-12T01:12:41.205Z
Updated	2025-09-19T22:06:40.572Z
Milestone	6.2
Labels	backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/720
Commit	a79d702be6fc655eaf841d51286d24bf4cef4310

Summary

rtems: Add rtems_barrier_get_number_waiting()

Backport commit 528095cd24afeef648ea0e70694aa3755a7c0edf.

Close #5336.

Author: Sebastian Huber 2025-09-12T01:12:41.353Z

assigned to @sebhub

Author: Sebastian Huber 2025-09-12T01:12:55.926Z

enabled an automatic merge when all merge checks for 14b23c1d56adff6ade331ad6dea0720c259daced pass

Author: Gedare Bloom 2025-09-15T16:23:01.551Z

approved this merge request

Author: Amar Takhar 2025-09-15T17:27:29.750Z

aborted the automatic merge because target branch was updated

Author: Chris Johns 2025-09-19T22:06:03.462Z

approved this merge request

Author: Chris Johns 2025-09-19T22:06:21.077Z

added 2 commits

- d27c444b - 1 commit from branch `rtems/rtos:6`
- a79d702b - rtems: Add rtems_barrier_get_number_waiting()

Compare with previous version

2.8.2.21 222 - posix/aio_misc.c/aio_init(): lock before accessing data

Id	222
State	merged
Merged by	Amar Takhar
Merged at	2024-09-25T17:48:35.955Z
Created	2024-09-17T09:16:40.178Z
Updated	2025-09-19T00:52:57.680Z
Milestone	6.2
Labels	api::posix
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/222
Commit	617808b9794ae01d0d7cd874b15c580719a11d79

Summary

posix/aio_misc.c/aio_init(): lock before accessing data

Added lock before accessing data to address coverity issue.

```
CID 1592924: Data race condition (MISSING_LOCK)
/cpukit/posix/src/aio_misc.c: 146 in rtems_aio_init()
143  rtems_chain_initialize_empty( &aio_request_queue.work_req );
144  rtems_chain_initialize_empty( &aio_request_queue.idle_req );
145



     CID 1592924: Data race condition (MISSING_LOCK)
     Accessing aio_request_queue.active_threads without holding lock rtems_aio_
↪queue.mutex.
     146  aio_request_queue.active_threads = 0;
     147  aio_request_queue.idle_threads = 0;
     148  atomic_init( &aio_request_queue.queued_requests, 0 );


 Closes `#5129 <https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/5129>`_.
```

Author: Joel Sherrill 2024-09-18T07:04:12.949Z

Please add the annotated analysis from Coverity in the description.

Author: Alessandro Nardin 2024-09-18T07:04:12.949Z

added

Author: Alessandro Nardin 2024-09-18T06:55:52.891Z

changed the description

Author: Alessandro Nardin 2024-09-18T07:02:31.632Z

added 10 commits

- 7a464d0a...d304a817 - 9 commits from branch `rtems/rtos:main`
- 344caffe - posix/aio_misc.c/aio_init(): lock before accessing data

Compare with previous version

Author: Alessandro Nardin 2024-09-18T07:04:12.966Z

resolved all threads

Author: Alessandro Nardin 2024-09-24T15:55:22.469Z

added 12 commits

- 344caffe...6003ea9d - 11 commits from branch `rtems/rtos:main`
- 2c802636 - posix/aio_misc.c/aio_init(): lock before accessing data

Compare with previous version

Author: Joel Sherrill 2024-09-25T15:03:59.061Z

approved this merge request

Author: Amar Takhar 2024-09-25T17:47:37.733Z

approved this merge request

Author: Amar Takhar 2024-09-25T17:47:50.240Z

added 6 commits

- 2c802636...9eb23924 - 5 commits from branch `rtems/rtos:main`
- 280846e5 - posix/aio_misc.c/aio_init(): lock before accessing data

Compare with previous version

Author: Amar Takhar 2024-09-25T17:48:20.829Z

added 2 commits

- de196e05 - 1 commit from branch `rtems/rtos:main`
- 617808b9 - posix/aio_misc.c/aio_init(): lock before accessing data

Compare with previous version

2.8.2.22 722 - rtems: Backport Doxygen changes

Id	722
State	merged
Merged by	Amar Takhar
Merged at	2025-09-15T17:27:26.686Z
Assignee(s)	Sebastian Huber
Created	2025-09-12T01:32:06.980Z
Updated	2025-09-15T17:27:26.674Z
Milestone	6.2
Labels	backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/722
Commit	d27c444b8dd5caa8416fd1b0d040d4009641169e

Summary

rtems: Backport Doxygen changes

The conversion to Markdown for the documentation sources resulted in changes of Doxygen comments of generated sources. Backport these changes.

Close #5338.

Author: Sebastian Huber 2025-09-12T01:32:07.140Z

assigned to @sebhub

Author: Sebastian Huber 2025-09-12T01:32:16.377Z

enabled an automatic merge when all merge checks for c0d4a7022a49a7f739366524f3c46479bd968fb9 pass

Author: Sebastian Huber 2025-09-12T02:43:27.770Z

added 1 commit

- d27c444b - rtems: Backport Doxygen changes

Compare with previous version

Author: Gedare Bloom 2025-09-15T16:26:57.611Z

approved this merge request

Author: Amar Takhar 2025-09-15T17:27:23.119Z

enabled an automatic merge when all merge checks for d27c444b8dd5caa8416fd1b0d040d4009641169e pass

Author: Amar Takhar 2025-09-15T17:27:23.787Z

approved this merge request

2.8.2.23 637 - cpukit/libdebugger/server: Use generic TLS accessor

Id	637
State	merged
Merged by	Chris Johns
Merged at	2025-07-31T01:11:16.233Z
Assignee(s)	Kinsey Moore
Created	2025-07-27T22:46:42.779Z
Updated	2025-07-31T01:11:16.219Z
Milestone	6.2
Labels	cpukit::debugger
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/637
Commit	a79813c96e76bc0e7c71ffce675374b520129d24

Summary

cpukit/libdebugger/server: Use generic TLS accessor

This updates the libdebugger server to use a generic TLS area access mechanism so that it works across all supported architectures.

Closes #5313

Author: Kinsey Moore 2025-07-27T22:46:42.910Z

assigned to @opticron

Author: Kinsey Moore 2025-07-29T12:33:37.222Z

added 1 commit

- 7fe22dd7 - cpukit/libdebugger/server: Use generic TLS accessor

Compare with previous version

Author: Joel Sherrill 2025-07-29T12:45:44.428Z

approved this merge request

Author: Chris Johns 2025-07-31T01:10:51.396Z

approved this merge request

Author: Chris Johns 2025-07-31T01:11:00.111Z

added 2 commits

- 0cf6de01 - 1 commit from branch `rtems/rtos:6`
- a79813c9 - cpukit/libdebugger/server: Use generic TLS accessor

Compare with previous version

Author: Chris Johns 2025-07-31T01:11:04.184Z

enabled an automatic merge when all merge checks for a79813c96e76bc0e7c71ffce675374b520129d24 pass

2.8.2.24 518 - cpukit/libdebugger: Add support for TLS variables

Id	518
State	merged
Merged by	Chris Johns
Merged at	2025-07-25T01:33:07.623Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Chris Johns
Created	2025-06-17T19:19:24.345Z
Updated	2025-07-25T01:33:10.653Z
Milestone	6.2
Labels	backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/518
Commit	1240e8f81b39fab0551da0971ff57a560f06a025

Summary

cpukit/libdebugger: Add support for TLS variables

This adds support for the “vGetTLSAddr” GDB query which retrieves the address of a TLS variable by offset from the beginning of the TLS memory space for the given thread. This offset does not include the size of the thread control block which is at the beginning of every TLS area as used by RTEMS. Notably, the returned address is big-endian rather than the little-endian typical with other responses.

This functionality does not include retrieval of addresses for TLS variables hosted in loadable modules, only TLS variables in the host binary.

Closes #5271 Updates #4883

Author: Kinsey Moore 2025-06-17T19:19:24.986Z

requested review from @chris

Author: Kinsey Moore 2025-06-17T19:19:25.012Z

assigned to @opticron

Author: Kinsey Moore 2025-06-18T18:59:43.036Z

changed the description

Author: Kinsey Moore 2025-06-18T19:01:15.967Z

mentioned in issue #4883

Author: Kinsey Moore 2025-06-25T11:42:20.014Z

added 1 commit

- 14329bc2 - cpukit/libdebugger: Add support for TLS variables

Compare with previous version

Author: Gedare Bloom 2025-06-25T16:35:42.812Z

approved this merge request

Author: Kinsey Moore 2025-06-26T00:48:21.060Z

added 1 commit

- 4f819d02 - cpukit/libdebugger: Add support for TLS variables

Compare with previous version

Author: Kinsey Moore 2025-07-25T00:18:50.538Z

added 1 commit

- c276be7e - cpukit/libdebugger: Add support for TLS variables

Compare with previous version

Author: Kinsey Moore 2025-07-25T00:19:02.905Z

reset approvals from @gedare by pushing to the branch

Author: Chris Johns 2025-07-25T00:19:58.757Z

approved this merge request

Author: Chris Johns 2025-07-25T00:20:19.659Z

added 5 commits

- c276be7e...e7fa90ab - 4 commits from branch `rtems/rtos:6`
- 7061ab5b - cpukit/libdebugger: Add support for TLS variables

Compare with previous version

Author: Chris Johns 2025-07-25T00:20:53.415Z

enabled an automatic merge when all merge checks for 7061ab5bd67c1b30283910a82c28d00baf2c7dd4 pass

Author: Kinsey Moore 2025-07-25T01:11:54.548Z

aborted the automatic merge because target branch was updated

Author: Kinsey Moore 2025-07-25T01:31:48.988Z

added 3 commits

- 7061ab5b...b1dbd9ee - 2 commits from branch `rtems/rtos:6`
- 1240e8f8 - cpukit/libdebugger: Add support for TLS variables

Compare with previous version

Author: Joel Sherrill 2025-07-25T01:32:56.791Z

approved this merge request

Author: Amar Takhar 2025-07-25T01:32:58.337Z

approved this merge request

2.8.2.25 626 - bsps/include/dev/spi: Add missing extern and guard

Id	626
State	merged
Merged by	Kinsey Moore
Merged at	2025-07-25T01:11:51.663Z
Assignee(s)	Kinsey Moore
Created	2025-07-23T20:19:01.389Z
Updated	2025-07-25T01:11:51.652Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/626
Commit	b1dbd9eeae9ad1c1dbc1b9593039e41e1101a4ce

Summary

bsps/include/dev/spi: Add missing extern and guard

This adds missing extern “C” declarations and a missing header guard.

Updates #5309

Author: Kinsey Moore 2025-07-23T20:19:01.576Z

assigned to @opticron

Author: Kinsey Moore 2025-07-24T22:33:22.448Z

enabled an automatic merge when all merge checks for b1dbd9eeae9ad1c1dbc1b9593039e41e1101a4ce pass

Author: Joel Sherrill 2025-07-24T22:33:26.979Z

approved this merge request

Author: Chris Johns 2025-07-25T01:11:47.559Z

approved this merge request

2.8.2.26 548 - cpu/riscv: Add Smdbltrp extension compatibility to 6 branch

Id	548
State	merged
Merged by	Kinsey Moore
Merged at	2025-07-03T13:20:06.894Z
Created	2025-07-03T08:10:40.579Z
Updated	2025-07-03T13:20:06.437Z
Milestone	6.2
Labels	arch:riscv
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/548
Commit	e7fa90ab0ccd0566dd0b136c62aa729515c3b011

Summary

cpu/riscv: Add Smdbltrp extension compatibility

If the Double Trap Extension is implemented, the MDT bit of the mstatus (or mstatush in RV32) register will be set when a trap is to be taken.

The MIE (Machine Interrupt Enable) bit can only be set to 1 if the MDT bit is zero.

Thus, we need to clear MDT first if we want to enable interrupts when dispatching a thread.

MDT is also cleared in register a1 before restoring the interrupt frame as writing 1 to MDT will cause MIE to be set to 0. In RV64 this happens regardless of the value written to MIE in the same write.

In RV32, MDT is in the mstatush so we do not need to clear during restore as this register is not restored.

With this change all 60 SMP tests pass (compared to 20/60 before the fix). The tests have been run on hardware using two RV64 CPUs that implement the double trap extension.

Close #5288

(cherry picked from commit 19f12d2dca02da3072c0c31e2da281f6a447699e)

Author: Kinsey Moore 2025-07-03T13:11:23.395Z

approved this merge request

Author: Kinsey Moore 2025-07-03T13:11:30.083Z

enabled an automatic merge when all merge checks for e7fa90ab0ccd0566dd0b136c62aa729515c3b011 pass

Author: Joel Sherrill 2025-07-03T13:20:01.821Z

approved this merge request

2.8.2.27 537 - bsps/noelv: Backport polled mode console to 6

Id	537
State	merged
Merged by	Gedare Bloom
Merged at	2025-06-28T15:35:41.336Z
Created	2025-06-26T07:02:00.422Z
Updated	2025-06-28T15:36:37.701Z
Milestone	6.2
Labels	arch:riscv, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/537
Commit	dd490c5c2d02e472c83b7052612b554e8b74358f

Summary

bsps/noelv: Fix using console in polled mode

Before, the console driver needed `BSP_CONSOLE_USE_INTERRUPTS` to be defined or it would not build. The intent was to use polled mode if the macro was equal to zero.

This change makes it so interrupt mode is used if the macro is defined and polled mode is used if the macro is not defined.

(cherry picked from commit 5e0a68d3ab6bedb16e465267310c59c25803b783)

Close #5283

Author: Joel Sherrill 2025-06-27T13:32:10.089Z

This needs an issue for the backport and the issue needs to be associated with the 6.2 release epic.

If that needs clarification, this is documented somewhere. Ask on Discord and hopefully someone can give you a pointer.

If you need help, ask on Discord.

Author: Matteo Concas 2025-06-27T13:32:10.089Z

I created issue #5283, but I can't seem to add it to the 6.2 release epic or add labels to it. I guess only maintainers have these rights.

Author: Matteo Concas 2025-06-27T07:42:39.176Z

added 1 commit

- dd490c5c - bsps/noelv: Fix using console in polled mode

Compare with previous version

Author: Matteo Concas 2025-06-27T07:43:20.752Z

changed the description

Author: Kinsey Moore 2025-06-27T13:32:10.120Z

resolved all threads

Author: Kinsey Moore 2025-06-27T13:32:14.452Z

approved this merge request

Author: Gedare Bloom 2025-06-28T14:53:54.575Z

approved this merge request

2.8.2.28 532 - bsps/sparc/leon3: Backport GPTIMER timer index logic fix to 6

Id	532
State	merged
Merged by	Kinsey Moore
Merged at	2025-06-26T02:36:21.764Z
Assignee(s)	Matteo Concas
Created	2025-06-23T07:28:42.604Z
Updated	2025-06-26T02:36:21.748Z
Milestone	6.2
Labels	backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/532
Commit	d010f6ae8bc4e2ccfcc162b256e18ed61b71820d

Summary

bsps/sparc/leon3: Fix GPTIMER timer index logic

The old logic would lead to an error when multiprocessing was enabled and `LEON3_GPTIMER_BASE` was defined due to `leon3_timer_core_index` being undefined.

The new logic fixes this and keeps the same intent:

- If multiprocessing is not enabled, the timer index is 0
- If multiprocessing is enabled and `LEON3_GPTIMER_BASE` is defined, the timer index is twice the CPU boot index
- If multiprocessing is enabled and `LEON3_GPTIMER_BASE` is not defined, we fallback to the old logic using the GPTIMER core index.

Author: Matteo Concas 2025-06-23T07:29:20.225Z

changed title from **bsps/sparc/leon3: {-Fix-} GPTIMER timer index logic** to **bsps/sparc/leon3: {+Backport+} GPTIMER timer index logic{+ fix to 6+}**

Author: Matteo Concas 2025-06-23T07:30:22.977Z

mentioned in merge request !514

Author: Gedare Bloom 2025-06-25T16:24:56.538Z

@matteo.concas please add closes #5281 to the commit message someone will have to manually close it also, after the backport

Author: Matteo Concas 2025-06-25T16:24:56.538Z

I have added “Close #5281” to the commit message.

Author: Gedare Bloom 2025-06-24T20:31:45.106Z

assigned to @matteo.concas

Author: Matteo Concas 2025-06-25T06:23:00.842Z

added 1 commit

- d010f6ae - bsps/sparc/leon3: Fix GPTIMER timer index logic

Compare with previous version

Author: Gedare Bloom 2025-06-25T16:24:56.595Z

resolved all threads

Author: Gedare Bloom 2025-06-25T16:26:16.722Z

approved this merge request

Author: Joel Sherrill 2025-06-25T22:20:48.635Z

approved this merge request

Author: Kinsey Moore 2025-06-26T02:36:07.135Z

enabled an automatic merge when the pipeline for d010f6ae8bc4e2ccfcc162b256e18ed61b71820d succeeds

2.8.2.29 524 - cpukit/libdebugger: Prevent hang on memory access

Id	524
State	merged
Merged by	Kinsey Moore
Merged at	2025-06-19T22:52:50.613Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Chris Johns
Created	2025-06-18T18:55:15.610Z
Updated	2025-06-19T22:52:53.452Z
Milestone	6.2
Labels	arch:aarch64, cpukit::debugger
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/524
Commit	3d8b56f10c9cabe8cc731ada636af59f71e8e10b

Summary

cpukit/libdebugger: Prevent hang on memory access

When memory is accessed by the remote debugging client, the access is sandboxed with setjmp/longjmp and appropriate exception handlers to prevent the attempted access from causing a failure of the debugger or otherwise altering execution. The existing implementation works as expected when the context executing the memory access and the exception context resulting from a failed access do not share a stack.

In the case of AArch64, a failed access when the debugger is already in exception context causes a re-entry into exception context where the machine state is pushed onto the same stack that was in use where the exception occurred. When setjmp is called inside a stack frame and the exception occurs outside that stack frame, the stack frame is unwound before the exception occurs and the exception entry overwrites the area previously occupied by the stack frame housing the setjmp and corrupting the link register that is stored there. After restoration of state using longjmp(), this corrupted link register information is loaded from the stack frame and undesired behavior occurs.

In the instance of this bug that was encountered, the corrupted link register contained an unaligned pointer which caused an unending cascade of prefetch abort exceptions presenting as a hard hang.

Closes #5273

Author: Kinsey Moore 2025-06-18T18:55:16.294Z

requested review from @chris

Author: Kinsey Moore 2025-06-18T18:55:16.326Z

assigned to @opticron

Author: Chris Johns 2025-06-19T22:36:09.770Z

approved this merge request

Author: Joel Sherrill 2025-06-19T22:48:37.839Z

approved this merge request

2.8.2.30 492 - bsps/shared/dev/ide: Initalise ATA request links as off chain

Id	492
State	merged
Merged by	Kinsey Moore
Merged at	2025-05-30T13:34:27.218Z
Assignee(s)	Chris Johns
Created	2025-05-28T03:02:46.375Z
Updated	2025-05-30T13:34:29.285Z
Milestone	6.2
Labels	arch:i386
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/492
Commit	cb3fba044770f0bb6a96bd2b93e09df90d1e2e34

Initalise ATA request links as off chain

- Fixes the asserts when building with RTEMS_DEBUG

Closes #5254

Author: Chris Johns 2025-05-28T03:02:46.604Z

assigned to @chris

Author: Joel Sherrill 2025-05-29T22:47:40.523Z

approved this merge request

Author: Kinsey Moore 2025-05-30T13:34:12.786Z

approved this merge request

2.8.2.31 354 - score: Fix RTEMS_DEBUG build

Id	354
State	merged
Merged by	Kinsey Moore
Merged at	2025-01-08T13:31:58.965Z
Assignee(s)	Sebastian Huber
Created	2025-01-08T05:42:37.595Z
Updated	2025-05-09T00:10:25.214Z
Milestone	6.2
Labels	rtems::score
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/354
Commit	34ba74f4f492030ea33fc23adfd21e20959ba9f8

Summary

score: Fix RTEMS_DEBUG build

Close #5159.

Author: Sebastian Huber 2025-01-08T05:42:37.873Z

assigned to @sebhub

Author: Chris Johns 2025-01-08T05:43:50.581Z

approved this merge request

Author: Kinsey Moore 2025-01-08T13:31:38.056Z

approved this merge request

2.8.2.32 416 - machine/timecounters: Add _Timecounter_Getboottime, _Timecounter_Getboottimebin decls

Id	416
State	merged
Merged by	Kinsey Moore
Merged at	2025-05-08T22:38:11.262Z
Assignee(s)	Chris Johns
Created	2025-02-11T22:27:17.904Z
Updated	2025-05-08T22:38:15.309Z
Milestone	6.2
Labels	rtems::kernel
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/416
Commit	6335d7e48a692e4c4fe0577b6bba44ff0f64aefc

Summary

Add _Timecounter_Getboottime, _Timecounter_Getboottimebin decls

Closes #5212

Author: Chris Johns 2025-02-11T22:27:18.157Z

assigned to @chris

Author: Kinsey Moore 2025-05-08T22:36:28.879Z

This fails the commit message line length checks.

Author: Chris Johns 2025-05-08T22:36:01.285Z

added 1 commit

- 993962be - machine/timecounters: Add missing _Timecounter_ decls

Compare with previous version

Author: Joel Sherrill 2025-05-08T22:36:28.914Z

resolved all threads

Author: Joel Sherrill 2025-05-08T22:36:37.023Z

approved this merge request

Author: Kinsey Moore 2025-05-08T22:36:54.367Z

approved this merge request

Author: Kinsey Moore 2025-05-08T22:37:04.928Z

added 4 commits

- 993962be...f769b20c - 3 commits from branch `rtems/rtos:6`
- 328e83ec - machine/timecounters: Add missing _Timecounter_ decls

Compare with previous version

Author: Chris Johns 2025-05-08T22:37:32.553Z

added 1 commit

- 6335d7e4 - machine/timecounters: Add missing _Timecounter_ decls

Compare with previous version

2.8.2.33 461 - cpukit/libdl: Fix loading symbols from an object file at runtime

Id	461
State	merged
Merged by	Amar Takhar
Merged at	2025-04-04T00:06:34.500Z
Assignee(s)	Chris Johns
Created	2025-04-01T01:34:14.150Z
Updated	2025-04-04T00:06:36.822Z
Milestone	6.2
Labels	cpukit::dl, tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/461
Commit	f769b20c98e48c4351c540ac53c443acf64cd6b1

Summary

cpukit/libdl: Fix loading symbols from an object file at runtime

- Assume a relocation record with a symbol name with a length of 0 is resolved. ARM seems to create a symbol with no name for R_ARM_V4BX relocation records.
- Move the addition of the rtems_rtl_base_sym_global_add symbol to the global symbol table to the weak rtems_rtl_base_global_syms_init call. If symbols are embedded the support for runtime loading symbols is over loaded. This change is required so the base object has a valid global symbol table attached to track dependencies.

Fixes #5236

Author: Chris Johns 2025-04-01T01:34:14.397Z

assigned to @chris

Author: Kinsey Moore 2025-04-03T23:01:59.004Z

approved this merge request

Author: Amar Takhar 2025-04-04T00:06:28.081Z

approved this merge request

2.8.2.34 459 - Backport “spec: Install missing header files for GRLIB and SPARC” to 6 branch

Id	459
State	merged
Merged by	Joel Sherrill
Merged at	2025-03-26T16:50:31.035Z
Created	2025-03-26T16:48:45.767Z
Updated	2025-03-26T16:50:33.271Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/459
Commit	9dae9f5fe858dbd556ebd2f529035f8c63824dca

Backport commit `spec: Install missing header files for GRLIB and SPARC` on `main` to `6` branch.

Closes issue #5232

Author: Kinsey Moore 2025-03-26T16:49:31.177Z

approved this merge request

Author: Joel Sherrill 2025-03-26T16:50:20.843Z

approved this merge request

2.8.2.35 418 - gitlab: Add link to CI

Id	418
State	merged
Merged by	Chris Johns
Merged at	2025-02-13T03:24:20.100Z
Assignee(s)	Amar Takhar
Created	2025-02-12T13:40:24.076Z
Updated	2025-03-13T22:44:56.007Z
Milestone	6.2
Labels	ci
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/418
Commit	b4149b2282ee3543455894ae7981703de1d719ac

Summary

gitlab: Add link to CI

This runs only the commit message and merge request checker.

Required so we can have ‘all pipelines must pass’ enabled due to a bug in Gitlab

Author: Amar Takhar 2025-02-12T13:40:24.364Z

assigned to @amar

Author: Amar Takhar 2025-02-12T14:04:32.289Z

Once this is merged I can enable enforcing pipelines must pass.

Author: Kinsey Moore 2025-02-12T14:46:29.753Z

approved this merge request

Author: Chris Johns 2025-02-13T03:18:41.727Z

changed the description

Author: Chris Johns 2025-02-13T03:24:10.796Z

Commit message as “ue” instead of “due”

Author: Amar Takhar 2025-02-13T03:22:35.416Z

added 1 commit

- b4149b22 - gitlab: Add link to CI

Compare with previous version

Author: Chris Johns 2025-02-13T03:24:10.814Z

resolved all threads

Author: Chris Johns 2025-02-13T03:24:15.303Z

approved this merge request

2.8.2.36 413 - Revert “build: Provide LDFLAGS for pkg-config”

Id	413
State	merged
Merged by	Kinsey Moore
Merged at	2025-02-11T13:51:35.086Z
Assignee(s)	Chris Johns
Created	2025-02-11T05:43:37.231Z
Updated	2025-02-11T13:51:37.304Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/413
Commit	87bf49b7156b9ddf45c218e5d4fa01f27b283db7

Summary

Revert “build: Provide LDFLAGS for pkg-config”

This reverts commit e36ba91110724b5cc8a9e07659d98d0bcb96e4d4

Updates #5165

See https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/issues/38

Author: Chris Johns 2025-02-11T05:50:43.847Z

changed the description

Author: Chris Johns 2025-02-11T05:50:43.893Z

assigned to @chris

Author: Chris Johns 2025-02-11T05:52:05.406Z

changed the description

Author: Amar Takhar 2025-02-11T05:55:01.814Z

approved this merge request

Author: Kinsey Moore 2025-02-11T13:51:20.391Z

approved this merge request

2.8.2.37 345 - bsp/qoriq: Ignore spurious interrupts

Id	345
State	merged
Merged by	Kinsey Moore
Merged at	2025-02-07T23:20:29.334Z
Assignee(s)	Sebastian Huber
Created	2024-12-06T10:22:28.402Z
Updated	2025-02-07T23:20:33.215Z
Milestone	6.2
Labels	arch:powerpc, backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/345
Commit	e421c922a87842f0613a269054acd041e46c91cd

Summary

bsp/qoriq: Ignore spurious interrupts

For example, with edge triggered external interrupts we may see spurious interrupts. Ignore them instead of issuing a fatal error.

Use eieio to synchronize access to the IACK and EOI registers.

Use a loop to immediately services the next pending interrupt without having to go through the exception epiloge and prologue.

Close #5173.

Author: Sebastian Huber 2024-12-06T10:22:28.560Z

assigned to @sebhub

Author: Gedare Bloom 2024-12-06T16:10:09.706Z

approved this merge request

Author: Kinsey Moore 2024-12-06T16:19:36.472Z

added 2 commits

- a357119b - 1 commit from branch `rtems/rtos:6`
- 81ed4b2d - bsp/qoriq: Ignore spurious interrupts

Compare with previous version

Author: Kinsey Moore 2025-02-07T22:57:58.139Z

This needs the same fix as the other MR.

Author: Gedare Bloom 2025-02-07T23:17:29.509Z

changed this line in version 6 of the diff

Author: Kinsey Moore 2024-12-06T16:20:26.526Z

requested changes

Author: Gedare Bloom 2025-02-03T18:59:36.917Z

unapproved this merge request

Author: Kinsey Moore 2025-02-06T23:49:46.426Z

added 9 commits

- 81ed4b2d...9641e1e9 - 8 commits from branch `rtems/rtos:6`
- 70cb4a1c - bsp/qoriq: Ignore spurious interrupts

Compare with previous version

Author: Kinsey Moore 2025-02-07T22:56:47.362Z

added 3 commits

- 70cb4a1c...e36ba911 - 2 commits from branch `rtems/rtos:6`
- f1e807b2 - bsp/qoriq: Ignore spurious interrupts

Compare with previous version

Author: Kinsey Moore 2025-02-07T22:57:45.129Z

added 1 commit

- 18c59283 - bsp/qoriq: Ignore spurious interrupts

Compare with previous version

Author: Kinsey Moore 2025-02-07T22:57:58.154Z

resolved all threads

Author: Kinsey Moore 2025-02-07T22:58:41.186Z

approved this merge request

Author: Gedare Bloom 2025-02-07T23:17:29.818Z

added 1 commit

- be39d7cc - bsp/qoriq: Ignore spurious interrupts

Compare with previous version

Author: Gedare Bloom 2025-02-07T23:17:45.099Z

reset approvals from @opticron by pushing to the branch

Author: Gedare Bloom 2025-02-07T23:18:36.678Z

added 1 commit

- e421c922 - bsp/qoriq: Ignore spurious interrupts

Compare with previous version

Author: Gedare Bloom 2025-02-07T23:19:38.690Z

approved this merge request

Author: Kinsey Moore 2025-02-07T23:20:19.442Z

approved this merge request

2.8.2.38 335 - build: Provide LDFLAGS for pkg-config (6.1)

Id	335
State	merged
Merged by	Joel Sherrill
Merged at	2025-02-07T18:29:24.490Z
Assignee(s)	Sebastian Huber
Created	2024-11-28T14:26:56.054Z
Updated	2025-02-07T18:29:26.896Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/335
Commit	e36ba91110724b5cc8a9e07659d98d0bcb96e4d4

Summary

build: Provide LDFLAGS for pkg-config

Some pkg-config variants perform transformations on the –libs options. This may lead to completely broken linker options. Provide the LDFLAGS as a variable. Remove “Ldflags:” since this is an unsupported field.

Update #5165.

Author: Sebastian Huber 2024-11-28T14:26:56.172Z

assigned to @sebhub

Author: Sebastian Huber 2024-11-28T14:28:45.629Z

changed title from **build: Provide LDFLAGS for pkg-config** to **build: Provide LDFLAGS for pkg-config{+ (6.1)+}**

Author: Chris Johns 2024-11-28T18:55:33.768Z

approved this merge request

Author: Chris Johns 2024-11-28T18:56:10.244Z

unapproved this merge request

Author: Kinsey Moore 2025-01-17T01:21:22.921Z

approved this merge request

Author: Kinsey Moore 2025-01-17T01:21:50.110Z

added 4 commits

- 0de8e928...34ba74f4 - 3 commits from branch `rtems/rtos:6`
- b337ac32 - build: Provide LDFLAGS for pkg-config

Compare with previous version

Author: Kinsey Moore 2025-01-17T03:12:28.532Z

unapproved this merge request

Author: Kinsey Moore 2025-01-17T03:12:38.050Z

approved this merge request

Author: Sebastian Huber 2025-01-20T23:32:47.963Z

added 2 commits

- f7de6d54 - 1 commit from branch `rtems/rtos:6`
- c6242efc - build: Provide LDFLAGS for pkg-config

Compare with previous version

Author: Sebastian Huber 2025-01-20T23:33:00.694Z

reset approvals from @opticron by pushing to the branch

Author: Kinsey Moore 2025-01-24T01:06:37.734Z

added 5 commits

- c6242efc...f1c201c5 - 4 commits from branch `rtems/rtos:6`
- 6c845593 - build: Provide LDFLAGS for pkg-config

Compare with previous version

Author: Kinsey Moore 2025-01-24T01:06:45.116Z

approved this merge request

Author: Kinsey Moore 2025-02-06T23:48:13.858Z

added 2 commits

- 9641e1e9 - 1 commit from branch `rtems/rtos:6`
- 7654de7c - build: Provide LDFLAGS for pkg-config

Compare with previous version

Author: Kinsey Moore 2025-02-07T18:28:08.013Z

added 2 commits

- a0e4be53 - 1 commit from branch `rtems/rtos:6`
- e36ba911 - build: Provide LDFLAGS for pkg-config

Compare with previous version

Author: Joel Sherrill 2025-02-07T18:29:12.972Z

approved this merge request

2.8.2.39 404 - grlib/occan: Fix baud rate calculation

Id	404
State	merged
Merged by	Joel Sherrill
Merged at	2025-02-07T18:03:48.749Z
Assignee(s)	Gedare Bloom
Created	2025-02-07T15:51:47.539Z
Updated	2025-02-07T18:03:50.977Z
Milestone	6.2
Labels	backport, grlib
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/404
Commit	a0e4be53f4e30ee02d6d0c9221d613d18c72f426

Summary

grlib/occan: Fix baud rate calculation

Fixes #5205

Closes #5205

Author: Gedare Bloom 2025-02-07T15:51:47.744Z

assigned to @gedare

Author: Kinsey Moore 2025-02-07T18:01:17.302Z

approved this merge request

Author: Joel Sherrill 2025-02-07T18:03:40.618Z

approved this merge request

2.8.2.40 381 - cpukit/termios: Fix ordering of baud rate table

Id	381
State	merged
Merged by	Sebastian Huber
Merged at	2025-02-06T03:35:42.316Z
Assignee(s)	Gedare Bloom
Created	2025-02-03T19:05:27.637Z
Updated	2025-02-06T03:35:45.233Z
Milestone	6.2
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/381
Commit	9641e1e97d8195d567a6218228ef0f0f2d7fdc25

Summary

cpukit/termios: Fix ordering of baud rate table

rtems_termios_set_best_baud expects a sorted baud rate table.

Fixes #5202

Closes #5202

Author: Gedare Bloom 2025-02-03T19:05:27.858Z

assigned to @gedare

Author: Kinsey Moore 2025-02-03T19:10:11.840Z

approved this merge request

Author: Sebastian Huber 2025-02-06T03:35:22.184Z

approved this merge request

2.8.2.41 365 - Backport 6.2: bsps/shared: NS16550 driver updates the line control register during operation

Id	365
State	merged
Merged by	Chris Johns
Merged at	2025-01-24T00:09:30.843Z
Created	2025-01-23T14:26:20.807Z
Updated	2025-01-24T00:09:32.535Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/365
Commit	f1c201c508ff65e1ed9d0ec8149f39be52ac39a9

Summary

bsps/shared: NS16550 driver updates the line control register during operation

Fixes: #5187

Author: Kinsey Moore 2025-01-23T14:27:47.909Z

approved this merge request

Author: Jan Sommer 2025-01-23T14:33:23.574Z

changed title from **bsps/shared: NS16550 driver updates the line control register during operation** to **{+Backport 6.2: +}bsps/shared: NS16550 driver updates the line control register during operation**

Author: Chris Johns 2025-01-24T00:08:35.222Z

added 3 commits

- 545f8f0f...603c168a - 2 commits from branch `rtems/rtos:6`
- f1c201c5 - bsps/shared: NS16550 driver updates the line control register during operation

Compare with previous version

Author: Chris Johns 2025-01-24T00:09:26.181Z

approved this merge request

2.8.2.42 361 - cpukit/libmisc: fix flag in capture.c

Id	361
State	merged
Merged by	Kinsey Moore
Merged at	2025-01-23T23:49:48.189Z
Assignee(s)	Gedare Bloom
Created	2025-01-21T00:00:22.382Z
Updated	2025-01-23T23:49:50.563Z
Milestone	6.2
Labels	cpukit::misc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/361
Commit	603c168a0ba828efc949b398d3623ebc9a0aafa3

Summary

cpukit/libmisc: fix flag in capture.c

The RTEMS_CAPTURE_OVERFLOW is an overflow flag for each CPU, and its value is the same as RTEMS_CAPTURE_INIT. Executing rtems_capture_flush will set the RTEMS_CAPTURE_INIT flag to 0 in the global flags.

Fixes #5184.

Closes #5184

Author: Gedare Bloom 2025-01-21T00:00:24.030Z

assigned to @gedare

Author: Chris Johns 2025-01-23T23:45:11.771Z

added 3 commits

- 151074b3...84c2cf3d - 2 commits from branch `rtems/rtos:6`
- 603c168a - cpukit/libmisc: fix flag in capture.c

Compare with previous version

Author: Chris Johns 2025-01-23T23:45:36.805Z

approved this merge request

Author: Kinsey Moore 2025-01-23T23:49:43.026Z

approved this merge request

Author: Gedare Bloom 2026-01-22T21:12:02.277Z

mentioned in issue #5184

2.8.2.43 367 - cpukit/libdl/arm: Fix trampoline alignment

Id	367
State	merged
Merged by	Chris Johns
Merged at	2025-01-23T23:37:30.167Z
Created	2025-01-23T22:05:59.402Z
Updated	2025-01-23T23:37:32.473Z
Milestone	6.2
Labels	arch:arm, cpukit::dl
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/367
Commit	84c2cf3da9983ef7eadb11d4a676449d6b3ef875

Summary

cpukit/libdl/arm: Fix trampoline alignment

This commit aligns trampolines for THUMB and ARM instructions (CALL/JUMP24 and THM_JUMP24/THM_PC22).

According to the ARM technical reference in section “Register-relative and PC-relative expressions”:

In Thumb code: * For B, BL, CBNZ, and CBZ instructions, the value of the PC is the address of the current instruction plus 4 bytes. * For all other instructions that use labels, the value of the PC is the address of the current instruction plus 4 bytes, with bit[1] of the result cleared to 0 to make it word-aligned.

Closes #5189

https://developer.arm.com/documentation/dui0473/m/symbols–literals–expressions–and-operators/register-relative-and-pc-relative-expressions

Author: Kinsey Moore 2025-01-23T22:49:30.326Z

I have created #5189 for this MR to reference with appropriate epic and milestone. Could you please reference it with “Closes #5189” on a new line at the end of the commit message?

Author: Ranulfo Raphael 2025-01-23T22:49:30.326Z

Done. Thanks.

Author: Ranulfo Raphael 2025-01-23T22:41:09.917Z

added 1 commit

- 84c2cf3d - cpukit/libdl/arm: Fix trampoline alignment

Compare with previous version

Author: Ranulfo Raphael 2025-01-23T22:47:35.033Z

changed the description

Author: Ranulfo Raphael 2025-01-23T22:49:30.342Z

resolved all threads

Author: Kinsey Moore 2025-01-23T23:03:23.524Z

approved this merge request

Author: Chris Johns 2025-01-23T23:37:24.885Z

approved this merge request

2.8.2.44 348 - libmisc/stackchk: Add stack smashing protection (closed)

Id	348
State	closed
Assignee(s)	Joel Sherrill
Reviewer(s)	Gedare Bloom
Closed by	Gedare Bloom
Created	2024-12-19T06:34:14.290Z
Closed	2025-10-03T19:14:16.933Z
Updated	2025-10-03T19:14:16.918Z
Milestone	6.2
Labels	backport
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/348
Commit	6a6881cb661f460ee9e064107dcf8590ae6e552a

Summary

libmisc/stackchk: Add stack smashing protection

This is a backport for merge request 277! to 6 branch.

2.8.2.44.1.1 Note

Closes #5180

Author: Mohamed Hassan 2024-12-19T06:41:59.787Z

mentioned in issue #5180

Author: Gedare Bloom 2024-12-19T16:33:40.221Z

assigned to @joel

Author: Gedare Bloom 2024-12-19T16:35:21.370Z

requested review from @gedare

Author: Gedare Bloom 2025-10-03T19:12:52.826Z

Needs the same fixes as !277

Author: Mohamed Hassan 2025-10-03T19:12:52.826Z

Done.

Author: Gedare Bloom 2025-02-07T18:30:50.708Z

Please add Closes #5180 to the commit message and the MR description (although I don't think Gitlab will pick it up correctly yet for a release branch)

Author: Mohamed Hassan 2025-02-07T18:30:50.708Z

Understood & done.

Author: Mohamed Hassan 2024-12-20T14:49:15.952Z

added 1 commit

- 066b355c - libmisc/stackchk: Add stack smashing protection

Compare with previous version

Author: Mohamed Hassan 2024-12-20T15:02:21.630Z

added 1 commit

- 30d7008a - libmisc/stackchk: Add stack smashing protection

Compare with previous version

Author: Mohamed Hassan 2024-12-20T15:03:35.573Z

changed the description

Author: Mohamed Hassan 2024-12-23T20:25:19.593Z

added 2 commits

- d61a739e - 1 commit from branch `rtems/rtos:6`
- b50f74c9 - libmisc/stackchk: Add stack smashing protection

Compare with previous version

Author: Kinsey Moore 2025-02-06T23:51:32.758Z

added 8 commits

- b50f74c9...9641e1e9 - 7 commits from branch `rtems/rtos:6`
- 9c5f1ae7 - libmisc/stackchk: Add stack smashing protection

Compare with previous version

Author: Amar Takhar 2025-07-03T01:14:00.936Z

added 13 commits

- 9c5f1ae7...dd490c5c - 12 commits from branch `rtems/rtos:6`
- 6a6881cb - libmisc/stackchk: Add stack smashing protection

Compare with previous version

Author: Gedare Bloom 2025-10-03T19:12:48.618Z

Where does this print statement come from?

Author: Gedare Bloom 2025-10-03T19:14:16.474Z

As indicated in #5180 we won't merge this to the released branch.

2.9 RTEMS / RTOS / Examples

Go to *Issues* (page 3291) or *Merge Requests* (page 3300)

Issues Summary

3 - Compile error in misc/regulator/regulator_example.c (page 554)

Merge Requests Summary

17 - gitlab: Add link to CI (page 555)

2.9.1 Issues

2.9.1.1 3 - Compile error in misc/regulator/regulator_example.c

Id	3
State	closed
Type	ISSUE
Author	geng zhu
Closed by	Kinsey Moore
Created	2024-09-20T08:14:44.138Z
Closed	2024-11-25T03:08:28.196Z
Updated	2025-09-19T00:49:55.867Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems-examples/-/work_items/3
Merges	1

Summary

- compile rtems_example failed with error

```
[ 97/175] Linking build/aarch64-rtems6-phytium_pi/misc/nanosecond_tick_wrap/
↪nanoseconds_tick_wrap.exe
[ 98/175] Compiling misc/regulator/regulator_example.c
[ 99/175] Compiling misc/regulator/rtems_config.c
../../misc/regulator/regulator_example.c: In function 'example_send_messages':
../../misc/regulator/regulator_example.c:134:6: error: 'rtems_regulator_
↪attributes' has no member named 'output_thread_priority'; did you mean␣
↪'delivery_thread_priority'?
134 |      .output_thread_priority = 16,
|      ^~~~~~~~~~~~~~~~~~~~~
|      delivery_thread_priority
../../misc/regulator/regulator_example.c:135:6: error: 'rtems_regulator_
↪attributes' has no member named 'output_thread_stack_size'; did you mean␣
↪'delivery_thread_stack_size'?
135 |      .output_thread_stack_size = 0,
```

(continues on next page)

(continued from previous page)

```
|       ^~~~~~~~~~~~~~~~~~~~~~~
|       delivery_thread_stack_size
../../misc/regulator/regulator_example.c:136:6: error: 'rtems_regulator_
↪attributes' has no member named 'output_thread_period'; did you mean 'delivery_
↪thread_period'?
136 |     .output_thread_period = RTEMS_MILLISECONDS_TO_TICKS(1000),
|       ^~~~~~~~~~~~~~~~~~~
|       delivery_thread_period

Waf: Leaving directory `/root/rtems-work/rtems/rtems-examples/build/aarch64-
↪rtems6-phytium_pi'
Build failed
-> task in 'regulator_example.exe' failed with exit status 1 (run with -v to␣
↪display more information)
make: *** [/root/rtems-work/tools/rtems_phytium_pi.mk:40: phytium_pi_aarch64_
↪example] Error 1
```

- I modify code as gcc prompted and works ok

Steps to reproduce

Author: Joel Sherrill 2024-11-22T17:22:43.104Z

mentioned in merge request !8

2.9.2 Merge Requests

2.9.2.1 17 - gitlab: Add link to CI

Id	17
State	merged
Merged by	Kinsey Moore
Merged at	2025-02-14T16:35:53.233Z
Assignee(s)	Amar Takhar
Created	2025-02-14T06:37:07.586Z
Updated	2025-02-14T16:35:54.240Z
Milestone	6.2
Labels	ci
Link	https://gitlab.rtems.org/rtems/rtos/rtems-examples/-/merge_requests/17
Commit	bca39c20c4366c7ce5ffb0e9ceead722edb94f26

Summary

gitlab: Add link to CI

This runs only the commit message and merge request checker.

Required so we can have ‘all pipelines must pass’ enabled due to a bug in GitLab.

Author: Amar Takhar 2025-02-14T06:37:08.005Z

assigned to @amar

Author: Amar Takhar 2025-02-14T06:37:22.524Z

changed the description

Author: Kinsey Moore 2025-02-14T16:34:42.221Z

added 50 commits

- 22a29f33...45383537 - 49 commits from branch `rtems/rtos:6`
- bca39c20 - gitlab: Add link to CI

Compare with previous version

Author: Kinsey Moore 2025-02-14T16:35:33.248Z

approved this merge request

2.10 RTEMS / RTOS / Release

Go to *Issues* (page 3309) or *Merge Requests* (page 3317)

Issues Summary

19 - Unhandled tag in Release Note generator (page 558)
18 - Add version named libbsd packages to releases (page 559)
17 - Make default pckage compression BZ2 (page 560)
16 - Unclear which libbsd branch(es) are in the release package (page 561)
12 - RTEMS 6 release notes in this repo not in top level page (page 557)

Merge Requests Summary

33 - Fix including the per version release notes (page 562)
30 - release-notes: Handle HTML p tags and multiple URLs on a line (page 562)
28 - notes/rtems-notes-6.2.md: Add deprecation of mghttpd (page 563)
25 - notes/rtems-notes-6.2: Start notes for 6.2 release (page 564)

2.10.1 Issues

2.10.1.1 12 - RTEMS 6 release notes in this repo not in top level page

Id	12
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-01-22T20:44:57.482Z
Closed	2025-12-17T05:53:11.689Z
Updated	2025-12-17T05:53:11.754Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/work_items/12
Merges	1

The RTEMS 6 release notes have not appeared on the main page of the release where they should be.

Author: Chris Johns 2025-01-22T20:44:57.669Z

assigned to @chris

Author: Chris Johns 2025-01-22T20:44:57.992Z

Author: Chris Johns	2025-12-16T20:46:23.577Z

changed the description

Author: Chris Johns	2025-12-17T05:02:48.541Z

mentioned in merge request !33

Author: Chris Johns	2025-12-17T05:53:12.556Z

set status to **Done**

2.10.1.2 19 - Unhandled tag in Release Note generator

Id	19
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Gedare Bloom
Created	2025-09-15T21:55:16.141Z
Closed	2025-10-10T20:47:22.808Z
Updated	2025-10-10T20:47:22.990Z
Milestone	6.2
Labels	release
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/work_items/19
Merges	1

The recent upgrades to GitLab have resulted in the <p> HTML tag being present in the issues and MR data extracted via GitLabs APIs.

Add the support.

Author: Chris Johns	2025-09-15T21:55:16.201Z

set status to **In progress**

Author: Chris Johns	2025-09-15T21:55:16.287Z

assigned to @chris

Author: Chris Johns	2025-10-02T22:30:07.848Z

added rtems#10 as parent epic

Author: Gedare Bloom 2025-10-10T20:47:24.401Z

set status to **Done**

2.10.1.3 18 - Add version named libbsd packages to releases

Id	18
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Gedare Bloom
Created	2025-07-25T02:02:51.105Z
Closed	2025-10-10T20:47:22.816Z
Updated	2025-10-10T20:47:22.985Z
Milestone	6.2
Labels	release
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/work_items/18
Merges	1

Summary

Support version named libbsd packages.

Author: Chris Johns 2025-07-25T02:02:51.181Z

set status to **To do**

Author: Chris Johns 2025-07-25T02:02:51.436Z

assigned to @chris

Author: Chris Johns 2025-07-25T02:04:53.317Z

mentioned in issue #16

Author: Chris Johns 2025-10-02T23:36:53.479Z

set status to **In progress**

Author: Chris Johns 2025-10-02T23:37:00.014Z

added rtems#10 as parent epic

Author: Gedare Bloom 2025-10-10T20:47:24.385Z

set status to **Done**

2.10.1.4 17 - Make default pckage compression BZ2

Id	17
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-07-18T03:32:41.430Z
Closed	2025-10-02T23:15:30.856Z
Updated	2025-10-02T23:15:30.862Z
Milestone	6.2
Labels	release
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/work_items/17
Merges	0

Summary

Make the compression on RTEMS packages BZ2 as it is supported on MacOS without needing the `xz` command. That command is not available as part of the OS.

Author: Chris Johns 2025-07-18T03:32:41.592Z

assigned to @chris

Author: Chris Johns 2025-10-02T23:15:30.888Z

set status to **Won't do**

Author: Chris Johns 2025-10-02T23:16:05.113Z

@amar said we should keep using `xz` as it gives smaller files and shorter downloads.

2.10.1.5 16 - Unclear which libbsd branch(es) are in the release package

Id	16
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-02-12T18:26:14.809Z
Closed	2025-07-25T02:04:51.737Z
Updated	2025-07-25T02:04:51.834Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/work_items/16
Merges	0

Summary

The rtems-libbsd release tar ball has no indication in its name which branch it came from.

Also the release notes does not specify this.

2.10.1.5.1.1 Pre-set options

Author: Joel Sherrill 2025-02-12T18:26:14.907Z

assigned to @chris

Author: Joel Sherrill 2025-02-12T18:29:16.945Z

mentioned in merge request rtems/websites/www.rtems.org!3

Author: Chris Johns 2025-07-25T02:00:41.982Z

We cannot change the name of libbsd in 6 which is `rtems-libbsd-6.1.tar.xz`. In future the libbsd naming will be versioned.

Author: Chris Johns 2025-07-25T02:04:51.812Z

set status to **Done**

Author: Chris Johns 2025-07-25T02:04:52.637Z

Closing as it will be resolved with #18

2.10.2 Merge Requests

2.10.2.1 33 - Fix including the per version release notes

Id	33
State	merged
Merged by	Chris Johns
Merged at	2025-12-17T05:53:11.467Z
Assignee(s)	Chris Johns
Created	2025-12-17T05:02:42.726Z
Updated	2025-12-17T05:53:11.459Z
Milestone	6.2
Labels	release
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/33
Commit	ddb931f48bd03958499abf58abc0b88a6b44b43b

Fix including the per version release notes.

Closes #12

Author: Chris Johns 2025-12-17T05:02:42.904Z

assigned to @chris

Author: Chris Johns 2025-12-17T05:03:01.104Z

enabled an automatic merge when all merge checks for ddb931f48bd03958499abf58abc0b88a6b44b43b pass

Author: Amar Takhar 2025-12-17T05:53:08.622Z

approved this merge request

2.10.2.2 30 - release-notes: Handle HTML p tags and multiple URLs on a line

Id	30
State	merged
Merged by	Gedare Bloom
Merged at	2025-10-10T20:47:22.364Z
Assignee(s)	Chris Johns
Created	2025-10-10T20:02:56.251Z
Updated	2025-10-10T20:47:22.356Z
Milestone	6.2
Labels	release
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/30
Commit	0ce9bf106d5e34a2e893eb247ce2edb2025b32e7

Fixes for the 6.2 release.

Note. the release scripts are a rolling release

Author: Chris Johns 2025-10-10T20:02:56.415Z

assigned to @chris

Author: Gedare Bloom 2025-10-10T20:47:11.079Z

approved this merge request

2.10.2.3 28 - notes/rtems-notes-6.2.md: Add deprecation of mghttpd

Id	28
State	merged
Merged by	Kinsey Moore
Merged at	2025-07-24T23:07:18.010Z
Assignee(s)	Joel Sherrill
Created	2025-07-18T13:50:53.594Z
Updated	2025-07-24T23:07:17.997Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/28
Commit	b79a05aa8bd44dc5626084c173ba4e9b25875464

Summary

notes/rtems-notes-6.2.md: Add deprecation of mghttpd

Updates #5303

Author: Joel Sherrill 2025-07-18T13:50:53.784Z

assigned to @joel

Author: Gedare Bloom 2025-07-18T18:01:36.534Z

approved this merge request

Author: Joel Sherrill 2025-07-24T23:06:50.852Z

added 1 commit

- b79a05aa - notes/rtems-notes-6.2.md: Add deprecation of mghttpd

Compare with previous version

Author: Joel Sherrill 2025-07-24T23:07:04.968Z

reset approvals from @gedare by pushing to the branch

Author: Kinsey Moore 2025-07-24T23:07:09.285Z

approved this merge request

Author: Kinsey Moore 2025-07-24T23:07:11.577Z

enabled an automatic merge when all merge checks for b79a05aa8bd44dc5626084c173ba4e9b25875464 pass

Author: Chris Johns 2025-07-24T23:07:13.512Z

approved this merge request

2.10.2.4 25 - notes/rtems-notes-6.2: Start notes for 6.2 release

Id	25
State	merged
Merged by	Chris Johns
Merged at	2025-02-26T18:16:05.336Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Chris Johns
Created	2025-02-14T22:44:37.007Z
Updated	2025-02-26T18:16:07.539Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/25
Commit	3d753cfc92fc5f2a207510a8f8c1083027b69c03

Summary

closes rtos/rtems/rtos#5216

Author: Gedare Bloom 2025-02-14T22:44:37.181Z

requested review from @chris

Author: Gedare Bloom 2025-02-14T22:44:37.196Z

assigned to @gedare

Author: Gedare Bloom 2025-02-14T22:45:19.316Z

mentioned in issue rtems#5216

Author: Gedare Bloom 2025-02-14T22:54:49.502Z

added 1 commit

- 8a896c7f - notes/rtems-notes-6.2: Start notes for 6.2 release

Compare with previous version

Author: Gedare Bloom 2025-02-14T22:58:32.263Z

added 1 commit

- 3d753cfc - notes/rtems-notes-6.2: Start notes for 6.2 release

Compare with previous version

Author: Gedare Bloom 2025-02-14T22:59:52.905Z

changed the description

Author: Kinsey Moore 2025-02-15T01:34:28.940Z

approved this merge request

Author: Chris Johns 2025-02-26T18:15:57.455Z

approved this merge request

2.11 RTEMS / Tools / RTEMS Deployment

Go to *Issues* (page 3336) or *Merge Requests* (page 3344)

Issues Summary

8 - pkg __init__ is missing a None check of package on MacOS (page 566)
6 - Move 6 libbsd confgurations to libbsd-fb14 (page 567)

Merge Requests Summary

25 - pkg: Fix None check on hosts with no packaging (page 568)
22 - Move libbsd to libbsd-fb14 (page 569)
21 - gitlab: Add link to CI (page 569)

2.11.1 Issues

2.11.1.1 8 - pkg __init__ is missing a None check of package on MacOS

Id	8
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-07-18T03:40:35.097Z
Closed	2025-12-16T20:44:47.460Z
Updated	2025-12-16T20:44:47.550Z
Milestone	6.2
Labels	tool::rtems-deployment
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/work_items/8
Merges	0

Add a suitable check to guard against no packager available for a host.

Author: Chris Johns 2025-07-18T03:40:35.198Z

cloned from #7

Author: Chris Johns 2025-07-18T23:46:55.996Z

mentioned in merge request !25

Author: Chris Johns 2025-12-16T20:44:47.525Z

set status to **Done**

2.11.1.2 6 - Move 6 libbsd confgurations to libbsd-fb14

Id	6
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Gedare Bloom
Created	2025-04-19T04:01:15.547Z
Closed	2025-04-23T21:53:05.870Z
Updated	2025-04-23T21:53:05.884Z
Milestone	6.2
Labels	libbsd, tool::rtems-deployment
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/work_items/6
Merges	0

Move the `libbsd` configurations to the FreeBSD 14 version.

Author: Chris Johns 2025-04-19T04:01:15.720Z

assigned to @chris

Author: Chris Johns 2025-04-19T04:01:16.013Z

Author: Chris Johns 2025-04-19T05:32:54.833Z

marked this issue as blocked by rtems-source-builder#86

Author: Chris Johns 2025-04-19T05:36:29.460Z

mentioned in merge request !22

Author: Gedare Bloom 2025-04-23T21:53:05.621Z

https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/22

2.11.2 Merge Requests

2.11.2.1 25 - pkg: Fix None check on hosts with no packaging

Id	25
State	merged
Merged by	Amar Takhar
Merged at	2025-07-18T23:51:20.202Z
Assignee(s)	Chris Johns
Created	2025-07-18T23:46:52.769Z
Updated	2025-07-18T23:51:20.192Z
Milestone	6.2
Labels	tool::rtems-deployment
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/25
Commit	612fc665fa49c49a37b00dd84664261da74f6fc5

Summary

pkg: Fix None check on hosts with no packaging

Closes #8

Author: Chris Johns 2025-07-18T23:46:52.908Z

assigned to @chris

Author: Amar Takhar 2025-07-18T23:51:15.745Z

enabled an automatic merge when all merge checks for 612fc665fa49c49a37b00dd84664261da74f6fc5 pass

Author: Amar Takhar 2025-07-18T23:51:16.479Z

approved this merge request

2.11.2.2 22 - Move libbsd to libbsd-fb14

Id	22
State	merged
Merged by	Gedare Bloom
Merged at	2025-04-23T21:52:05.367Z
Assignee(s)	Chris Johns
Created	2025-04-19T05:36:21.968Z
Updated	2025-04-23T21:52:06.627Z
Milestone	6.2
Labels	libbsd, tool::rtems-deployment
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/22
Commit	687d50873baff1fc0bdca8fa207f374f05495d48

Move libbsd to libbsd-fb14

- Move to FreeBSD 14 for RTEMS 6

Closes #6

> **Author:** Chris Johns 2025-04-19T05:36:22.180Z
>
> assigned to @chris
>
> **Author:** Gedare Bloom 2025-04-23T21:51:56.878Z
>
> approved this merge request
>
> **Author:** Gedare Bloom 2025-04-23T21:53:05.999Z
>
> mentioned in issue #6

2.11.2.3 21 - gitlab: Add link to CI

Id	21
State	merged
Merged by	Kinsey Moore
Merged at	2025-02-14T16:35:24.446Z
Assignee(s)	Amar Takhar
Created	2025-02-14T03:30:32.155Z
Updated	2025-02-14T16:35:40.094Z
Milestone	6.2
Labels	ci
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/21
Commit	d140be8dd4c6c5f992a18feddd73db322a951150

Summary

gitlab: Add link to CI

This runs only the commit message and merge request checker.

Required so we can have ‘all pipelines must pass’ enabled due to a bug in GitLab.

Author: Amar Takhar 2025-02-14T03:30:32.363Z

assigned to @amar

Author: Kinsey Moore 2025-02-14T16:34:55.014Z

approved this merge request

2.12 RTEMS / Tools / RTEMS Source Builder

Go to *Issues* (page 302) or *Merge Requests* (page 319)

Issues Summary

150 - Release URL handling in download is broken (page 572)
148 - Only support SHA512 hashes (page 573)
146 - Export as JSON the sources details from sb-get-source command (page 576)
139 - Use the RTEMS cache first for downloads (page 577)
128 - GNU FTP URLs are broken after moving to ftpmirror.gnu.org (page 578)
126 - Change ftp.gnu.org to ftpmirror.gnu.org (page 579)
119 - DTC missing checksum after change to .xz (page 580)
113 - Backport mirror name change patch to 6 branch (page 600)
112 - Backport glib download isolation to 6 branch (page 599)
110 - Backport mirror updates to 6 branch for future releases (page 601)
109 - Backport GDB TLS support patches to 6 branch (page 584)
104 - Backport QEMU version update to 6 branch (page 586)
103 - Update git package regerences for 6 (page 585)
101 - Backport UTF-8 fix to 6 branch (page 597)
98 - Can not Build gdb-15.2-arm64-apple-darwin (page 587)
95 - RTEMS tester fails to run correctly under python 3.13 (page 602)
86 - Add build support for LibBSD FreeBSD 14 (page 598)
30 - RSB build failure on the latest code (page 582)

Merge Requests Summary

206 - Fix release downloads (page 603)
203 - bare/devel: Fix QEMU libusb patch hash (page 604)
202 - Support only SHA512 Checksums (page 605)
198 - Add file cache support (page 606)
197 - Add catalog support to get sources (page 607)
185 - Fix GNU FTP links to support mirroring (page 608)
182 - rtems: Change ftp.gnu.org to ftpmirror.gnu.org (page 608)
167 - config: Update to new mirror names (page 611)
162 - Backport download isolation fixes to 6 branch (page 609)
159 - config: Migrate mirror links and hashes (page 612)
157 - rtems/config/tools/gdb: Add TLS support patch (page 613)
150 - devel/qemu-5.2.0: Update to the non-RC version (page 614)
147 - rtems: Update package git references (page 615)
145 - source-builder/sb/path.py: Avoid discarding utf-8 (page 617)
143 - rtems: Fix building on recent MacOS (page 616)
139 - Add support for the 6-freebsd-14 branch to RTEMS 6 (page 618)
128 - gitlab: Add link to CI (page 619)
88 - gmp: Use ftp.gnu.org mirror (page 615)

175 - config/devel/dtc-1.6.1-1.cfg: Update checksum (closed) (page 620)
146 - Update package git references to allow testing (closed) (page 622)

2.12.1 Issues

2.12.1.1 150 - Release URL handling in download is broken

Id	150
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Kinsey Moore
Created	2025-12-18T22:14:47.897Z
Closed	2026-02-05T17:53:21.213Z
Updated	2026-02-05T17:53:21.392Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/150
Merges	0

Adding the `VERSION` files breaks downloading. This is the backtrace when testing a 6.2 release:

```
Traceback (most recent call last):
File "/opt/work/chris/rtems/releases/6.2/rtems-source-builder-6.2/source-builder/
↪sb-set-builder", line 25, in <module>
sb.setbuilder.run()
File "/opt/work/chris/rtems/releases/6.2/rtems-source-builder-6.2/source-builder/
↪sb/setbuilder.py", line 822, in run
b.build(deps, mail=mail)
File "/opt/work/chris/rtems/releases/6.2/rtems-source-builder-6.2/source-builder/
↪sb/setbuilder.py", line 493, in build
bs.build(deps, nesting_count, mail)
File "/opt/work/chris/rtems/releases/6.2/rtems-source-builder-6.2/source-builder/
↪sb/setbuilder.py", line 493, in build
bs.build(deps, nesting_count, mail)
File "/opt/work/chris/rtems/releases/6.2/rtems-source-builder-6.2/source-builder/
↪sb/setbuilder.py", line 515, in build
self.build_package(configs[s], b)
File "/opt/work/chris/rtems/releases/6.2/rtems-source-builder-6.2/source-builder/
↪sb/setbuilder.py", line 274, in build_package
_build.make()
File "/opt/work/chris/rtems/releases/6.2/rtems-source-builder-6.2/source-builder/
↪sb/build.py", line 635, in make
self.prep(package)
File "/opt/work/chris/rtems/releases/6.2/rtems-source-builder-6.2/source-builder/
↪sb/build.py", line 498, in prep
self.source_setup(package, args[1:])
File "/opt/work/chris/rtems/releases/6.2/rtems-source-builder-6.2/source-builder/
↪sb/build.py", line 341, in source_setup
srcs =  self.source(setup_name, strip_components, download_only,
^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
File "/opt/work/chris/rtems/releases/6.2/rtems-source-builder-6.2/source-builder/
```

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```
↪sb/build.py", line 267, in source
download.get_file(src['url'], src['local'], self.opts, self.config)
File "/opt/work/chris/rtems/releases/6.2/rtems-source-builder-6.2/source-builder/
↪sb/download.py", line 697, in get_file
process_release_url(url_bases, opts, config)
File "/opt/work/chris/rtems/releases/6.2/rtems-source-builder-6.2/source-builder/
↪sb/download.py", line 652, in process_release_url
if not url.startswith(release_url):
^^^
NameError: name 'url' is not defined
rsb cmd: /opt/work/chris/rtems/releases/6.2/rtems-source-builder-6.2/source-
↪builder/sb-set-builder --prefix=/opt/work/rtems/6.2 --bset-tar-file --trace --
↪log=out/amd/amd-kria-k26.txt --no-install amd/amd-kria-k26
```

Author: Chris Johns 2025-12-18T22:14:48.018Z

cloned from #149

Author: Chris Johns 2025-12-19T04:20:31.666Z

mentioned in merge request !206

Author: Kinsey Moore 2026-02-05T17:53:21.269Z

set status to **Done**

Author: Kinsey Moore 2026-02-05T17:53:22.012Z

This was resolved with !206.

2.12.1.2 148 - Only support SHA512 hashes

Id	148
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-12-15T00:14:53.602Z
Closed	2025-12-16T20:44:19.677Z
Updated	2025-12-16T20:44:19.767Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/148
Merges	0

The RTEMS file cache only supports SHA512 hashes. A file using a different hash cannot be fetched from the file cache. Removing all other types of hashes will make us update all the configuration to SHA512.

Author: Chris Johns 2025-11-05T04:06:18.367Z

set status to **To do**

Author: Chris Johns 2025-11-05T04:06:18.506Z

assigned to @chris

Author: Chris Johns 2025-11-05T04:07:20.437Z

marked this issue as related to #138

Author: Amar Takhar 2025-12-14T23:59:59.252Z

FYI sha512 is because I thought this is what the RSB used, it uses something else? I was trying to use the same hash.

Author: Kinsey Moore 2025-12-14T23:59:59.252Z

There is a mix of SHA512, SHA256, and MD5 at the moment. SHA512 is the default for anything new going in.

Author: Chris Johns 2025-12-14T23:59:59.252Z

Looking at this issue some more. I have only added this issue to the 7 branch because I thought changing checksums on a release branch was too much however we need the file cache support for 6 so @amar which way should we move? This would also extend back to the 5 branch as well as I suppose we need to deal that version as well?

Author: Chris Johns 2025-12-14T23:59:59.252Z

To add to my last comment I am fine to update all the hashes to SHA512 on 6 and 5 if we think it is OK to do. It is a better hash.

Author: Amar Takhar 2025-12-14T23:59:59.252Z

I'm thinking we should use sha256 it's easier to manage. I just picked 512 because for whatever reason I thought that's what the RSB was using.

Author: Chris Johns 2025-12-14T23:59:59.666Z

There is a mix and most are 512 so I think it is simpler to stay with 512 and change any others.

Author: Chris Johns 2025-12-14T23:58:04.117Z

set status to **In progress**

Author: Chris Johns 2025-12-15T00:01:37.417Z

We need to make this change on 6 as well

Author: Chris Johns 2025-12-15T00:14:54.161Z

cloned from #140

Author: Chris Johns 2025-12-15T00:16:02.493Z

added rtems#10 as parent epic

Author: Chris Johns 2025-12-15T23:01:04.163Z

mentioned in merge request !202

Author: Chris Johns 2025-12-16T20:44:19.740Z

set status to **Done**

Author: Kinsey Moore 2026-02-21T18:26:36.176Z

mentioned in merge request !223

2.12.1.3 146 - Export as JSON the sources details from sb-get-source command

Id	146
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2025-11-18T20:14:33.035Z
Closed	2025-12-04T23:30:09.861Z
Updated	2025-12-04T23:30:10.055Z
Milestone	6.2
Labels	infra::cache, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/146
Merges	0

Summary

Adding a project cache to the RTEMS project requires a list of sources each branch needs to maintain the cache. Export the file list as JSON from the `sb-get-sources` tool to feed into the cache management tools.

Author: Chris Johns 2025-11-18T20:14:33.155Z

cloned from #108

Author: Chris Johns 2025-11-18T20:14:51.250Z

set status to **In progress**

Author: Chris Johns 2025-11-18T20:32:49.815Z

mentioned in merge request !197

Author: Kinsey Moore 2025-12-04T23:30:09.935Z

set status to **Done**

Author: Kinsey Moore 2025-12-04T23:30:10.673Z

This has been merged.

2.12.1.4 139 - Use the RTEMS cache first for downloads

Id	139
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-11-05T04:02:49.316Z
Closed	2025-11-18T20:31:44.804Z
Updated	2025-11-18T20:31:44.898Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/139
Merges	1

Update the RSB to use the RTEMS file cache at https://dl.rtems.org/ first when downloading sources.

The file caches references a file usings it SHA512 hash. If the RSB does not have that hash this file cache is not used. We should obsolete all hash types expect SHA512 so we clean up the configurations.

An example file download is:

```
https://dl.rtems.org/
↪d213e5db09fd56b8977b187c5a756f60d6e3e998be172550c2892dbdb4b2a8e8c750202bc863fe27d0d1c577ab9de1
↪tiff-4.0.10.tar.gz
```

Author: Chris Johns 2025-11-05T04:02:49.427Z

cloned from #138

Author: Chris Johns 2025-11-05T04:03:34.926Z

added rtems#10 as parent epic

Author: Matt Rippa 2025-11-06T19:23:07.729Z

Looking forward to these patches. With our site restrictions, we can not reliably build the tools.

Author: Amar Takhar 2025-11-06T22:28:41.556Z

The cache is setup now but it's not useful as you need to know the sha512 of the file before downloading it's located at https://dl.rtems.org/ Chris is working on modifying the RSB to use it.

Author: Chris Johns 2025-11-18T19:48:36.771Z

mentioned in merge request !196

Author: Chris Johns 2025-11-18T20:31:46.382Z

set status to **Done**

Author: Chris Johns 2025-11-18T20:48:19.928Z

mentioned in merge request !198

Author: Kinsey Moore 2026-02-21T04:11:50.167Z

mentioned in merge request !223

2.12.1.5 128 - GNU FTP URLs are broken after moving to ftpmirror.gnu.org

Id	128
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-10-01T00:27:13.340Z
Closed	2025-10-01T23:36:18.294Z
Updated	2025-10-01T23:36:18.343Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/128
Merges	0

The GNU Mirror pages says to use the generic names which means a number of our GNU FTP links are now broken.

Author: Chris Johns 2025-10-01T00:27:13.414Z

cloned from #127

Author: Chris Johns 2025-10-01T02:48:55.825Z

cloned to #129

Author: Chris Johns	2025-10-01T03:50:13.302Z

mentioned in merge request !185

Author: Chris Johns	2025-10-01T23:36:18.322Z

set status to **Done**

2.12.1.6 126 - Change ftp.gnu.org to ftpmirror.gnu.org

Id	126
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-09-27T23:05:09.765Z
Closed	2025-10-01T23:34:15.887Z
Updated	2025-10-01T23:34:15.936Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/126
Merges	0

Change any ftp.gnu.org URLs to ftpmirror.gnu.org to use GNU FTP Mirror support. This helps with loading on GNU's machines and the mirrors are faster due to GNU FTP rate limiting repeat downloads from the same user.

Author: Chris Johns	2025-09-27T23:05:09.847Z

cloned from #125

Author: Chris Johns	2025-09-27T23:05:27.726Z

added rtems#10 as parent epic

Author: Chris Johns	2025-09-27T23:52:30.423Z

mentioned in merge request !182

Author: Chris Johns	2025-10-01T23:34:15.916Z

set status to **Done**

2.12.1.7 119 - DTC missing checksum after change to .xz

Id	119
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-09-15T22:00:59.039Z
Closed	2025-09-19T06:59:38.780Z
Updated	2025-09-19T06:59:38.836Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/119
Merges	0

The extension of the DTC tar `changed <https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/commit/69576a8d9e99ea5d9596858cd9aad37a2cfea88d>`_but the checksum file pattern did not.

Author: Chris Johns 2025-09-15T22:00:59.102Z

set status to **To do**

Author: Chris Johns 2025-09-15T22:00:59.186Z

assigned to @joel

Author: Joel Sherrill 2025-09-16T15:59:20.535Z

Merge requests are posted for fix on main and 6.

Author: Joel Sherrill 2025-09-16T17:49:06.630Z

mentioned in commit 5eefb2bf71eb839887fc49d38f0c7f3d348562a6

Author: Joel Sherrill 2025-09-16T19:10:07.358Z

mentioned in commit 6b09eae6d720ff6b0d36fe7e29ef4acb1c6e3da3

Author: Joel Sherrill 2025-09-16T19:14:43.734Z

mentioned in commit bea88efb634495e9f6b97429e0a0a136e82f2b8d

Author: Kinsey Moore 2025-09-16T19:16:10.315Z

added rtems#10 as parent epic

Author: Kinsey Moore 2025-09-16T19:35:41.198Z

assigned to @opticron

Author: Kinsey Moore 2025-09-16T19:42:45.377Z

The referenced commit is under main/7, not 6 branch. As far as I can tell, 6 still pulls the DTC tarball correctly for devel/qemu-couverture. What is the command used to trigger this error on 6 branch?

Author: Chris Johns 2025-09-18T01:27:42.737Z

The command that sees the error is getting the sources which has to get all sources in the buildsets and configurations. The change moved the extension to `.xz` in the base recipe however:

```
$ grep gz bare/config/devel/dtc*
bare/config/devel/dtc-1.2.0.cfg:%hash sha512 dtc-%{dtc_version}.tar.gz␣
↪d7a8...
bare/config/devel/dtc-1.4.1-1.cfg:%hash sha256 dtc-%{dtc_version}.tar.
↪gz 03e7...
bare/config/devel/dtc-1.6.0-1.cfg:%hash sha256 dtc-%{dtc_version}.tar.
↪gz 9fbe0...
bare/config/devel/dtc-1.6.1-1.cfg:%hash sha256 dtc-%{dtc_version}.tar.
↪gz 38a6...
```

shows there are older existing versions still on the `.gz` extension. The change should have added a macro that defines the extension and used that. An example is GDB with `%{gdb_src_ext}`.

Author: Chris Johns 2025-09-18T01:39:27.924Z

Once @amar adds the build cache this error will be detected and we can make an issue or whatever to get it sorted. The build cache uses the get source tool to build a catalog.

Author: Amar Takhar 2025-09-18T01:39:27.879Z

I finished the build cache the same day we talked about it. What we're waiting on is an option to the RSB to dump all the upstream resources to a JSON file so we can continuously scan and load the cache. Though we'll have to account for situations like this.

Then the RSB can be modified to use it.

Author: Chris Johns 2025-09-18T05:22:12.115Z

Yes this is understood. A checksum error has become a hard error because people did not set or get is right and each release there was a lot of work to clean it up. For example the `gcc-head-newlib-head` configuration has a bad checksum after the path was redirected to our gitlab.

Author: Chris Johns 2025-09-18T02:46:24.012Z

assigned to @chris and unassigned @opticron and @joel

Author: Chris Johns 2025-09-18T02:46:27.582Z

set status to **In progress**

Author: Chris Johns 2025-09-18T02:50:35.400Z

Fixing on `main` with https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/177

Author: Chris Johns 2025-09-19T06:59:38.813Z

set status to **Done**

2.12.1.8 30 - RSB build failure on the latest code

Id	30
State	closed
Type	ISSUE
Author	yang zhang
Closed by	Amar Takhar
Created	2024-08-22T01:08:16.641Z
Closed	2024-08-22T01:15:32.176Z
Updated	2025-09-19T01:48:03.426Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/30
Merges	0

rsb build failure on the latest code

rsb-log-20240821-104738.txt Log: copy: /home/yangzhang/code/github/rtems-source-builder/rtems/build/tmp/aarch64-rtems6-binutils-2.43-x86_64-linux-gnu-1-1000 => /home/yangzhang/code/github/rtems-source-builder/rtems/build/tmp/sb-

1000/tools/rtems-default-tools reporting: tools/rtems-binutils-2.43.cfg -> aarch64-rtems6-binutils-2.43-x86_64-linux-gnu-1.txt making dir: /home/yangzhang/code/github/rtems-source-builder/rtems/build/tmp/aarch64-rtems6-binutils-2.43-x86_64-linux-gnu-1-1000/home/yangzhang/RTEMS/rtems/6/share/rtems/rsb reporting: tools/rtems-binutils-2.43.cfg -> aarch64-rtems6-binutils-2.43-x86_64-linux-gnu-1.xml making dir: /home/yangzhang/code/github/rtems-source-builder/rtems/build/tmp/aarch64-rtems6-binutils-2.43-x86_64-linux-gnu-1-1000/home/yangzhang/RTEMS/rtems/6/share/rtems/rsb config: tools/rtems-gcc-13.3-newlib-head.cfg error: shell macro failed: cat "/home/yangzhang/code/github/rtems-source-builder/rtems/config/stdcxx-template.py" | sed "s/@RSB_GCC_VERSION@//bin/sh: 1: /home/yangzhang/RTEMS/rtems/6/bin/aarch64-rtems6-gcc: not found/g" > "/home/yangzhang/RTEMS/rtems/6/share/gdb/python/rtems/stdcxx.py": 2: /bin/sh: 1: cannot create /home/yangzhang/RTEMS/rtems/6/share/gdb/python/rtems/stdcxx.py: Directory nonexistent

Steps to reproduce

1. git clone https://gitlab.rtems.org/rtems/tools/rtems-source-builder.git current commit is :632ccda714fdba59c39bb126cf417f2b101c8929 2. cd ~/rtems-source-builder/rtems ../source-builder/sb-set-builder –prefix="PATH" 6/rtems-aarch64

Additional Information

First, i git clone https://github.com/RTEMS/rtems.git when build with config.ini([aarch64/xilinx_zynqmp_lp64_qemu]) i found fail Log: ../../../cpukit/libcsupport/src/getrusage.c: In function 'getrusage': ../../../cpukit/libcsupport/src/getrusage.c:113:8: error: 'RUSAGE_THREAD' undeclared (first use in this function); did you mean 'SIGEV_THREAD'? 113 | case RUSAGE_THREAD: | ^~~~~~~~~~~~~~ | SIGEV_THREAD ../../../cpukit/libcsupport/src/getrusage.c:113:8: note: each undeclared identifier is reported only once for each function it appears in ————————————————- I found in the toolchain, only define RUSAGE_SELF and RUSAGE_SELF, no RUSAGE_THREAD, so i think i should update toolchain. Then i clone the newest rsb code, and then build, but rsb build failure as above.

Author: Amar Takhar 2024-08-22T01:13:38.418Z

Hello this has already been reported and there is a fix in issue https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/issues/29

I am closing this as it seems to be a duplicate if it is not please re-open.

Author: Amar Takhar 2024-08-22T01:15:16.813Z

Re-opening to use duplicate command I forgot existed.

Author: Amar Takhar 2024-08-22T01:15:32.085Z

marked this issue as a duplicate of #29

Author: Amar Takhar 2024-08-22T01:15:32.341Z

marked this issue as related to #29

2.12.1.9 109 - Backport GDB TLS support patches to 6 branch

Id	109
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-06-30T20:45:24.067Z
Closed	2025-07-30T18:29:47.658Z
Updated	2025-09-16T17:49:05.011Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/109
Merges	0

The following discussion from !156 should be addressed:

- [] @opticron started a discussion:

  A version of these patches will need to be backported to the 6 branch to support the TLS usage there.

  Author: Kinsey Moore 2025-06-30T20:45:24.172Z

  assigned to @opticron

  Author: Kinsey Moore 2025-06-30T21:07:19.108Z

  added rtems#10 as parent epic

  Author: Kinsey Moore 2025-06-30T21:07:47.532Z

  mentioned in merge request !157

  Author: Kinsey Moore 2025-07-30T18:29:47.713Z

  set status to **Done**

  Author: Joel Sherrill 2025-09-16T17:49:04.818Z

  mentioned in commit eb0378a4a21eeae511e967829314c06226f624fa

2.12.1.10 103 - Update git package regerences for 6

Id	103
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2025-05-23T02:42:39.665Z
Closed	2025-05-23T14:01:33.691Z
Updated	2025-09-16T17:49:04.604Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/103
Merges	1

Update the package references for git to allow testing.

Author: Chris Johns 2025-05-23T02:42:39.775Z

assigned to @chris

Author: Chris Johns 2025-05-23T02:45:38.168Z

mentioned in merge request !146

Author: Chris Johns 2025-05-23T02:47:10.863Z

mentioned in merge request !147

Author: Chris Johns 2025-09-16T17:49:04.112Z

mentioned in commit 3d76465c1d9e28e7ceef04ebb2c04f0c41528b73

2.12.1.11 104 - Backport QEMU version update to 6 branch

Id	104
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-05-28T18:11:50.502Z
Closed	2025-07-30T18:30:02.036Z
Updated	2025-09-16T17:49:04.582Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/104
Merges	0

Summary

This needs to be updated so that QEMU is buildable.

Steps to reproduce

2.12.1.11.2.1 Pre-set options

Author: Kinsey Moore 2025-05-28T18:11:50.669Z

assigned to @opticron

Author: Kinsey Moore 2025-05-28T18:11:51.060Z

Author: Kinsey Moore 2025-05-28T18:12:39.518Z

mentioned in merge request !150

Author: Kinsey Moore 2025-05-28T18:16:14.237Z

cloned to #105

Author: Kinsey Moore 2025-07-30T18:30:02.080Z

set status to **Done**

Author: Joel Sherrill 2025-09-16T17:49:04.089Z

mentioned in commit 005081ef48204fa8322e57b335aad4dc616b9c6f

2.12.1.12 98 - Can not Build gdb-15.2-arm64-apple-darwin

Id	98
State	closed
Type	ISSUE
Author	Heinz Junkes
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-04-10T10:43:48.170Z
Closed	2025-05-23T02:39:38.969Z
Updated	2025-09-16T17:49:04.154Z
Milestone	6.2
Labels	tool::gdb
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/98
Merges	1

Summary

Can not build gdb-15.2 on arm64-apple-darwin.

```
Apple clang version 17.0.0 (clang-1700.0.13.3)
Target: arm64-apple-darwin24.4.0
Thread model: posix
InstalledDir: /Applications/Xcode.app/Contents/Developer/Toolchains/XcodeDefault.
↪xctoolchain/usr/bin
```

Steps to reproduce

I have tried it with RTEMS6.1 release and the current one (7-origin/main).

```
...
checking whether /Applications/Xcode.app/Contents/Developer/usr/bin/make sets
↪$(MAKE)... yes
checking for style of include used by /Applications/Xcode.app/Contents/Developer/
↪usr/bin/make... GNU
checking whether /Applications/Xcode.app/Contents/Developer/usr/bin/make supports␣
↪nested variables... yes
checking dependency style of /usr/bin/cc -O2 -pipe -fbracket-depth=1024 -I/
↪Volumes/Epics/rtems-bbb/tools/rtems-source-builder/rtems/build/tmp/sb-501/tools/
↪rtems-default-tools/Volumes/Epics/rtems-bbb/install/rtems/7/include -I/Volumes/
↪Epics/rtems-bbb/tools/rtems-source-builder/rtems/build/tmp/sb-501-internal/
↪include... gcc3
checking whether /Applications/Xcode.app/Contents/Developer/usr/bin/make supports␣
↪nested variables... (cached) yes
checking whether ln -s works... yes
checking for arm64-apple-darwin24.4.0-ranlib... ranlib
checking for arm64-apple-darwin24.4.0-ar... (cached) ar
configure: updating cache ./config.cache
checking that generated files are newer than configure... done
```

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```
configure: creating ./config.status
config.status: creating Makefile.gnulib.inc
config.status: creating Makefile
config.status: creating import/Makefile
config.status: creating config.h
config.status: executing depfiles commands
config.status: executing default commands
make[1]: *** [all] Error 2
shell cmd failed: /bin/sh -ex  /Volumes/Epics/rtems-bbb/tools/rtems-source-builder/rtems/build/arm-rtems7-gdb-15.2-arm64-apple-darwin24.4.0-1/do-build
error: building arm-rtems7-gdb-15.2-arm64-apple-darwin24.4.0-1
```

Problems with zlib?

```
...
checking whether mbrtowc and mbstate_t are properly declared... (cached) yes
checking for iswlower... (cached) yes
In file included from ../../gdb-15.2/zlib/zutil.c:8:
../../gdb-15.2/zlib/zutil.h:170:11: warning: 'OS_CODE' macro redefined [-Wmacro-redefined]
170 | #  define OS_CODE 19
|           ^
../../gdb-15.2/zlib/zutil.h:141:11: note: previous definition is here
141 | #  define OS_CODE  7
|           ^
In file included from ../../gdb-15.2/zlib/zutil.c:10:
In file included from ../../gdb-15.2/zlib/gzguts.h:21:
In file included from /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/stdio.h:61:
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/_stdio.h:318:7: error: expected identifier or '('
318 | FILE    *fdopen(int, const char *) __DARWIN_ALIAS_STARTING(__MAC_10_6, __IPHONE_2_0, __DARWIN_ALIAS(fdopen));
|          ^
../../gdb-15.2/zlib/zutil.h:147:33: note: expanded from macro 'fdopen'
147 | #        define fdopen(fd,mode) NULL /* No fdopen() */
|                                  ^
/Applications/Xcode.app/Contents/Developer/Toolchains/XcodeDefault.xctoolchain/usr/lib/clang/17/include/__stddef_null.h:26:16: note: expanded from macro 'NULL'
26 | #define NULL ((void*)0)
|                ^
In file included from ../../gdb-15.2/zlib/zutil.c:10:
In file included from ../../gdb-15.2/zlib/gzguts.h:21:
In file included from /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/stdio.h:61:
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/_stdio.h:318:7: error: expected ')'
../../gdb-15.2/zlib/zutil.h:147:33: note: expanded from macro 'fdopen'
147 | #        define fdopen(fd,mode) NULL /* No fdopen(checking whether basename␣
```

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```
↪is declared... ) */
29 |                                    ^
30 /Applications/Xcode.app/Contents/Developer/Toolchains/XcodeDefault.xctoolchain/
↪usr/lib/clang/17/include/__stddef_null.h:26:16: note: expanded from macro 'NULL'
31 (cached)    26 | #define NULL (no
32 (void*)0)
33 |                ^
34 /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/
↪SDKs/MacOSX.sdk/usr/include/_stdio.h:318:7: note: to match this '('
35 ../../gdb-15.2/zlib/zutil.h:147:33: note: expanded from macro 'fdopen'
36 147 | #        define fdopen(fd,mode) NULL /* No fdopen() */
37 |                                    ^
38 /Applications/Xcode.app/Contents/Developer/Toolchains/XcodeDefault.xctoolchain/
↪usr/lib/clang/17/include/__stddef_null.h:26:15: note: expanded from macro 'NULL'
39 26 | #define NULL ((void*)0)
40 |               ^
41 In file included from ../../gdb-15.2/zlib/zutil.c:10:
42 In file included from ../../gdb-15.2/zlib/gzguts.h:21:
43 In file included from /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.
↪platform/Developer/SDKs/MacOSX.sdk/usr/include/stdio.h:61:
44 /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/
↪SDKs/MacOSX.sdk/usr/include/_stdio.h:318:7: error: expected ')'
45 318 | FILE    *fdopen(int, const char *) __DARWIN_ALIAS_STARTING(__MAC_10_6, __
↪IPHONE_2_0, __DARWIN_ALIAS(fdopen));
46 |         ^
47 ../../gdb-15.2/zlib/zutil.h:147:33: note: expanded from macro 'fdopen'
48 147 | #        define fdopen(fd,mode) NULL /* No fdopen() */
49 |                                    ^
50 /Applications/Xcode.app/Contents/Developer/Toolchains/XcodeDefault.xctoolchain/
↪usr/lib/clang/17/include/__stddef_null.h:26:22: note: expanded from macro 'NULL'
51 26 | #define NULL ((void*)0)
52 |                      ^
53 /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/
↪SDKs/MacOSX.sdk/usr/include/_stdio.h:318:7: note: to match this '('
54 ../../gdb-15.2/zlib/zutil.h:147:33: note: expanded from macro 'fdopen'
55 147 | #        define fdopen(fd,mode) NULL /* No fdopen() */
56 |                                    ^
57 /Applications/Xcode.app/Contents/Developer/Toolchains/XcodeDefault.xctoolchain/
↪usr/lib/clang/17/include/__stddef_null.h:26:14: note: expanded from macro 'NULL'
58 26 | #define NULL ((void*)0)
59 |               ^
60 ../../gdb-15.2/zlib/zutil.c:133:22: warning: a function definition without a␣
↪prototype is deprecated in all versions of C and is not supported in C23 [-
↪Wdeprecated-non-prototype]
61 133 | const char * ZEXPORT zError(err)
62 |                      ^
63 ../../gdb-15.2/zlib/zutil.c:305:22: warning: a function definition without a␣
↪prototype is deprecated in all versions of C and is not supported in C23 [-
↪Wdeprecated-non-prototype]
```

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```
305 | voidpf ZLIB_INTERNAL zcalloc (opaque, items, size)
|                       ^
../../gdb-15.2/zlib/zutil.c:315:20: warning: a function definition without a␣
↪prototype is deprecated in all versions of C and is not supported in C23 [-
↪Wdeprecated-non-prototype]
315 | void ZLIB_INTERNAL zcfree (opaque, ptr)
|                     ^
4 warnings and 3 errors generated.
make[2]: *** [libz_a-zutil.o] Error 1
make[1]: *** [all-zlib] Error 2
make[1]: *** Waiting for unfinished jobs....
checking for gawk... (cached) awk
```

2.12.1.12.2.1 Pre-set options

Author: Heinz Junkes 2025-04-10T10:44:37.539Z

changed the description

Author: Chris Johns 2025-04-18T22:34:03.205Z

assigned to @chris

Author: Chris Johns 2025-04-18T22:39:28.023Z

I wonder if we need to upgrade GDB to 16 like we have on RTEMS 7? I think some testing is needed.

Author: Heinz Junkes 2025-05-23T02:39:28.956Z

Unfortunately, it looks to me like a problem with the Apple OSx. Everything works perfectly with Sequoia 15.0. I got the problems after upgrading to 15.4. The main problem I see is that XCode is usually also updated during an upgrade of the OS and then problems like this occur. Unfortunately I can't select an older XCode on a new Apple OS? Apple simply changes too much at their own discretion :-(

Author: Amar Takhar 2025-05-23T02:39:28.956Z

There's no option to use homebrew / macports or just install the CLI tools without XCode? XCode is always a moving target and very hard to do longterm development for anything non-GUI. If you're doing GUI work then you need to accept that Apple does this if you want your software to work.

Author: Heinz Junkes 2025-04-22T09:40:33.211Z

It would be really nice if we had a builder-config that would work with the homebrew - installation only.

Author: Heinz Junkes 2025-04-22T14:48:25.853Z

Same error with rtems7 and gdb16:

```
checking whether ln -s works... yes
checking for arm64-apple-darwin24.4.0-ranlib... ranlib
checking for arm64-apple-darwin24.4.0-ar... (cached) ar
configure: updating cache ./config.cache
checking that generated files are newer than configure... done
configure: creating ./config.status
config.status: creating Makefile.gnulib.inc
config.status: creating Makefile
config.status: creating import/Makefile
config.status: creating config.h
config.status: executing depfiles commands
config.status: executing default commands
make: *** [all] Error 2
shell cmd failed: /bin/sh -ex  /Volumes/Epics/RTEMS_BBB/rsb/rtems/build/
↪arm-rtems7-gdb-16.2-arm64-apple-darwin24.4.0-1/do-build
error: building arm-rtems7-gdb-16.2-arm64-apple-darwin24.4.0-1
```

```
In file included from ../../gdb-16.2/zlib/zutil.c:8:
../../gdb-16.2/zlib/zutil.h:170:11: warning: 'OS_CODE' macro redefined␣
↪[-Wmacro-redefined]
170 | #  define OS_CODE 19
|           ^
../../gdb-16.2/zlib/zutil.h:141:11: note: previous definition is here
141 | #  define OS_CODE  7
|           ^
checking whether snprintf is declared... (cached) In file included from␣
↪../../gdb-16.2/zlib/zutil.c:10:
In file included from ../../gdb-16.2/zlib/gzguts.h:21:
In file included from /Applications/Xcode.app/Contents/Developer/
↪Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/stdio.
↪h:61:
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/
↪Developer/SDKs/MacOSX.sdk/usr/include/_stdio.h:318:7: error: expected␣
↪identifier or '('
yes
318 | FILE    *fdopen(int, const char *) __DARWIN_ALIAS_STARTING(__MAC_
↪10_6, __IPHONE_2_0, __DARWIN_ALIAS(fdopen));
|          ^
../../gdb-16.2/zlib/zutil.h:147:33: note: expanded from macro 'fdopen'
147 | #        define fdopen(fd,mode) NULL /* No fdopen() */
|                                  ^
/Applications/Xcode.app/Contents/Developer/Toolchains/XcodeDefault.
↪xctoolchain/usr/lib/clang/17/include/__stddef_null.h:26:16: note:␣
```

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```
↪expanded from macro 'NULL'
26 | #define NULL ((void*)0)
|                ^
In file included from ../../gdb-16.2/zlib/zutil.c:10:
In file included from ../../gdb-16.2/zlib/gzguts.h:21:
In file included from /Applications/Xcode.app/Contents/Developer/
↪Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/stdio.
↪h:61:
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/
↪Developer/SDKs/MacOSX.sdk/usr/include/_stdio.h:318:7: error: expected
↪')'
../../gdb-16.2/zlib/zutil.h:147:33: note: expanded from macro 'fdopen'
147 | #       define fdopen(fd,mode) NULL /* No fdopen() */
|                                 ^
/Applications/Xcode.app/Contents/Developer/Toolchains/XcodeDefault.
↪xctoolchain/usr/lib/clang/17/include/__stddef_null.h:26:16: note:␣
↪expanded from macro 'NULL'
26 | #define NULL ((void*)0)
|                ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/
↪Developer/SDKs/MacOSX.sdk/usr/include/_stdio.h:318:7: note: to match␣
↪this '('
../../gdb-16.2/zlib/zutil.h:147:33: note: expanded from macro 'fdopen'
147 | #       define fdopen(fd,mode) NULL /* No fdopen() */
|                                 ^
/Applications/Xcode.app/Contents/Developer/Toolchains/XcodeDefault.
↪xctoolchain/usr/lib/clang/17/include/__stddef_null.h:26:15: note:␣
↪expanded from macro 'NULL'
26 | #define NULL ((void*)0)
|                ^
In file included from ../../gdb-16.2/zlib/zutil.c:10:
In file included from ../../gdb-16.2/zlib/gzguts.h:21:
In file included from /Applications/Xcode.app/Contents/Developer/
↪Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/stdio.
↪h:61:
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/
↪Developer/SDKs/MacOSX.sdk/usr/include/_stdio.h:318:7: error: expected
↪')'
318 | FILE    *fdopen(int, const char *) __DARWIN_ALIAS_STARTING(__MAC_
↪10_6, __IPHONE_2_0, __DARWIN_ALIAS(fdopen));
|         ^
../../gdb-16.2/zlib/zutil.h:147:33: note: expanded from macro 'fdopen'
147 | #       define fdopen(fd,mode) NULL /* No fdopen() */
|                                 ^
/Applications/Xcode.app/Contents/Developer/Toolchains/XcodeDefault.
↪xctoolchain/usr/lib/clang/17/include/__stddef_null.h:26:22: note:␣
↪expanded from macro 'NULL'
26 | #define NULL ((void*)0)
|                      ^
```

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```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/_stdio.h:318:7: note: to match this '('
../../gdb-16.2/zlib/zutil.h:147:33: note: expanded from macro 'fdopen'
147 | #        define fdopen(fd,mode) NULL /* Nchecking whether <netinet/in.h> is self-contained... o fdopen() */
|                                  ^
/Applications/Xcode.app/Contents/Developer/Toolchains/XcodeDefault.xctoolchain/usr/lib/clang/17/include/__stddef_null.h:26:14: note: expanded from macro 'NULL'
26 | #define NULL ((void*)0)
|              ^
(cached) yes
checking whether open recognizes a trailing slash... (cached) no
../../gdb-16.2/zlib/zutil.c:133:22: warning: a function definition without a prototype is deprecated in all versions of C and is not supported in C23 [-Wdeprecated-non-prototype]
133 | const char * ZEXPORT zError(err)
|                      ^
../../gdb-16.2/zlib/zutil.c:305:22: warning: a function definition without a prototype is deprecated in all versions of C and is not supported in C23 [-Wdeprecated-non-prototype]
305 | voidpf ZLIB_INTERNAL zcalloc (opaque, items, size)
|                      ^
../../gdb-16.2/zlib/zutil.c:315:20: warning: a function definition without a prototype is deprecated in all versions of C and is not supported in C23 [-Wdeprecated-non-prototype]
315 | void ZLIB_INTERNAL zcfree (opaque, ptr)
|                    ^
4 warnings and 3 errors generated.
make[2]: *** [libz_a-zutil.o] Error 1
checking for opendir... (cached) yes
make[1]: *** [all-zlib] Error 2
make[1]: *** Waiting for unfinished jobs....
```

Author: Heinz Junkes 2025-04-22T15:11:35.960Z

I found this at the Homebrew Docu: “Homebrew depends on having an up-to-date version of Xcode because it comes with specific versions of build tools, e.g. clang.”

Author: Chris Johns 2025-05-03T00:30:32.343Z

The issue is related to the version of `zlib` in GDB. GDB needs a newer version as https://github.com/madler/zlib/blob/develop/zutil.h has the `MACOS` section removed.

Author: Chris Johns 2025-05-03T18:24:46.060Z

I was checking 16.2 which is our GDB for RTEMS 7. I checked gdb's git repo and the ``ziib `` header is still broken. I have raised a bug on gdb: https://sourceware.org/bugzilla/show_bug.cgi?id=32933

Author: Chris Johns 2025-05-03T02:31:07.808Z

It seems `binutils-2.44` has the same issue.

Author: Chris Johns 2025-05-03T09:29:22.052Z

GCC also suffers from the same issue.

Author: Chris Johns 2025-05-03T10:12:38.678Z

These patches let `aarch64` tools build on Sequoia and the latest Xcode.

gcc-13.3.0-zlib-macos-fix.diff

binutils-2.44-zlib-macos-fix.diff

gdb-16.2-zlib-macos-fix.diff

Author: Chris Johns 2025-05-03T10:13:47.560Z

cloned to #100

Author: Joel Sherrill 2025-05-05T01:58:40.938Z

@chris Did you submit these patches to the upstream projects?

Author: Chris Johns 2025-05-05T01:58:40.903Z

No. Upstream needs to pick up a newer `zlib` but there is shared complexity across a range of projects that share this. I have raised issues or there is a known issue.

Author: Chris Johns 2025-05-05T02:34:29.090Z

We need these changes to avoid changing the release. I have no idea if a gcc-13.x will ever see an updated `zlib` .

Author: Heinz Junkes 2025-05-05T01:57:29.301Z

Just for the sake of completeness. I have unfortunately encountered another problem. To solve it I had to do:

ln -s /opt/homebrew/Cellar/ncurses/6.5/include/ncursesw /usr/local/include/ncursesw

Unfortunately, I have not yet understood how I can use this fixed source builder to install version 6.1? (Does this refer to Joel's comment? 'upstream-projects'?)

```
RTEMS Tools Project - Source Builder Error Report
Build: error: building arm-rtems7-gdb-16.2-arm64-apple-darwin24.4.0-1
Command Line: ../source-builder/sb-set-builder --jobs=20 --prefix=/
↪Volumes/Epics/RTEMS_BBB/rtems/7 7/rtems-arm
Python: 3.13.1 (main, Feb  9 2025, 11:33:15) [Clang 16.0.0 (clang-1600.
↪0.26.4)]
https://gitlab.rtems.org/rtems/tools/rtems-source-builder.git/origin/
↪8084e3563ebc745f14c425fdd0d0b0deb8380995
Darwin Mac.fritz.box 24.4.0 Darwin Kernel Version 24.4.0: Fri Apr 11␣
↪18:33:39 PDT 2025; root:xnu-11417.101.15~117/RELEASE_ARM64_T6020 arm64
Tail of the build log:
checking for xsltproc... /usr/bin/xsltproc
configure: updating cache ./config.cache
configure: creating ./config.status
...

/usr/bin/c++ -O2 -pipe -fbracket-depth=1024 -I/Volumes/Epics/RTEMS_BBB/
↪rsb/rtems/build/tmp/sb-501/tools/rtems-default-tools/Volumes/Epics/
↪RTEMS_BBB/rtems/7/include -I/Volumes/Epics/RTEMS_BBB/rsb/rtems/build/
↪tmp/sb-501-internal/include -x c++ -std=gnu++17   -I. -I../../gdb-16.
↪2/gdb -I../../gdb-16.2/gdb/config -include ../../gdb-16.2/gdb/defs.h -
↪DLOCALEDIR="\\"/Volumes/Epics/RTEMS_BBB/rtems/7/share/locale\\"" -
↪DHAVE_CONFIG_H -I../../gdb-16.2/gdb/../include/opcode -I../bfd -I../..
↪/gdb-16.2/gdb/../bfd -I../../gdb-16.2/gdb/../include -I../../gdb-16.2/
↪gdb/../readline/readline/.. -I../../gdb-16.2/gdb/../zlib  -I../
↪libdecnumber -I../../gdb-16.2/gdb/../libdecnumber  -I../../gdb-16.2/
↪gdb/../gnulib/import -I../gnulib/import -I../../gdb-16.2/gdb/.. -I.. -
↪I../../gdb-16.2/gdb/../libbacktrace/ -I../libbacktrace/ -DTUI=1  -I/
↪Volumes/Epics/RTEMS_BBB/rsb/rtems/build/tmp/sb-501-internal/include  -
↪I/Users/junkes/.pyenv/versions/3.13.1/include/python3.13 -I/Users/
↪junkes/.pyenv/versions/3.13.1/include/python3.13   -I../../gdb-16.2/
↪gdb/.. -pthread    -Wall -Wpointer-arith -Wno-unused -Wunused-value -
↪Wunused-function -Wno-switch -Wno-char-subscripts -Wempty-body -
↪Wunused-but-set-parameter -Wunused-but-set-variable -Wno-sign-compare␣
↪-Wno-mismatched-tags -Wno-error=deprecated-register -Wsuggest-
↪override -Wdeprecated-copy -Wdeprecated-copy-dtor -Wredundant-move -
↪Wmissing-declarations -Wvla -Wmissing-prototypes -Wformat -Wformat-
↪nonliteral  -g -O2     -c -o record-btrace.o -MT record-btrace.o -MMD␣
↪-MP -MF ./.deps/record-btrace.Tpo ../../gdb-16.2/gdb/recor
d-btrace.c
In file included from ../../gdb-16.2/gdb/python/py-tui.c:32:
../../gdb-16.2/gdb/gdb_curses.h:43:10: fatal error: 'ncursesw/ncurses.h
↪' file not found
43 | #include <ncursesw/ncurses.h> /* IWYU pragma: export */
|          ^~~~~~~~~~~~~~~~~~~~
```

I have used the current version

```
commit 8084e3563ebc745f14c425fdd0d0b0deb8380995 (HEAD -> main, origin/
↪main, origin/HEAD)
Author: Chris Johns <chrisj@rtems.org>
Date:   Sat May 3 20:24:59 2025 +1000

rtems: Add paches to fix building on MacOS

- The zlib packages in gdb, binutils and gcc are broken on a
current MacOS. Patch around this until fixed upstream
```

Author: Chris Johns 2025-05-05T01:57:29.260Z

That looks like a homebew issue. It is why I build without it as it helps us isolate what are problems we have and what are Homebrew related.

Author: Chris Johns 2025-05-04T00:50:35.434Z

The 6 branch patches:

gdb-15.2-zlib-macos-fix.diff

binutils-2.43-zlib-macos-fix.diff

Author: Chris Johns 2025-05-04T01:24:18.010Z

mentioned in merge request !143

Author: Joel Sherrill 2025-05-23T02:39:22.978Z

See GCC issue 105404 for where they are tracking issues with zlib like this. Looks like GCC 16 is the first version that might address MacOS and update to pick up CVEs.

We need to carry the patch on 7 for at least GCC 13-15.

Author: Joel Sherrill 2025-05-23T02:39:22.978Z

A response from the gcc issue:

> note that the issue on macOS starts with Xcode16.3 on recent OS versions which have an up to date installed zlib (so the –with-system-zlib is a reasonable work-around).

Author: Chris Johns 2025-05-23T02:39:22.978Z

It is a work around unfortunately we have no history of adding this option to previous MacOS builds and what works and does not work. I also do not know how we could key option against MacOS version and Xocde versions.

Author: Chris Johns 2025-09-16T17:49:03.705Z

mentioned in commit 86fb2d4645ee6197198fb4755fbe8db1967c454c

2.12.1.13 101 - Backport UTF-8 fix to 6 branch

Id	101
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Chris Johns
Created	2025-05-08T13:30:05.384Z
Closed	2025-05-23T02:38:34.114Z
Updated	2025-09-16T17:49:03.772Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/101
Merges	1

Summary

Steps to reproduce

2.12.1.13.2.1 Pre-set options

Author: Kinsey Moore 2025-05-08T13:30:05.614Z

assigned to @opticron

Author: Kinsey Moore 2025-05-08T13:30:06.809Z

Author: Kinsey Moore 2025-05-08T13:31:36.971Z

mentioned in merge request !145

Author: Joel Sherrill 2025-09-16T17:49:03.215Z

mentioned in commit 15e5be5a328d099369dcba795ccc6ff33b82d055

2.12.1.14 86 - Add build support for LibBSD FreeBSD 14

Id	86
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Gedare Bloom
Created	2025-02-03T06:15:06.670Z
Closed	2025-04-23T21:50:41.896Z
Updated	2025-09-16T17:49:03.080Z
Milestone	6.2
Labels	libbsd::freebsd-14, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/86
Merges	1

Add support to build LibBSD branch `6-freebsd-14`.

Author: Chris Johns 2025-02-03T06:15:06.910Z

cloned from #83

Author: Chris Johns 2025-02-03T06:15:06.730Z

assigned to @chris

Author: Chris Johns 2025-02-03T06:15:11.226Z

Author: Chris Johns 2025-02-03T06:16:08.450Z

changed the description

Author: Chris Johns 2025-04-18T22:47:41.035Z

The config naming should only reference the version of FreeBSD being built. This simplifies the external user interface between versions of RTEMS. For example `7/rtems-libbsd.bset` becomes `7/rtems-libbsd-fb-14.bset` and we add `6/rtems-libbsd-fb-14.bset` to the 6 branch.

I have found the error codes returned by OpenSSL on FreeBSD 12 are different to the codes returned by FreeBSD 14. It is an example of why we need to remove the default branch from `libbsd` support and support active FreeBSD branches on an RTEMS release.

Author: Chris Johns 2025-04-19T05:32:54.777Z

marked this issue as blocking rtems-deployment#6

Author: Chris Johns 2025-04-19T05:35:14.607Z

mentioned in merge request !139

Author: Gedare Bloom 2025-04-23T21:47:46.417Z

Author: Gedare Bloom 2025-04-23T21:50:41.629Z

https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/139

Author: Chris Johns 2025-09-16T17:49:01.625Z

mentioned in commit 435961510b8e363936b091914f9ca53512f8a218

2.12.1.15 112 - Backport glib download isolation to 6 branch

Id	112
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-07-07T20:06:03.248Z
Closed	2025-08-02T17:33:47.456Z
Updated	2025-08-02T17:33:47.569Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/112
Merges	0

The following discussion from !161 should be addressed:

- [] @opticron started a discussion:

  This should be checked and resolved on the 6 branch if present. It is likely that at least the glib-2.80.2 issue exists.

Author: Kinsey Moore 2025-07-07T20:06:03.387Z

added rtems#10 as parent epic

Author: Kinsey Moore 2025-07-07T20:07:59.287Z

mentioned in merge request !162

Author: Kinsey Moore 2025-07-31T01:42:57.916Z

assigned to @opticron

Author: Chris Johns 2025-07-31T22:40:28.301Z

mentioned in commit 718d6a06f1fa1dcb8b1fb807b94e764bf3103954

Author: Chris Johns 2025-07-31T22:40:28.315Z

mentioned in commit eb651502437f9b8cf7f825e1d90b4e376f390362

Author: Kinsey Moore 2025-08-02T17:33:47.528Z

set status to **Done**

2.12.1.16 113 - Backport mirror name change patch to 6 branch

Id	113
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-07-17T22:04:34.656Z
Closed	2025-07-31T01:42:48.458Z
Updated	2025-07-31T01:42:48.471Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/113
Merges	0

The following discussion from !166 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to 6 branch.

  Author: Kinsey Moore 2025-07-17T22:05:42.021Z

  added rtems#10 as parent epic

  Author: Kinsey Moore 2025-07-17T22:05:59.643Z

  mentioned in merge request !167

Author: Amar Takhar 2025-07-19T15:14:25.315Z

mentioned in commit af7f6f3e6034fb80dd4b926d09f778a3b0f81a5d

Author: Kinsey Moore 2025-07-31T01:42:45.200Z

assigned to @opticron

Author: Kinsey Moore 2025-07-31T01:42:48.505Z

set status to **Done**

Author: Karthikey Kadati 2025-12-06T16:09:54.831Z

mentioned in merge request !199

2.12.1.17 110 - Backport mirror updates to 6 branch for future releases

Id	110
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-07-04T20:03:14.668Z
Closed	2025-07-30T18:31:31.469Z
Updated	2025-07-30T18:31:31.536Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/110
Merges	0

The following discussion from !158 should be addressed:

- [] @opticron started a discussion:

  This needs to be backported to 6 for future releases.

  Author: Kinsey Moore 2025-07-04T20:03:14.814Z

  added rtems#10 as parent epic

  Author: Kinsey Moore 2025-07-04T20:03:14.919Z

  assigned to @opticron

Author: Kinsey Moore 2025-07-04T20:04:15.510Z

mentioned in merge request !159

Author: Gedare Bloom 2025-07-15T22:33:20.153Z

mentioned in commit 905403bea3ec7d07a190ffa95188775927ab3077

Author: Kinsey Moore 2025-07-30T18:31:31.515Z

set status to **Done**

2.12.1.18 95 - RTEMS tester fails to run correctly under python 3.13

Id	95
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-02-28T22:39:31.754Z
Closed	2025-03-02T02:21:56.001Z
Updated	2025-03-02T02:21:56.073Z
Milestone	6.2
Labels	tool::test
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/95
Merges	0

Summary

When attempting to run the RTEMS tester with Python 3.13, these error messages are produced:

```
.../rtems-tools/tester/rt/test.py:76: SyntaxWarning: invalid escape sequence '\\['
status_regx = re.compile('^\\[\\s*\\d+/\\s*\\d+\\] p:.+')
.../rtems-tools/tester/rt/test.py:188: SyntaxWarning: invalid escape sequence '\\.
↪'
norun = re.compile('.*\\.norun.*')
Incorrect RTEMS Tools installation
```

This was tested on the 6.1 branch, but there appear to be no changes to main that would have fixed this.

Steps to reproduce

2.12.1.18.2.1 Pre-set options

Author: Kinsey Moore	2025-02-28T22:39:31.957Z

assigned to @opticron

Author: Kinsey Moore	2025-02-28T22:39:32.416Z

Author: Kinsey Moore	2025-03-02T02:13:13.434Z

On further investigation, this is 2 separate issues. The escapes need to be fixed to resolve the warnings and the actual exit is caused by missing telnetlib since it was deprecated in 3.11 and removed in 3.13.

Author: Kinsey Moore	2025-03-02T02:13:13.403Z

On debian systems, there is currently a workaround for the actual exit issue by installing `python3-zombie-telnetlib`.

Author: Kinsey Moore	2025-03-02T02:21:56.118Z

moved to rtems-tools#22

2.12.2 Merge Requests

2.12.2.1 206 - Fix release downloads

Id	206
State	merged
Merged by	Chris Johns
Merged at	2025-12-19T04:26:09.840Z
Assignee(s)	Chris Johns
Created	2025-12-19T04:20:26.518Z
Updated	2025-12-19T04:26:09.812Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/206
Commit	3814cb0e7f86cca2be403eac831f9bf571984659

Fix release downloads

Closes #150

Author: Chris Johns 2025-12-19T04:20:26.629Z

assigned to @chris

Author: Chris Johns 2025-12-19T04:20:44.801Z

enabled an automatic merge when all merge checks for 3814cb0e7f86cca2be403eac831f9bf571984659 pass

Author: Amar Takhar 2025-12-19T04:26:05.327Z

approved this merge request

Author: Kinsey Moore 2026-02-05T17:53:22.738Z

mentioned in issue #150

2.12.2.2 203 - bare/devel: Fix QEMU libusb patch hash

Id	203
State	merged
Merged by	Chris Johns
Merged at	2025-12-16T05:11:09.945Z
Assignee(s)	Chris Johns
Created	2025-12-16T05:10:17.501Z
Updated	2025-12-17T22:49:48.485Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/203
Commit	e0fc5716ff40b215799c7e2887566ba2393b41bc

The hash is wrong and the fetch from the RTEMS file cache fails with 404.

Author: Chris Johns 2025-12-16T05:10:18.395Z

assigned to @chris

Author: Chris Johns 2025-12-16T05:10:36.402Z

enabled an automatic merge when all merge checks for e0fc5716ff40b215799c7e2887566ba2393b41bc pass

Author: Amar Takhar 2025-12-16T05:11:05.289Z

approved this merge request

Author: Kinsey Moore 2025-12-17T22:49:48.864Z

Did this not have a backport issue? Was it committed to the main branch?

Author: Kinsey Moore 2025-12-17T22:49:48.864Z

@chris @amar ^ ^

Author: Amar Takhar 2025-12-17T22:49:48.864Z

No idea you'll have to ask Chris I thought there was an issue opened for %7.1 already?

Author: Chris Johns 2025-12-17T22:49:48.864Z

Yes it was committed to the `main` however it has a bug which I need to fix. My limited time this week was on the 6.2 release.

Author: Chris Johns 2025-12-17T22:49:48.884Z

resolved all threads

2.12.2.3 202 - Support only SHA512 Checksums

Id	202
State	merged
Merged by	Chris Johns
Merged at	2025-12-16T00:05:58.964Z
Assignee(s)	Chris Johns
Created	2025-12-15T23:00:58.325Z
Updated	2025-12-16T00:05:58.953Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/202
Commit	cbc93a5a714662e58e9106d3a75e01a405b33d19

Support only SHA512 check-sums to be compatible with the RTEMS file cache at https://dl.rtems.org.

1. Remove patchwork down loader support as the `--rsb-file` option can be used. This is a better and simpler alternative. A patchwork patch used SHA256.
2. Switch any remaining configurations to SHA512.

I have run `sb-get-sources`.

Updates #148

Author: Chris Johns 2025-12-15T23:00:58.472Z

assigned to @chris

Author: Chris Johns 2025-12-15T23:01:54.098Z

enabled an automatic merge when all merge checks for cbc93a5a714662e58e9106d3a75e01a405b33d19 pass

Author: Amar Takhar 2025-12-16T00:05:57.213Z

approved this merge request

2.12.2.4 198 - Add file cache support

Id	198
State	merged
Merged by	Chris Johns
Merged at	2025-11-18T20:55:20.257Z
Assignee(s)	Chris Johns
Created	2025-11-18T20:48:14.222Z
Updated	2025-11-18T20:55:20.243Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/198
Commit	5e8bd1aa277842bb4bc0045cd765850578790bbc

Add file cache support

Closes #139

Author: Chris Johns 2025-11-18T20:48:14.390Z

assigned to @chris

Author: Chris Johns 2025-11-18T20:48:33.353Z

enabled an automatic merge when all merge checks for 5e8bd1aa277842bb4bc0045cd765850578790bbc pass

Author: Amar Takhar 2025-11-18T20:55:16.932Z

approved this merge request

2.12.2.5 197 - Add catalog support to get sources

Id	197
State	merged
Merged by	Chris Johns
Merged at	2025-11-18T20:39:10.984Z
Assignee(s)	Chris Johns
Created	2025-11-18T20:32:42.902Z
Updated	2025-11-18T20:39:10.976Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/197
Commit	3d0e1ff5776c3f4d95b89215d643c1ee46a8cb36

Add catalog support to get sources

The catalog is a JSON format file of all the sources, patches and hashes the RSB could download.

Closes #146

Author: Chris Johns 2025-11-18T20:32:43.042Z

assigned to @chris

Author: Chris Johns 2025-11-18T20:33:09.430Z

enabled an automatic merge when all merge checks for 3d0e1ff5776c3f4d95b89215d643c1ee46a8cb36 pass

Author: Amar Takhar 2025-11-18T20:39:08.718Z

approved this merge request

2.12.2.6 185 - Fix GNU FTP links to support mirroring

Id	185
State	merged
Merged by	Chris Johns
Merged at	2025-10-01T14:06:02.583Z
Assignee(s)	Chris Johns
Created	2025-10-01T03:50:04.401Z
Updated	2025-10-01T14:06:02.503Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/185
Commit	9a03d058f3de052ac50e4ea29f78350ea2ecc7ab

Fix GNU FTP links to support mirroring

Closes #128

Author: Chris Johns 2025-10-01T03:50:04.548Z

assigned to @chris

Author: Chris Johns 2025-10-01T03:50:24.995Z

enabled an automatic merge when all merge checks for 9a03d058f3de052ac50e4ea29f78350ea2ecc7ab pass

Author: Kinsey Moore 2025-10-01T14:06:00.601Z

approved this merge request

2.12.2.7 182 - rtems: Change ftp.gnu.org to ftpmirror.gnu.org

Id	182
State	merged
Merged by	Chris Johns
Merged at	2025-09-28T00:10:39.970Z
Assignee(s)	Chris Johns
Created	2025-09-27T23:52:25.820Z
Updated	2025-09-28T00:10:39.909Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/182
Commit	50ec06298cd0da2ae90047de4582278349a196d3

rtems: Change ftp.gnu.org to ftpmirror.gnu.org

Use the GNU FTP mirror support.

Closes #126

Author: Chris Johns 2025-09-27T23:52:25.932Z

assigned to @chris

Author: Chris Johns 2025-09-27T23:52:52.575Z

enabled an automatic merge when all merge checks for 50ec06298cd0da2ae90047de4582278349a196d3 pass

Author: Amar Takhar 2025-09-28T00:10:35.094Z

approved this merge request

2.12.2.8 162 - Backport download isolation fixes to 6 branch

Id	162
State	merged
Merged by	Chris Johns
Merged at	2025-07-31T22:40:27.279Z
Assignee(s)	Kinsey Moore
Created	2025-07-07T20:07:54.420Z
Updated	2025-07-31T22:40:29.240Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/162
Commit	718d6a06f1fa1dcb8b1fb807b94e764bf3103954

Summary

Updates #112

Author: Kinsey Moore 2025-07-07T20:07:54.557Z

assigned to @opticron

Author: Kinsey Moore 2025-07-25T21:54:49.800Z

added 4 commits

- dd8ba890...af7f6f3e - 2 commits from branch `rtems/tools:6`
- 4639cf2b - source-builder/sb/build: Provide a copy action

- e836280d - source-builder/glib: Provide download dependencies

Compare with previous version

Author: Chris Johns 2025-07-28T13:58:47.428Z

Please set to `None` and make the test `is not None` in `source()`.

Author: Kinsey Moore 2025-07-28T13:48:57.798Z

changed this line in version 3 of the diff

Author: Kinsey Moore 2025-07-28T13:58:47.428Z

This has been addressed.

Author: Chris Johns 2025-07-28T02:44:14.987Z

requested changes

Author: Kinsey Moore 2025-07-28T13:48:58.530Z

added 2 commits

- eb651502 - source-builder/sb/build: Provide a copy action
- 718d6a06 - source-builder/glib: Provide download dependencies

Compare with previous version

Author: Kinsey Moore 2025-07-28T13:58:47.450Z

resolved all threads

Author: Chris Johns 2025-07-31T22:40:22.022Z

approved this merge request

2.12.2.9 167 - config: Update to new mirror names

Id	167
State	merged
Merged by	Amar Takhar
Merged at	2025-07-19T15:14:23.953Z
Assignee(s)	Kinsey Moore
Created	2025-07-17T22:05:55.244Z
Updated	2025-07-19T15:14:23.938Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/167
Commit	af7f6f3e6034fb80dd4b926d09f778a3b0f81a5d

Summary

config: Update to new mirror names

The mirrors are now named such that they do not appear to be official mirrors as the github mirrors were. This should avoid our servers getting scraped by bots so often.

Closes #113

Author: Kinsey Moore 2025-07-17T22:06:32.141Z

This needs to be backported to 5 branch.

Author: Kinsey Moore 2025-07-17T22:06:32.276Z

created #114 to continue this discussion

Author: Kinsey Moore 2025-07-17T22:06:32.160Z

resolved all threads

Author: Kinsey Moore 2025-07-17T22:06:32.690Z

mentioned in issue #114

Author: Kinsey Moore 2025-07-18T12:52:28.127Z

assigned to @opticron

Author: Amar Takhar 2025-07-19T15:12:56.305Z

enabled an automatic merge when all merge checks for af7f6f3e6034fb80dd4b926d09f778a3b0f81a5d pass

Author: Amar Takhar 2025-07-19T15:12:57.339Z

approved this merge request

2.12.2.10 159 - config: Migrate mirror links and hashes

Id	159
State	merged
Merged by	Gedare Bloom
Merged at	2025-07-15T22:33:19.519Z
Assignee(s)	Kinsey Moore
Created	2025-07-04T20:04:09.157Z
Updated	2025-07-15T22:33:26.528Z
Milestone	6.2
Labels	backport
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/159
Commit	905403bea3ec7d07a190ffa95188775927ab3077

Summary

config: Migrate mirror links and hashes

This migrates configurations from the GitHub mirrors to the RTEMS GitLab mirrors.

Closes #110

Author: Kinsey Moore 2025-07-04T20:04:09.872Z

assigned to @opticron

Author: Kinsey Moore 2025-07-04T20:04:58.842Z

This should be backported to 5 for future releases.

Author: Kinsey Moore 2025-07-04T20:04:58.961Z

created #111 to continue this discussion

Author: Kinsey Moore 2025-07-04T20:04:58.859Z

resolved all threads

Author: Kinsey Moore 2025-07-04T20:04:59.291Z

mentioned in issue #111

Author: Gedare Bloom 2025-07-15T22:33:09.309Z

approved this merge request

2.12.2.11 157 - rtems/config/tools/gdb: Add TLS support patch

Id	157
State	merged
Merged by	Amar Takhar
Merged at	2025-07-01T14:22:47.309Z
Assignee(s)	Kinsey Moore
Created	2025-06-30T21:07:42.745Z
Updated	2025-07-01T14:22:48.620Z
Milestone	6.2
Labels	cpukit::debugger, tool::gdb
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/157
Commit	eb0378a4a21eeae511e967829314c06226f624fa

Summary

rtems/config/tools/gdb: Add TLS support patch

This adds the preliminary patches for GDB 15.2 to support retrieval of TLS addresses from the remote GDB server.

Closes #109

Author: Kinsey Moore 2025-06-30T21:07:42.858Z

assigned to @opticron

Author: Joel Sherrill 2025-07-01T13:42:10.272Z

approved this merge request

2.12.2.12 150 - devel/qemu-5.2.0: Update to the non-RC version

Id	150
State	merged
Merged by	Chris Johns
Merged at	2025-05-28T22:20:01.865Z
Assignee(s)	Kinsey Moore
Created	2025-05-28T18:09:49.036Z
Updated	2025-05-28T22:20:02.876Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/150
Commit	005081ef48204fa8322e57b335aad4dc616b9c6f

Summary

devel/qemu-5.2.0: Update to the non-RC version

The release candidate 1 tarball has been removed from the QEMU website. This moves RSB to the 5.2.0 release which is still available.

Closes #104

Author: Kinsey Moore 2025-05-28T18:09:49.268Z

assigned to @opticron

Author: Kinsey Moore 2025-05-28T18:11:02.512Z

marked this merge request as **draft**

Author: Kinsey Moore 2025-05-28T18:12:21.317Z

added 1 commit

- 005081ef - devel/qemu-5.2.0: Update to the non-RC version

Compare with previous version

Author: Kinsey Moore 2025-05-28T18:12:39.449Z

changed the description

Author: Kinsey Moore 2025-05-28T18:12:45.945Z

marked this merge request as **ready**

Author: Chris Johns 2025-05-28T22:19:13.805Z

approved this merge request

2.12.2.13 147 - rtems: Update package git references

Id	147
State	merged
Merged by	Kinsey Moore
Merged at	2025-05-23T14:01:25.937Z
Assignee(s)	Chris Johns
Created	2025-05-23T02:47:03.843Z
Updated	2025-05-23T14:01:27.707Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/147
Commit	3d76465c1d9e28e7ceef04ebb2c04f0c41528b73

rtems: Update package git references

Closes #103

Author: Chris Johns 2025-05-23T02:47:04.357Z

assigned to @chris

Author: Kinsey Moore 2025-05-23T14:01:17.943Z

approved this merge request

2.12.2.14 88 - gmp: Use ftp.gnu.org mirror

Id	88
State	merged
Merged by	Joel Sherrill
Merged at	2024-12-16T19:07:29.329Z
Created	2024-12-12T23:05:00.408Z
Updated	2025-05-09T00:14:44.978Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/88
Commit	e139977d351305775c4effa3c0b4a52531e38083

Summary

gmplib.org blocks IPs associated with Microsoft/GitHub for performance reasons. This poses a problem for GitHub CI/CD configurations that build the toolchains using rtems-source-builder, although it's easy to fix with a quick `patch`.

Nonetheless, it might be a good idea to reduce traffic to gmplib.org, since their infrastructure doesn't seem particularly beefy.

Email thread: https://gmplib.org/list-archives/gmp-devel/2023-June/006162.html

Author: Joel Sherrill 2024-12-16T19:06:18.708Z

added 3 commits

- af5dee32...7d8bc0af - 2 commits from branch `rtems/tools:6`
- e139977d - gmp: Use ftp.gnu.org mirror

Compare with previous version

Author: Joel Sherrill 2024-12-16T19:07:03.680Z

approved this merge request

Author: Joel Sherrill 2024-12-16T19:07:25.931Z

Is this also addressed on the main branch?

2.12.2.15 143 - rtems: Fix building on recent MacOS

Id	143
State	merged
Merged by	Kinsey Moore
Merged at	2025-05-08T22:54:09.608Z
Assignee(s)	Chris Johns
Created	2025-05-04T01:24:11.091Z
Updated	2025-05-08T22:54:09.594Z
Milestone	6.2
Labels	tool::gdb
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/143
Commit	86fb2d4645ee6197198fb4755fbe8db1967c454c

Fix building on recent MacOS

Closes #98

Author: Chris Johns 2025-05-04T01:24:11.530Z

assigned to @chris

Author: Kinsey Moore 2025-05-08T22:53:40.685Z

approved this merge request

Author: Joel Sherrill 2025-05-08T22:53:46.921Z

approved this merge request

Author: Kinsey Moore 2025-05-08T22:53:51.172Z

added 2 commits

- 15e5be5a - 1 commit from branch `rtems/tools:6`
- 86fb2d46 - rtems: Fix building on recent MacOS

Compare with previous version

Author: Kinsey Moore 2025-05-08T22:54:04.580Z

enabled an automatic merge when the pipeline for 86fb2d4645ee6197198fb4755fbe8db1967c454c succeeds

2.12.2.16 145 - source-builder/sb/path.py: Avoid discarding utf-8

Id	145
State	merged
Merged by	Chris Johns
Merged at	2025-05-08T22:13:29.634Z
Assignee(s)	Kinsey Moore
Created	2025-05-08T12:55:26.646Z
Updated	2025-05-08T22:13:31.286Z
Milestone	6.2
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/145
Commit	15e5be5a328d099369dcba795ccc6ff33b82d055

Summary

source-builder/sb/path.py: Avoid discarding utf-8

On MSYS2 on Windows 10, non-ASCII utf-8 characters should not be discarded since filesystems on this platform can support them. This fixes a build issue in GCC where a Go test file includes a non-ASCII character.

Closes #101

Author: Kinsey Moore 2025-05-08T12:55:27.133Z

assigned to @opticron

Author: Kinsey Moore 2025-05-08T12:55:45.664Z

mentioned in merge request !144

Author: Kinsey Moore 2025-05-08T13:31:04.102Z

added 1 commit

- 15e5be5a - source-builder/sb/path.py: Avoid discarding utf-8

Compare with previous version

Author: Kinsey Moore 2025-05-08T13:31:36.905Z

changed the description

Author: Chris Johns 2025-05-08T22:13:25.113Z

approved this merge request

2.12.2.17 139 - Add support for the 6-freebsd-14 branch to RTEMS 6

Id	139
State	merged
Merged by	Gedare Bloom
Merged at	2025-04-23T21:48:02.616Z
Assignee(s)	Chris Johns
Created	2025-04-19T05:35:06.449Z
Updated	2025-04-23T21:50:42.296Z
Milestone	6.2
Labels	libbsd::freebsd-14, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/139
Commit	435961510b8e363936b091914f9ca53512f8a218

Add support for the `6-freebsd-14` branch to RTEMS 6

- Fix `sb-rtems-pkg` configuration for LwIP
- Fix the LwIP build set and configuration file

Closes #86

Author: Chris Johns 2025-04-19T05:35:07.207Z

assigned to @chris

Author: Gedare Bloom 2025-04-23T21:44:05.828Z

added 2 commits

- edc391f7 - 1 commit from branch `rtems/tools:6`
- 43596151 - rtems/libbsd: Add support for the 6-freebsd-14 branch to RTEMS 6

Compare with previous version

Author: Gedare Bloom 2025-04-23T21:47:58.361Z

approved this merge request

Author: Gedare Bloom 2025-04-23T21:50:42.085Z

mentioned in issue #86

2.12.2.18 128 - gitlab: Add link to CI

Id	128
State	merged
Merged by	Joel Sherrill
Merged at	2025-03-13T22:42:44.684Z
Assignee(s)	Amar Takhar
Created	2025-02-14T10:37:43.063Z
Updated	2025-03-13T22:42:44.669Z
Milestone	6.2
Labels	ci, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/128
Commit	edc391f7985dd3f6f18db0c7562963618a31e51b

Summary

gitlab: Add link to CI

This runs only the commit message and merge request checker.

Required so we can have 'all pipelines must pass' enabled due to a bug in GitLab.

Closes #6

Author: Amar Takhar 2025-02-14T10:37:43.260Z

assigned to @amar

Author: Joel Sherrill 2025-03-13T22:41:20.453Z

approved this merge request

Author: Joel Sherrill 2025-03-13T22:42:01.574Z

added 5 commits

- 11cc9ad3...b1aec320 - 4 commits from branch `rtems/tools:6`
- edc391f7 - gitlab: Add link to CI

Compare with previous version

Author: Joel Sherrill 2025-03-13T22:42:31.580Z

enabled an automatic merge when the pipeline for edc391f7985dd3f6f18db0c7562963618a31e51b succeeds

2.12.2.19 175 - config/devel/dtc-1.6.1-1.cfg: Update checksum (closed)

Id	175
State	closed
Assignee(s)	Joel Sherrill
Reviewer(s)	Chris Johns
Closed by	Joel Sherrill
Created	2025-09-16T15:58:38.565Z
Closed	2025-09-18T23:30:07.188Z
Updated	2025-09-18T23:30:07.169Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/175
Commit	bea88efb634495e9f6b97429e0a0a136e82f2b8d

Summary

config/devel/dtc-1.6.1-1.cfg: Update checksum

The file extension was wrong, checksum was incorrect, and the checksum needed to be sha512.

Author: Joel Sherrill 2025-09-16T15:58:38.665Z

requested review from @chris

Author: Joel Sherrill 2025-09-16T17:48:36.153Z

assigned to @joel

Author: Joel Sherrill 2025-09-16T17:48:56.054Z

restored source branch `6-update-dtc-hash`

Author: Kinsey Moore 2025-09-16T17:52:52.497Z

changed the description

Author: Kinsey Moore 2025-09-16T19:15:43.221Z

This needs a backport issue and this should really be 1 commit.

Author: Joel Sherrill 2025-09-16T19:15:43.221Z

Chris' original issue was for 6 and I pulled the fix forward. Isn't that the same?

Author: Joel Sherrill 2025-09-16T19:10:09.540Z

added 1 commit

- 6b09eae6 - config/devel/dtc-1.6.1-1.cfg: Update hash

Compare with previous version

Author: Joel Sherrill 2025-09-16T19:14:45.286Z

added 1 commit

- bea88efb - config/devel/dtc-1.6.1-1.cfg: Update checksum

Compare with previous version

Author: Kinsey Moore 2025-09-16T19:15:43.239Z

resolved all threads

Author: Kinsey Moore 2025-09-16T19:47:04.352Z

As far as I can tell, this is only an update of the hash from 256 to 512 and there is no error to resolve on 6 branch.

Author: Joel Sherrill	2025-09-18T23:30:06.563Z

OBE

2.12.2.20 146 - Update package git references to allow testing (closed)

Id	146
State	closed
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-05-23T02:45:27.261Z
Closed	2025-05-23T02:45:53.376Z
Updated	2025-05-23T02:45:53.364Z
Milestone	6.2
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/146
Commit	3d76465c1d9e28e7ceef04ebb2c04f0c41528b73

Update package git references to allow testing.

Closes #103

Author: Chris Johns	2025-05-23T02:45:27.477Z

assigned to @chris

Author: Chris Johns	2025-05-23T02:46:11.774Z

Forgot to select the right branch

2.13 RTEMS / Tools / RTEMS Tools

Go to *Issues* (page 3563) or *Merge Requests* (page 3586)

Issues Summary

31 - Backport to 6: “mkimage.py: Add ability to set timestamp” (page 623)
22 - RTEMS tester fails to run correctly under python 3.13 (page 624)

Merge Requests Summary

77 - mkimage.py: Add ability to set timestamp (page 627)
52 - gitlab: Add link to CI (page 628)

2.13.1 Issues

2.13.1.1 31 - Backport to 6: “mkimage.py: Add ability to set timestamp”

Id	31
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2025-12-09T21:20:11.483Z
Closed	2025-12-16T20:47:35.888Z
Updated	2025-12-16T20:47:35.980Z
Milestone	6.2
Labels	tool
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/31
Merges	0

The following discussion from !76 should be addressed:

- [] @opticron started a discussion:

  This could be backported to 6 without affecting existing behavior.

  Author: Kinsey Moore 2025-12-09T21:20:11.870Z

  added rtems#10 as parent epic

  Author: Kinsey Moore 2025-12-09T21:20:12.055Z

  set status to **To do**

Author: Kinsey Moore	2025-12-09T21:20:12.364Z

assigned to @opticron

Author: Kinsey Moore	2025-12-09T21:22:40.730Z

mentioned in merge request !77

Author: Kinsey Moore	2025-12-16T20:47:35.953Z

set status to **Done**

2.13.1.2 22 - RTEMS tester fails to run correctly under python 3.13

Id	22
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Chris Johns
Created	2025-02-28T22:39:31.754Z
Closed	2025-10-02T22:52:00.909Z
Updated	2025-10-02T22:52:00.914Z
Milestone	6.2
Labels	tool::test
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/22
Merges	0

Summary

When attempting to run the RTEMS tester with Python 3.13, these error messages are produced:

```
.../rtems-tools/tester/rt/test.py:76: SyntaxWarning: invalid escape sequence '\\['
status_regx = re.compile('^\\[\\s*\\d+/\\s*\\d+\\] p:.+')
.../rtems-tools/tester/rt/test.py:188: SyntaxWarning: invalid escape sequence '\\.
↪'
norun = re.compile('.*\\.norun.*')
Incorrect RTEMS Tools installation
```

This was tested on the 6.1 branch, but there appear to be no changes to main that would have fixed this.

This issue also includes the `telnetlib` issue.

Steps to reproduce

2.13.1.2.2.1 Pre-set options

Author: Kinsey Moore 2025-03-02T02:21:55.776Z

assigned to @opticron

Author: Kinsey Moore 2025-02-28T22:39:31.957Z

assigned to @opticron

Author: Kinsey Moore 2025-02-28T22:39:32.416Z

Author: Kinsey Moore 2025-03-02T02:13:13.434Z

On further investigation, this is 2 separate issues. The escapes need to be fixed to resolve the warnings and the actual exit is caused by missing telnetlib since it was deprecated in 3.11 and removed in 3.13.

Author: Kinsey Moore 2025-03-02T02:13:13.403Z

On debian systems, there is currently a workaround for the actual exit issue by installing `python3-zombie-telnetlib`.

Author: Amar Takhar 2025-03-02T02:28:45.323Z

The current state of telnetlib isn't great I don't think there are any maintained ones. This one is its own project but no activity from the maintainer in years: https://github.com/jquast/telnetlib3

The Python one was just removed there is nobody touching the code anymore which is why they called it 'zombie' .. apt name.

`telnetlib3` is at least installable via pypi. I'm not sure if it's a drop in replacement does it work can you try it out?

FreeBSD for example has no telnet library for python available and I'm sure that's true for most OS the Python project itself recommends either telnetlib3 or Exscript which is even more out of maintainership

Author: Kinsey Moore 2025-03-02T02:34:43.202Z

`telnetlib3` *appears* to be a mostly drop-in replacement (s/telnetlib/telnetlib3/g), but I don't have an example of a tester configuration that actually uses it, so I can't verify that functionality completely.

Author: Chris Johns 2025-03-02T02:37:05.927Z

https://docs.rtems.org/docs/main/user/testing/configuration.html#console and look for:

```
%define bsp_tty_dev      1.2.3.4:8989
```

Author: Kinsey Moore 2025-03-02T02:43:13.300Z

Ah, I *do* actually have a test configuration that I can verify this on. It'll probably have to wait until Monday.

Author: Kinsey Moore 2025-03-02T02:21:56.083Z

moved from rtems-source-builder#95

Author: Kinsey Moore 2025-03-02T02:22:42.566Z

mentioned in merge request !53

Author: Kinsey Moore 2025-07-30T18:50:47.695Z

The situation has been improved by 0efe888 in that the reason for exit is displayed. This still needs work to verify the migration path to telnetlib3.

Author: Chris Johns 2025-10-02T22:41:29.516Z

changed the description

Author: Chris Johns 2025-10-02T22:44:15.955Z

This is issue cover two problem. We need to split it as the syntax issue has been fixed and we should close this issue.

Author: Chris Johns 2025-10-02T22:49:19.321Z

/clone–with_notes

Author: Chris Johns 2025-10-02T22:50:33.435Z

cloned to #30

Author: Chris Johns 2025-10-02T22:51:53.525Z

Flxed

Author: Chris Johns 2025-10-02T22:52:00.940Z

set status to **Done**

2.13.2 Merge Requests

2.13.2.1 77 - mkimage.py: Add ability to set timestamp

Id	77
State	merged
Merged by	Kinsey Moore
Merged at	2025-12-10T05:39:36.290Z
Assignee(s)	Kinsey Moore
Created	2025-12-09T21:22:22.884Z
Updated	2025-12-10T05:39:36.281Z
Milestone	6.2
Labels	tool
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/77
Commit	4e6e2007e8d5d73c4371b81cc7b29dcd1905aee9

Summary

mkimage.py: Add support for AArch64

Updates #31

Author: Kinsey Moore 2025-12-09T21:22:23.754Z

assigned to @opticron

Author: Kinsey Moore 2025-12-09T21:22:54.320Z

enabled an automatic merge when all merge checks for 4e6e2007e8d5d73c4371b81cc7b29dcd1905aee9 pass

Author: Amar Takhar 2025-12-10T02:49:15.682Z

mentioned in merge request !76

Author: Amar Takhar 2025-12-10T05:39:25.739Z

This has the change from !76 in it

Author: Kinsey Moore 2025-12-10T05:39:25.739Z

One is for main and one is for 6 branch.

Author: Amar Takhar 2025-12-10T05:39:25.739Z

I see they both have two commits just the MR titles are wrong

Author: Amar Takhar 2025-12-10T02:50:35.938Z

requested changes

Author: Kinsey Moore 2025-12-10T04:24:11.287Z

changed title from

mkimage.py: Add

support for AArch64

to

mkimage.py: Add

ability to set timestamp

Author: Amar Takhar 2025-12-10T05:39:25.784Z

resolved all threads

Author: Amar Takhar 2025-12-10T05:39:34.095Z

approved this merge request

2.13.2.2 52 - gitlab: Add link to CI

Id	52
State	merged
Merged by	Chris Johns
Merged at	2025-03-13T22:40:18.474Z
Assignee(s)	Amar Takhar
Created	2025-02-14T10:40:05.215Z
Updated	2025-03-13T22:41:57.727Z
Milestone	6.2
Labels	ci
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/52
Commit	a2538346b745e2bd31e7bf8909a4e847f6d9c760

Summary

gitlab: Add link to CI

This runs only the commit message and merge request checker.

Required so we can have ‘all pipelines must pass’ enabled due to a bug in GitLab.

Closes #6

Author: Amar Takhar 2025-02-14T10:40:05.432Z

assigned to @amar

Author: Chris Johns 2025-03-13T22:40:10.076Z

approved this merge request

2.14 RTEMS / Tools / RTEMS Waf

Go to *Issues* (page 3648) or *Merge Requests* (page 3651)

Issues Summary

Merge Requests Summary

15 - gitlab: Add link to CI (page 630)

2.14.1 Merge Requests

2.14.1.1 15 - gitlab: Add link to CI

Id	15
State	merged
Merged by	Kinsey Moore
Merged at	2025-02-14T16:35:39.701Z
Assignee(s)	Amar Takhar
Created	2025-02-14T03:10:41.813Z
Updated	2025-02-14T16:35:44.419Z
Milestone	6.2
Labels	ci
Link	https://gitlab.rtems.org/rtems/tools/rtems_waf/-/merge_requests/15
Commit	a8ac021edec065b8d6525f44a8739296bf896f2f

Summary

gitlab: Add link to CI

This runs only the commit message and merge request checker.

Required so we can have 'all pipelines must pass' enabled due to a bug in Gitlab.

Author: Amar Takhar 2025-02-14T03:10:42.018Z

assigned to @amar

Author: Kinsey Moore 2025-02-14T16:35:19.731Z

approved this merge request

2.15 RTEMS / Websites / Main Website

Go to rtems/websites/www.rtems.org-issues or *Merge Requests* (page 631)

Issues Summary

Merge Requests Summary

9 - 2025-12-20-rtems-6-2-released.md: New file (page 631)

2.15.1 Merge Requests

2.15.1.1 9 - 2025-12-20-rtems-6-2-released.md: New file

Id	9
State	merged
Merged by	Chris Johns
Merged at	2026-01-20T20:32:16.710Z
Assignee(s)	Joel Sherrill
Created	2025-12-20T15:52:10.905Z
Updated	2026-01-20T20:32:17.856Z
Milestone	6.2
Labels	website::www
Link	https://gitlab.rtems.org/rtems/websites/www.rtems.org/-/merge_requests/9
Commit	4c575830213fe2464558ebb2d5ed453682149b3e

Summary

2025-12-20-rtems-6-2-released.md: New file

This new file contains the RTEMS 6.2 release notes.

Author: Joel Sherrill 2025-12-20T15:52:11.215Z

assigned to @joel

Author: Joel Sherrill 2025-12-20T15:53:07.132Z

added 3 commits

- 57d1a4a0...b94d61f7 - 2 commits from branch `rtems/websites:main`
- 00d30b7b - 2025-12-20-rtems-6-2-released.md: New file

Compare with previous version

Author: Joel Sherrill 2025-12-20T15:53:13.997Z

marked this merge request as **draft**

Author: Joel Sherrill 2026-01-20T20:32:04.939Z

@chris Please provide feedback on this so we can publish it. You mentioned something about libbsd before Christmas. When I looked at https://ftp.rtems.org/pub/rtems/releases/6/6.2/, I do not see a distinction on libbsd. What libbsd branch was this cut from? I thought there would be a libbsd branch component in the file name. Help appreciated.

Author: Chris Johns 2026-01-20T20:32:04.939Z

Yes. We provide but have obsoleted rtems-libbsd-6.2.tar.xz and we recommend all users move to [rtems-libbsd-fb14-6.2.tar.xz](https://ftp.rtems.org/pub/rtems/releases/6/6.2/sources/rtems-libbsd-fb14-6.2.tar.xz).

Author: Joel Sherrill 2026-01-20T20:32:04.939Z

@chris Is it OK now?

Author: Chris Johns 2026-01-20T20:32:04.939Z

Sorry I cannot see any change mentioning obsoleting `libbsd-fb12` ?

Author: Joel Sherrill 2026-01-12T23:55:36.735Z

left review comments

Author: Joel Sherrill 2026-01-15T21:35:06.615Z

added 5 commits

- 00d30b7b...77badedb - 4 commits from branch `rtems/websites:main`
- a8e752b0 - 2025-12-20-rtems-6-2-released.md: New file

Compare with previous version

Author: Joel Sherrill 2026-01-15T21:36:08.502Z

marked this merge request as **ready**

Author: Joel Sherrill 2026-01-20T16:42:58.914Z

added 1 commit

- 4c575830 - 2025-12-20-rtems-6-2-released.md: New file

Compare with previous version

Author: Chris Johns	2026-01-20T20:32:04.958Z

resolved all threads

Author: Chris Johns	2026-01-20T20:32:14.391Z

approved this merge request

CHAPTER

THREE

RTEMS 6.1

3.1 RTEMS / Documentation / Documentation

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45 - Remove the menu bar in the documentation or fix all the broken links (page 664)
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42 - Dangling references (page 666)
39 - User manual IRC section (page 669)
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30 - C Classic API manual SMP link points to git.rtems.org (page 671)
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22 - Link to non exisent repository (page 670)
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10 - Manuals refer to git.rtems.org (page 679)
8 - Document Merge Request Workflow (page 676)
5 - Contributing guidance is outdated (page 677)
4 - Rewrite bug user story (page 678)
3 - sync git.rtems.org (page 680)
2 - Rewrite trac links to gitlab (page 679)
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48 - user: Add –release option to Rust instructions (page 694)
47 - posix-compliance: Update API tracking csv to account for lio_listio (page 742)
46 - user/bsps/atsam: Migrate from BSP README.md (page 693)
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44 - posix-users/input_and_output.rst: Update AIO docs (page 681)
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3.1.1 Issues

3.1.1.1 15 - Update amd64 User Manual documentation to include how to create bootable image for the rtems-test config

Id	15
State	closed
Type	ISSUE
Author	Matheus Pecoraro
Closed by	Amar Takhar
Created	2024-06-15T20:41:56.290Z
Closed	2024-10-16T04:44:05.463Z
Updated	2025-09-19T01:03:41.077Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/15
Merges	1

Summary

Update the amd64 section on the User Manual to describe how to create the bootable image required for the BSP tester config added in this MR

Author: Matheus Pecoraro 2024-06-15T20:43:03.248Z

@amar I imagine based on our previous conversations it would contain a link to a pre-made image and a tutorial on how to create it. If that's the case where would the image be hosted?

Author: Matheus Pecoraro 2024-06-15T20:43:23.133Z

mentioned in merge request rtems/tools/rtems-tools!3

Author: Matheus Pecoraro 2024-08-13T17:58:06.174Z

mentioned in merge request !42

3.1.1.2 12 - Manuals refer to ssh://git@gitlab.rtems.org:2222/... which is not accessible for users without SSH-key

Id	12
State	closed
Type	ISSUE
Author	Frank Kuehndel
Assignee(s)	Kinsey Moore
Closed by	Amar Takhar
Created	2024-05-22T16:20:57.708Z
Closed	2024-10-07T17:45:30.342Z
Updated	2025-09-19T01:03:40.967Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/12
Merges	0

Summary

@gedare thankfully did the painful work of changing all the references from `git.rtems.org` to the new `gitlab.rtems.org`. Unfortunately, the SSH protocol was used. For example in (`rtems-docs.git`) `user/start/sources.rst` is says now:

```
git clone ssh://git@gitlab.rtems.org:2222/rtems/tools/rtems-source-builder.git rsb
```

This does not work for users which have no Gitlab account or have not (yet) deposited an SSH public key. It would be better to use the HTTPS protocol as this permits to clone and update the repos without Gitlab account. For example:

```
git clone https://gitlab.rtems.org/rtems/tools/rtems-source-builder.git rsb
```

Steps to reproduce

I used a container to verify:

```
$ podman run -it --rm ubuntu:latest bash
root@35177ab8d4a3:/# apt update
[...]
root@35177ab8d4a3:/# apt install git
[...]
root@35177ab8d4a3:/# cd
root@35177ab8d4a3:~# git config --global user.email "user@example.com"
root@35177ab8d4a3:~# git config --global user.name "User Name"

root@35177ab8d4a3:~# git clone ssh://git@gitlab.rtems.org:2222/rtems/tools/rtems-
↪source-builder.git rsb
Cloning into 'rsb'...
The authenticity of host '[gitlab.rtems.org]:2222 ([140.211.10.148]:2222)' can't␣
↪be established.
ED25519 key fingerprint is SHA256:9UCwVh/lXqg0AG8rjTSB2AJIMPpoh3aL8atLTjQ4ASo.
```

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```
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '[gitlab.rtems.org]:2222' (ED25519) to the list of known hosts.
git@gitlab.rtems.org: Permission denied (publickey).
fatal: Could not read from remote repository.

Please make sure you have the correct access rights
and the repository exists.

root@35177ab8d4a3:~# git clone https://gitlab.rtems.org/rtems/tools/rtems-source-builder.git rsb
Cloning into 'rsb'...
remote: Enumerating objects: 13541, done.
remote: Counting objects: 100% (483/483), done.
remote: Compressing objects: 100% (222/222), done.
remote: Total 13541 (delta 274), reused 462 (delta 261), pack-reused 13058 (from 1)
Receiving objects: 100% (13541/13541), 3.57 MiB | 507.00 KiB/s, done.
Resolving deltas: 100% (9399/9399), done.

root@35177ab8d4a3:~# exit
```

Author: Amar Takhar 2024-05-22T16:29:01.269Z

assigned to @gedare

Author: Amar Takhar 2024-05-22T16:30:14.492Z

Thanks you're right ssh:// won't work unless you have an account _and_ have added an SSH key. Anyone who wants to open an issue will not need an SSH key, either. The only time you need it is if you plan to submit changes via Git.

Author: Amar Takhar 2024-10-07T17:45:30.079Z

This was fixed in !29

Author: Amar Takhar 2024-10-07T17:45:42.878Z

assigned to @opticron and unassigned @gedare

3.1.1.3 1 - Update docs to reflect docs.rtems.io

Id	1
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Gedare Bloom
Closed by	Gedare Bloom
Created	2024-04-24T01:57:31.592Z
Closed	2025-02-05T18:18:58.767Z
Updated	2025-09-19T01:03:40.842Z
Milestone	6.1
Labels	resolution::later
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/1
Merges	0

Summary

Documentation will have to reflect the move from docs.rtems.org to docs.rtems.io

Author: Amar Takhar	2024-04-24T01:57:31.665Z

assigned to @gedare

Author: Amar Takhar	2024-04-24T05:49:56.752Z

3.1.1.4 69 - waf probe for python module is broken on windows/MSYS2

Id	69
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Chris Johns
Created	2025-01-20T18:55:34.604Z
Closed	2025-01-20T22:32:58.634Z
Updated	2025-01-20T22:32:58.647Z
Milestone	6.1
Labels	os::windows
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/69
Merges	0

Summary

Using Windows/MSYS2 following the (current) README directions for building winds up in an error at

```
$ ./waf configure
...
Checking for python module 'sphinx_book_theme' : not found Could not find the python module 'sphinx_book_theme' (complete log in C:\\\\msys64\\\\home\\\\gedare\\\\rtems\\\\rtems-docs\\\\build\\\\config.log)
```

Author: Gedare Bloom	2025-01-20T18:55:34.785Z

assigned to @gedare

Author: Gedare Bloom	2025-01-20T18:55:35.171Z

Author: Gedare Bloom	2025-01-20T18:57:22.725Z

mentioned in merge request !131

3.1.1.5 44 - Point stale default branch references to “main”

Id	44
State	closed
Type	ISSUE
Author	ita2048 ita2048
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-11-01T11:40:25.499Z
Closed	2025-01-16T23:43:45.413Z
Updated	2025-01-16T23:43:45.430Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/44
Merges	0

Summary

The old references need updating to point to “main”: 1. First, the URL to the documentation itself reads “master”: https://docs.rtems.org/branches/master/user/index.html 2. ~~”The Master branch the development branch and latest release is 5.3.” on https://docs.rtems.org/~~ 3. ~~”The Master branch the development branch and latest release is 5.3.” on https://docs.rtems.org/branches.html~~ 4. ~~”is one more than 6`` and is on the ``master branch” on https://docs.rtems.org/branches/master/user/installation/developer.html (which should have been deleted)~~ 5. ~~”the bug is not reproducible on the Git master” on https://docs.rtems.org/branches/master/user/installation/developer.html~~ 6. “Make sure not to commit changes in the master branch” on https://docs.rtems.org/branches/master/user/start/gsoc.html 7. “The master branch has the version N.0.0 with N being the next major release number.” on https://docs.rtems.org/branches/master/user/support/bugs.html

8. “NOTE: The following example uses FreeBSD master branch” on https://docs.rtems.org/branches/master/user/exe/device-tree.html - FreeBSD’s main branch seems to be called `main including on [freebsd.org](https://cgit.freebsd.org/src/)

Author: Chris Johns 2024-11-07T23:37:42.516Z

assigned to @amar

Author: Gedare Bloom 2024-12-04T21:39:40.232Z

Author: Kinsey Moore 2025-01-14T03:37:08.872Z

changed the description

Author: Kinsey Moore 2025-01-14T03:55:22.962Z

changed the description

Author: Kinsey Moore 2025-01-14T03:55:53.354Z

changed the description

Author: Kinsey Moore 2025-01-14T03:58:00.327Z

mentioned in commit opticron/rtems-docs@537651cdf7d132aded2536dd578cf79111a31e2e

Author: Kinsey Moore 2025-01-14T03:58:29.416Z

mentioned in merge request !114

Author: Kinsey Moore 2025-01-14T03:59:39.021Z

mentioned in commit opticron/rtems-docs@f1c58fe7b2cbdcf2c6f25f396d6429455d80f1f5

Author: Kinsey Moore 2025-01-14T04:01:38.583Z

mentioned in merge request !115

Author: Kinsey Moore 2025-01-14T20:15:03.645Z

mentioned in merge request !117

Author: Chris Johns 2025-01-16T23:39:54.611Z

mentioned in commit opticron/rtems-docs@c5f8b54a274e13b856c4aa563605a103b40d076c

3.1.1.6 53 - Typos

Id	53
State	closed
Type	ISSUE
Author	ita2048 ita2048
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-11-09T10:21:40.360Z
Closed	2025-01-16T23:37:21.971Z
Updated	2025-01-16T23:37:21.984Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/53
Merges	0

- “We are currently working on pur privacy policy” -> “our privacy policy” on https://www.rtems.org/privacy/
- “Rational” -> “Rationale” on https://docs.rtems.org/branches/master/user.html#rational
- “explcitly” in https://gitlab.rtems.org/rtems/docs/rtems-docs/-/blob/main/cpu-supplement/aarch64.rst?plain=1#L128

Author: Amar Takhar 2024-11-09T19:01:00.977Z

We need to run things through spellcheck it’s supported as a command in the docs with a person dictionary but nobody uses it. Thanks.

Author: Kinsey Moore 2024-11-14T23:25:42.957Z

assigned to @amar

Author: Gedare Bloom 2024-12-04T21:39:40.968Z

Author: Kinsey Moore 2025-01-14T03:19:39.669Z

mentioned in merge request !113

Author: Kinsey Moore 2025-01-14T03:28:17.733Z

The website has been updates and a MR has been submitted to resolve the remainder.

Author: Chris Johns 2025-01-16T23:37:14.901Z

mentioned in commit e9cd5ce72b4300fcb47a44be959ef6cde37e6a17

3.1.1.7 62 - Update waf to 2.1.4 : rtems/docs/rtems-docs

Id	62
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-12-04T22:16:34.228Z
Closed	2024-12-22T03:35:51.333Z
Updated	2024-12-22T03:35:51.344Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/62
Merges	0

Summary

The latest verison of waf fixes several issues on Windows. We also have a huge inconsistency in the version we're running which we should probably fix:

```
./rtems-deployment/waf       waf 2.0.24 (1af97c71f5a6756abf36d0f78ed8fd551596d7cb)
./rtems-docs/waf             waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
./rtems-examples/waf         waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-libbsd/waf           waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-littlevgl/waf        waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-lwip/waf             waf 2.0.18 (314689b8994259a84f0de0aaef74d7ce91f541ad)
./rtems-net-legacy/waf       waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems-net-services/waf     waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-tools/waf            waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems/waf                  waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
```

Steps to reproduce

3.1.1.7.2.1 Pre-set options

Author: Amar Takhar 2024-11-16T20:21:25.689Z

marked this issue as blocking rtems/docs/rtems-docs#54

Author: Amar Takhar 2024-11-16T20:21:31.439Z

changed the description

Author: Gedare Bloom 2024-11-17T00:11:44.128Z

Should we automate an approach to keep all our repos in sync with waf version?

Author: Amar Takhar 2024-11-17T00:19:39.724Z

Yeah I already have that written down but it's not that easy. We need to think about the workflow of how this should happen. There needs to be a process to test the new version against all the repositories to make sure it works and then update so we need to be more deliberate about it.

I have some ideas about it but the procedural part needs to be discussed: what's important enough to upgrade for and do we want to support one repo getting ahead of others to avoid increasing the size of our repositories or whether we care or not. Clearly the above is not great having `2.0` vs `2.1` Having said that `2.1.4` has fixes we really want for Windows.

Author: Amar Takhar 2024-11-17T01:08:46.506Z

See also: https://gitlab.com/ita1024/waf/-/issues/2452

Author: Amar Takhar 2024-11-17T03:50:21.836Z

assigned to @amar

Author: Amar Takhar 2024-11-17T04:22:19.639Z

After this update is done I'll create another issue for the next update. As we require an update we should collect reasons, issues and MRs until we trigger the next update. Of course a critical issue should be an immediate update but smaller things for instance if it's specific to one repo we can let that one repo get out of sync until we have more of are reason to update project-wide. otherwise we may end up update too often.

Author: Amar Takhar 2024-11-18T20:19:26.807Z

mentioned in merge request rtems/rtos/rtems!318

Author: Amar Takhar 2024-11-20T23:35:55.569Z

mentioned in commit amar/rtems-deployment@c8fd177b03fb5130697a7411d716f1542c6175b1

Author: Amar Takhar 2024-11-20T23:36:01.722Z

mentioned in commit amar/rtems-docs@ff70333104a0aaa05877df336d1bb1672b205b73

Author: Amar Takhar 2024-11-20T23:36:04.790Z

mentioned in commit amar/rtems-examples@8056cf5ccaaff51477096bdd3ae3850cecee957d

Author: Amar Takhar 2024-11-20T23:36:05.900Z

mentioned in commit amar/rtems-libbsd@2cac334d6a21b6006dfee4613d3da78eec26b1c8

Author: Amar Takhar 2024-11-20T23:36:08.424Z

mentioned in commit amar/rtems-littlevgl@7831e7125a6efe283e3c65efec1e24a96fdfc2ac

Author: Amar Takhar 2024-11-20T23:36:10.195Z

mentioned in commit amar/rtems-lwip@24f46d35dedf08807d6088443ab5c82e95c36ed8

Author: Amar Takhar 2024-11-20T23:36:12.174Z

mentioned in commit amar/rtems-net-legacy@8845824db452168140610db037ea0359e363cf1d

Author: Amar Takhar 2024-11-20T23:36:14.636Z

mentioned in commit amar/rtems-net-services@7bcc152d49267e5b5ca3c00c1707cc40b2ef95b6

Author: Amar Takhar 2024-11-20T23:36:17.086Z

mentioned in commit amar/rtems-tools@12a94b63506ad84ec1c4feed56d3ce2e85475d85

Author: Amar Takhar 2024-11-20T23:36:21.347Z

mentioned in commit amar/rtems@62baa874b823fea35b7cdea78734d277ada7b455

Author: Amar Takhar 2024-11-20T23:39:31.029Z

mentioned in merge request rtems/rtos/rtems!323

Author: Amar Takhar 2024-11-20T23:39:48.843Z

mentioned in merge request rtems/tools/rtems-tools!44

Author: Amar Takhar 2024-11-20T23:40:09.031Z

mentioned in merge request rtems/pkg/rtems-net-services!9

Author: Amar Takhar 2024-11-20T23:40:25.975Z

mentioned in merge request rtems/pkg/rtems-net-legacy!6

Author: Amar Takhar 2024-11-20T23:40:33.280Z

mentioned in merge request rtems/pkg/rtems-lwip!11

Author: Amar Takhar 2024-11-20T23:40:41.082Z

mentioned in merge request rtems/pkg/rtems-littlevgl!4

Author: Amar Takhar 2024-11-20T23:40:53.742Z

mentioned in merge request rtems/pkg/rtems-libbsd!25

Author: Amar Takhar 2024-11-20T23:41:01.964Z

mentioned in merge request rtems/rtos/rtems-examples!5

Author: Amar Takhar 2024-11-20T23:41:10.912Z

mentioned in merge request rtems/docs/rtems-docs!89

Author: Amar Takhar 2024-11-20T23:41:24.453Z

mentioned in merge request rtems/tools/rtems-deployment!13

Author: Gedare Bloom 2024-11-21T00:03:44.787Z

mentioned in commit gedare/rtems-docs@2f1694269539dc59177b203df1b8481ee52f989a

Author: Gedare Bloom 2024-11-21T00:04:29.322Z

mentioned in merge request rtems/docs/rtems-docs!85

Author: Gedare Bloom 2024-11-21T00:06:48.926Z

mentioned in commit gedare/rtems-docs@816d14787b8bb89e7830c9885946fa8dc6dadf79

Author: Amar Takhar 2024-11-22T10:02:29.944Z

mentioned in commit amar/rtems-docs@24cf46b966d77bada338422de2ead632f79beb89

Author: Amar Takhar 2024-11-24T23:02:01.254Z

mentioned in commit amar/rtems-docs@7582461dbcff0287bb8bc1a615734696a416b266

Author: Amar Takhar 2024-11-24T23:03:10.673Z

mentioned in commit amar/rtems-examples@ac68170083fc3b2e5ce9a63a6c64b4b2e5d7915f

Author: Amar Takhar 2024-11-24T23:03:49.371Z

mentioned in commit amar/rtems-libbsd@a2d65d78fbe832a50ca6c986936c9b0c16647739

Author: Amar Takhar 2024-11-24T23:06:27.181Z

mentioned in commit amar/rtems@03c5b7e88f165ea56487e78822cf0b8595c79cfa

Author: Amar Takhar 2024-11-25T01:33:09.501Z

mentioned in commit amar/rtems-docs@b9af7d8fad94c310f7d973c10b5a7c2da8d4e7e8

Author: Amar Takhar 2024-12-04T21:56:00.650Z

mentioned in commit amar/rtems@8d71cc5dc4a0e11fd7b8d7b5b94bb2e54d3a6f9e

Author: Gedare Bloom 2024-12-04T22:16:38.273Z

cloned from rtems/rtos/rtems#5153

Author: Gedare Bloom 2024-12-04T22:16:34.372Z

assigned to @amar

Author: Gedare Bloom 2024-12-04T22:21:47.105Z

Author: Gedare Bloom 2024-12-04T22:46:41.336Z

Author: Chris Johns 2024-12-21T23:37:41.731Z

changed title from **Update waf to 2.1.4** to **Update waf to 2.1.4{+ : rtems/docs/rtems-docs+}**

Author: Chris Johns 2024-12-22T00:51:45.576Z

mentioned in merge request !105

3.1.1.8 60 - Missing module 'distro'

Id	60
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Kinsey Moore, Joel Sherrill, Gedare Bloom, Sebastian Huber
Closed by	Chris Johns
Created	2024-12-04T18:56:52.621Z
Closed	2024-12-19T23:30:27.747Z
Updated	2024-12-19T23:30:27.759Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/60
Merges	0

Summary

Reported in #58

```
$ ./waf configure --plantuml --ditaa --pdf --singlehtml --prefix=/home/minna/src/
↪artifacts/html
[...]
Checking for program 'pdf2ps'                   : /usr/bin/pdf2ps
Checking for program 'makeglossaries'           : /usr/bin/makeglossaries
Traceback (most recent call last):
File "/home/minna/src/rtems-docs/common/latex.py", line 85, in host_name
```

(continues on next page)

(continued from previous page)

```
from distro import linux_distribution
ModuleNotFoundError: No module named 'distro'
```

How come this is showing up now was something pulling it before? Docs need to be updated.

Steps to reproduce

3.1.1.8.2.1 Pre-set options

Author: Amar Takhar 2024-11-23T08:57:25.917Z

assigned to @chris

Author: Amar Takhar 2024-11-23T08:57:44.141Z

marked this issue as related to #58

Author: Chris Johns 2024-11-24T22:20:48.273Z

It is in a `try/except` in the code on `main`:

!`image <https://gitlab.rtems.org/-/project/uploads/ac9c83434b039fe7c86ba94107bc5f0e/image.png>`_

Author: Chris Johns 2024-11-24T22:26:46.204Z

assigned to @joel

Author: Chris Johns 2024-11-24T22:27:55.976Z

assigned to @sebhub, @gedare, and @opticron and unassigned @chris

Author: Chris Johns 2024-11-24T22:28:12.954Z

Looks like the call has gone:

!`image <https://gitlab.rtems.org/-/project/uploads/54d1e59be8549741a7b7598ead055d8e/image.png>`_{width=746 height=149}

I do not use Linux or have a suitable set up to sort this out. I am giving this to the Linux people we have I know of.

Author: Frank Kuehndel 2024-12-03T12:30:56.878Z

I guess, this again has become two independent topics:

1. At least on OpenSUSE, the `distro` package is not installed by default. It should be mentioned somewhere in the `README.md` to add it to the Python environment. I just do not see the right place and do not know whether other Linux distributions have `distro` installed by default or not.
2. Deprecation of `platform` and `linux_distribution()`:

According to Distro - an OS platform information API *Python's original ``platform.linux_distribution`` function ([has been] removed in Python 3.8)*.

According to distro package version 1.9.0 API `distro.linux_distribution()` is deprecated. I guess in `common/latex.py`, `distro[0]` should be replaced by `distro.name()`, and `dirsto[1]` by `distro.version()` ... or somehow similar (I do not know how much compatible you must be to old Python versions with `platform.linux_distribution` function).

Author: Gedare Bloom 2024-12-04T18:56:53.404Z

cloned from #59

Author: Gedare Bloom 2024-12-04T18:56:52.716Z

assigned to @opticron, @joel, @gedare, and @sebhub

Author: Gedare Bloom 2024-12-04T19:01:32.809Z

mentioned in merge request !99

Author: Gedare Bloom 2024-12-04T19:08:10.014Z

Author: Gedare Bloom 2024-12-16T14:49:07.498Z

mentioned in commit b72e70157237e220adf768628656340f10a64e55

Author: Frank Kuehndel 2024-12-18T18:16:28.927Z

mentioned in merge request !102

Author: Frank Kuehndel 2024-12-18T18:24:35.706Z

I tested this and I can build the RTEMS docs without the `distro` package on OpenSUSE, now. Thanks @gedare

3.1.1.9 58 - waf.py: SyntaxWarning: invalid escape sequence

Id	58
State	closed
Type	ISSUE
Author	Frank Kuehndel
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-11-22T13:02:32.215Z
Closed	2024-11-26T05:27:22.714Z
Updated	2024-12-18T21:40:15.528Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/58
Merges	2

Summary

I am adapting our CI pipeline which build the RTEMS Docs to the latest changes and recognized the following warnings:

```
$ cd rtems-docs
$ ./waf configure --plantuml --ditaa --pdf --singlehtml --prefix=/home/minna/src/
↪artifacts/html

/home/minna/src/rtems-docs/common/waf.py:111: SyntaxWarning: invalid escape␣
↪sequence '\\D'
ver = tuple(map(int, re.split('[\\D]', version)))

/home/minna/src/rtems-docs/common/waf.py:118: SyntaxWarning: invalid escape␣
↪sequence '\\D'
ver = tuple(map(int, re.split('[\\D]', version)))

/home/minna/src/rtems-docs/common/latex.py:9: SyntaxWarning: invalid escape␣
↪sequence '\\d'
'\\documentclass[a4paper,11pt,english]{report}']
```

Moreover, using OpenSUSE as basis for the builds, the python package `distro` is missing:

```
$ ./waf configure --plantuml --ditaa --pdf --singlehtml --prefix=/home/minna/src/
↪artifacts/html
[...]
Checking for program 'pdf2ps'                  : /usr/bin/pdf2ps
Checking for program 'makeglossaries'          : /usr/bin/makeglossaries
Traceback (most recent call last):
File "/home/minna/src/rtems-docs/common/latex.py", line 85, in host_name
from distro import linux_distribution
ModuleNotFoundError: No module named 'distro'
```

This missing module can easily installed in the environment with `pip install distro`.

Steps to reproduce

See README.md

3.1.1.9.2.1 Pre-set options

Author: Amar Takhar 2024-11-22T18:23:25.811Z

assigned to @frank_k

Author: Amar Takhar 2024-11-22T18:28:54.628Z

assigned to @amar and unassigned @frank_k

Author: Amar Takhar 2024-11-22T18:29:19.544Z

Hello Frank this issue has two problems? The errors and the missing module? I'm not sure w hat to say about the missing module that is not something I have changed. @chris will have to speak about that one.

As for the syntax error that is also not something I've changed what version of Python are you using? I'm on 3.11 but it should work on 3.9+

Author: Amar Takhar 2024-11-23T08:55:18.741Z

mentioned in merge request !93

Author: Amar Takhar 2024-11-23T08:55:53.615Z

Please try !93 should fix the issue.

Author: Amar Takhar 2024-11-23T08:56:06.583Z

This does not cover the missing module.

Author: Amar Takhar 2024-11-23T08:57:26.345Z

mentioned in issue #59

Author: Amar Takhar 2024-11-23T08:57:44.182Z

marked this issue as related to #59

Author: Chris Johns 2024-11-26T05:27:48.746Z

mentioned in commit ca3080f0f71515375afe97f781ed6e7db4c64436

Author: Chris Johns 2024-11-26T05:28:39.578Z

mentioned in merge request !94

Author: Frank Kuehndel 2024-12-03T11:46:47.157Z

Sorry for the late reply. I am using Python 3.6. The warnings are still present in `17c582f53ad06ec64c47c7eaaf255de218ee6ff2`. Maybe its only because of the old Python version. I have to check this.

Author: Gedare Bloom 2024-12-04T18:56:55.271Z

mentioned in issue #60

Author: Frank Kuehndel 2024-12-18T21:24:11.230Z

mentioned in merge request !103

Author: Frank Kuehndel 2024-12-18T21:40:15.423Z

The current warnings (Python 3.11 prints these messages when it compiles the code; rtems-docs `de527cdcf8dad014f66733854068c908fd422dfc`):

```
/home/minna/src/rtems-docs/common/waf.py:111: SyntaxWarning: invalid escape sequence '\\D'
ver = tuple(map(int, re.split('[\\D]', version)))
/home/minna/src/rtems-docs/common/waf.py:118: SyntaxWarning: invalid escape sequence '\\D'
ver = tuple(map(int, re.split('[\\D]', version)))
/home/minna/src/rtems-docs/common/waf.py:418: SyntaxWarning: invalid escape sequence '\\?'
no_hash = re.sub(b'\\?v=[a-z0-9]{8}', b'', fp.read())
/home/minna/src/rtems-docs/common/waf.py:419: SyntaxWarning: invalid escape sequence '\\?'
no_digest = re.sub(b'\\?digest=[a-z0-9]{20}', b'', no_hash)
/home/minna/src/rtems-docs/common/latex.py:9: SyntaxWarning: invalid escape sequence '\\d'
'\\documentclass[a4paper,11pt,english]{report}']
```

3.1.1.10 61 - Document Running rpi4 on Qemu

Id	61
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Gedare Bloom
Created	2024-12-04T21:28:13.553Z
Closed	2024-12-04T21:32:48.585Z
Updated	2024-12-04T21:32:48.601Z
Milestone	6.1
Labels	backport
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/61
Merges	0

Summary

Documentation is needed for helping run RTEMS on Raspberry Pi 4.

Author: Gedare Bloom 2024-12-04T21:28:18.787Z

assigned to @gedare

Author: Gedare Bloom 2024-12-04T21:28:19.221Z

Author: Kinsey Moore 2024-12-04T21:28:31.958Z

mentioned in commit 3c9a21fc8364b646574bdc1ea05120d6bdd33751

Author: Gedare Bloom 2024-12-04T21:29:13.180Z

mentioned in merge request !98

3.1.1.11 52 - singlehtml menu is broken

Id	52
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-11-08T00:01:50.409Z
Closed	2024-11-22T00:55:59.045Z
Updated	2024-11-22T00:55:59.055Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/52
Merges	0

Summary

The singlehtml documentation the menu on the left does not tree down.

Steps to reproduce

3.1.1.11.2.1 Pre-set options

Author: Amar Takhar	2024-11-08T00:01:50.503Z

assigned to @amar

3.1.1.12 55 - Version not showing in left panel

Id	55
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-11-14T06:41:59.443Z
Closed	2024-11-22T00:45:09.325Z
Updated	2024-11-22T00:45:09.337Z
Milestone	6.1
Labels	doc, doc::sphinx
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/55
Merges	0

A change has removed the version string from the left panel. The 6.1-rc4 build of the documentation shows it:

!`image.png <https://gitlab.rtems.org/-/project/uploads/786867c7fab7c1d4101412121d1bfb69/image.png>`_

and the latest build of the docs is:

!`image.png <https://gitlab.rtems.org/-/project/uploads/6dbb2123a908bca48fb4fb325a86e8ec/image.png>`_

Author: Chris Johns 2024-11-14T06:45:53.724Z

changed the description

Author: Gedare Bloom 2024-11-14T06:46:08.463Z

Compare: * https://docs.rtems.org/docs/main/user/overview/index.html * https://ftp.rtems.org/pub/rtems/releases/6/rc/6.1-rc4/docs/html/user/overview/index.html

Author: Amar Takhar 2024-11-14T06:56:41.757Z

The new theme has a version switcher allowing you to switch between doc versions and keep the section you're on. It's right where that version is.

Author: Amar Takhar 2024-11-14T06:58:49.092Z

If you look beside 'PyData Theme' here: https://pydata-sphinx-theme.readthedocs.io/en/stable/user_guide/indices.html you can switch between versions it's pretty handy.

Author: Chris Johns 2024-11-14T07:57:03.182Z

I cannot see any version box in our docs? What happens in the released?

Author: Amar Takhar 2024-11-14T07:57:03.150Z

No idea I haven't changed anything are those versions pulled from somewhere?

FYI I have fixed this in the new theme it shows up there.

Author: Chris Johns 2024-11-22T00:45:04.994Z

assigned to @amar

3.1.1.13 48 - Highlight the benefits of the new Rtems release/releases :rocket:

Id	48
State	closed
Type	ISSUE
Author	ita2048 ita2048
Assignee(s)	Gedare Bloom
Closed by	Kinsey Moore
Created	2024-11-01T12:53:25.397Z
Closed	2024-11-21T23:44:12.380Z
Updated	2024-11-21T23:44:12.451Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/48
Merges	1

The following page describes problems to address when migrating to a new version https://docs.rtems.org/branches/master/user/migration/index.html

However, the documentation is missing what is new and exciting in the latest version. Why should anyone upgrade to the latest release? What is new and sparks joy? :sparkles: Are there new features? Are there new platforms? :computer:

Concrete suggestion: * Rename Changing versions to “upgrading to Rtems 6” * Add a section about “What is new in Rtems 6” or “Highlights of this new version”

Author: ita2048 ita2048 2024-11-01T12:55:50.287Z

changed the description

Author: Chris Johns 2024-11-07T23:36:21.797Z

assigned to @gedare

Author: Gedare Bloom 2024-11-20T21:53:30.240Z

mentioned in merge request !88

3.1.1.14 11 - Mention GitLab in user/migration/v5-to-v6.rst

Id	11
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Chris Johns
Created	2024-05-16T19:16:09.288Z
Closed	2024-11-17T22:13:30.050Z
Updated	2024-11-17T22:13:30.140Z
Milestone	6.1
Labels	infra::migration
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/11
Merges	1

Summary

During the v6 release we have transitioned to GitLab. It should be mentioned in the migration notes.

Steps to reproduce

> **Author:** Chris Johns 2024-10-18T00:12:17.556Z
>
> assigned to @gedare
>
> **Author:** Gedare Bloom 2024-11-17T20:45:58.506Z
>
> mentioned in merge request !84

3.1.1.15 50 - Add documentation for flashdev command

Id	50
State	closed
Type	ISSUE
Author	Aaron Nyholm
Assignee(s)	Chris Johns, Aaron Nyholm
Closed by	Kinsey Moore
Created	2024-11-06T22:57:18.720Z
Closed	2024-11-10T21:44:49.026Z
Updated	2024-11-10T21:44:49.147Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/50
Merges	1

Summary

Currently there is no documentation for the `flashdev` command in the shell guide. This needs to be added.

Steps to reproduce

3.1.1.15.2.1 Pre-set options

Author: Amar Takhar 2024-11-06T23:09:57.793Z

This is for https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/291

Author: Amar Takhar 2024-11-06T23:10:17.021Z

assigned to @eagleirony and @chris

Author: Aaron Nyholm 2024-11-08T03:22:54.147Z

mentioned in merge request !74

3.1.1.16 17 - docs.rtems.org needs changes to reflect gitlab and master->main rename

Id	17
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Chris Johns, Amar Takhar
Closed by	Amar Takhar
Created	2024-06-30T23:29:56.574Z
Closed	2024-11-07T23:59:51.707Z
Updated	2024-11-07T23:59:51.721Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/17
Merges	0

Summary

https://docs.rtems.org/ still has `/master/` as the URL. This needs to be changed to main we can have an automatic forward in the webserver to redirect `https://docs.rtems.org/*/master/*` to ``https://docs.rtems.org/*/main/*``.

This step needs to be completed before docs can be automated anyway so it is a blocking change to that but I'm unsure if CI doc building will happen before %6.1 or not.

Author: Amar Takhar 2024-10-06T01:14:39.960Z

mentioned in issue rtems/rtos/rtems#5133

Author: Amar Takhar 2024-10-06T01:17:32.848Z

marked this issue as blocked by rtems/rtos/rtems#5133

Author: Amar Takhar 2024-10-06T01:17:39.434Z

removed the relation with rtems/rtos/rtems#5133

Author: Amar Takhar 2024-10-06T01:18:00.348Z

marked this issue as blocking rtems/rtos/rtems#5133

Author: Amar Takhar 2024-10-06T01:18:06.466Z

assigned to @chris

Author: Amar Takhar 2024-10-28T21:09:26.888Z

assigned to @amar

Author: Amar Takhar 2024-10-28T21:17:18.038Z

marked rtems/rtos/rtems#5133 as a duplicate of this issue

Author: Amar Takhar 2024-11-07T23:59:51.430Z

This was completed with the new docs website launch.

3.1.1.17 47 - Fix broken API documentation links

Id	47
State	closed
Type	ISSUE
Author	ita2048 ita2048
Closed by	Amar Takhar
Created	2024-11-01T12:33:22.838Z
Closed	2024-11-06T21:00:53.911Z
Updated	2024-11-06T21:00:53.924Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/47
Merges	0

Summary

3.1.1.17.1.1 Development:

- Please rename “RTEMS CPU Kit Doxygen” to “RTEMS API documentation” linked from https://docs.rtems.org/
- Please fix the link https://docs.rtems.org/doxygen/branches/master/ so that it reads “main” instead of “master”
- Please update the API documentation to 5.3 because it is only for “RTEMS 5.0.0” on the main branch

3.1.1.17.1.2 Release 5.3

- Please rename “RTEMS CPU Kit Doxygen” to “RTEMS API documentation” linked from https://docs.rtems.org/
- Please fix the link to the API documentation on 5.3 because the link is currently broken https://docs.rtems.org/doxygen/releases/rtems-5.3/ with error 404

The API docs links for 5.2, 5.1 and 4.11 are not broken, so something terrible happened recently :grimacing: :skull_crossbones:

> **Author:** Amar Takhar 2024-11-06T21:00:53.568Z
>
> This was confirmed as fixed by @ita2048 on Discord.

3.1.1.18 45 - Remove the menu bar in the documentation or fix all the broken links

Id	45
State	closed
Type	ISSUE
Author	ita2048 ita2048
Assignee(s)	Amar Takhar
Closed by	ita2048 ita2048
Created	2024-11-01T11:47:58.790Z
Closed	2024-11-06T20:56:05.005Z
Updated	2024-11-06T20:56:05.017Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/45
Merges	0

Summary

The following links need updating as they all point to a blank page about a Gitlab migration: * Documentation->wiki * Documentation->view tickets * Documentation->new ticket * Documentation->git repository

```
have migrated to GitLab please see https://gitlab.rtems.org/groups/rtems/

If you have any questions you can find us on our Discord at
https://www.rtems.org/discord in #gitlab-support for updates
```

In addition: * The “Home” button on the top-left corner does not point back to rtems.org but to the documentation itself https://docs.rtems.org/index.html - how should one return to rtems.org? * The rtems logo does not link back to rtems.org

It seems that the entire navigation bar should be removed.

Author: Amar Takhar 2024-11-05T23:51:37.389Z

assigned to @amar

Author: Amar Takhar 2024-11-05T23:51:46.072Z

Hi @ita2048 these should be fixed on the new website I’m marking this as fixed if there are any more issues either re-open or make a new issue thank you!

Author: ita2048 ita2048 2024-11-06T20:56:03.318Z

Any issues can be opened in the rtems-docs project located at https://devel.rtems.org/rtems/docs/rtems-docs/

The second link on the new page `https://devel.rtems.org/rtems/docs/rtems-docs/` points to the exact empty page as above (was it meant to read `gitlab.rtems.org`?)

```
We have migrated to GitLab please see https://gitlab.rtems.org/groups/
↪rtems/

If you have any questions you can find us on our Discord at
https://www.rtems.org/discord in #gitlab-support for updates.
```

Author: Amar Takhar 2024-11-06T20:56:26.811Z

Yes that was a terrible mistake on my part haha. I still type `devel` too much.

I have fixed the links thank you let me know if it’s OK now.

3.1.1.19 42 - Dangling references

Id	42
State	closed
Type	ISSUE
Author	Amar Takhar
Closed by	Gedare Bloom
Created	2024-10-29T19:39:39.063Z
Closed	2024-10-30T03:43:37.443Z
Updated	2024-10-30T03:45:16.133Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/42
Merges	0

Summary

ita pointed out on discord that we have some dangling references:

- https://discord.com/channels/820452222382112799/1257160543580590141/1300849519700869230

See here:

- user/installation/developer.rst#L206

Not sure what was meant to be there or if it can be deleted.

Steps to reproduce

3.1.1.19.2.1 Pre-set options

Author: Amar Takhar 2024-10-30T03:45:12.945Z

This was fixed in !72

3.1.1.20 43 - Fix references to old branches

Id	43
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Gedare Bloom
Closed by	Gedare Bloom
Created	2024-10-29T20:40:42.257Z
Closed	2024-10-29T22:44:14.370Z
Updated	2024-10-29T22:44:14.536Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/43
Merges	0

Summary

These docs refer to `4.11` which was released 20 years ago.

- https://docs.rtems.org/branches/master/user/installation/developer.html

We should fix this to use replaceables which should stay accurate for the commandlines even though the screen output may be wrong it will at least be a little closer.

Note the documentation itself needs to be fixed as well.

Steps to reproduce

Try to follow the documentation.

3.1.1.20.2.1 Pre-set options

Author: Amar Takhar 2024-10-29T20:42:49.956Z

changed the description

Author: Amar Takhar 2024-10-29T20:43:15.367Z

changed the description

Author: Gedare Bloom 2024-10-29T20:48:04.074Z

I think this entire section should be removed in favor of the Quick Start. Some relevant text could be migrated there.

Author: Amar Takhar 2024-10-29T20:48:04.035Z

For %6.1?

Author: Gedare Bloom 2024-10-29T20:51:50.883Z

probably, anyone trying to follow this section will get confused

Author: Gedare Bloom 2024-10-29T22:16:20.465Z

assigned to @gedare

Author: Amar Takhar 2024-10-29T22:39:33.935Z

mentioned in merge request !72

3.1.1.21 24 - Deprecating Interfaces needs moving from wiki

Id	24
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-07-26T23:39:08.220Z
Closed	2024-10-25T05:48:13.688Z
Updated	2024-10-25T05:48:13.764Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/24
Merges	1

Summary

This file:

- https://gitlab.rtems.org/rtems/docs/rtems-docs/-/blob/main/eng/coding-deprecating.rst?ref_type=heads

Needs to be populated by the contents of this file:

- https://gitlab.rtems.org/amar/old-wiki/-/blob/main/Developer/Coding/Deprecating.md?ref_type=heads

Needs to be done before %6.1 as part of devel.rtems.org decomissioning.

Steps to reproduce

Author: Amar Takhar 2024-07-27T00:06:30.797Z

changed title from **Deprec{-t-}ating Interfaces needs moving from wiki** to **Deprec{+i+}ating Interfaces needs moving from wiki**

Author: Amar Takhar 2024-07-27T00:07:02.295Z

mentioned in merge request !38

Author: Amar Takhar 2024-07-28T12:11:23.428Z

mentioned in commit 05f9a3d56b45e700104d22bf40881ef89fff5d91

Author: Joel Sherrill 2024-10-08T21:08:16.114Z

changed title from **Deprec{-i-}ating Interfaces needs moving from wiki** to **Deprecating Interfaces needs moving from wiki**

Author: Chris Johns 2024-10-18T00:04:56.174Z

assigned to @amar

Author: Amar Takhar 2024-10-25T05:32:45.169Z

mentioned in merge request !67

3.1.1.22 39 - User manual IRC section

Id	39
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-10-18T04:35:30.574Z
Closed	2024-10-25T03:27:02.622Z
Updated	2024-10-25T03:27:02.714Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/39
Merges	1

Change the IRC section to discord

Author: Chris Johns 2024-10-24T22:26:23.488Z

assigned to @amar

Author: Chris Johns 2024-10-24T22:26:49.894Z

We do not use IRC and have moved to Discord

Author: Amar Takhar 2024-10-25T03:22:00.678Z

mentioned in merge request !66

3.1.1.23 22 - Link to non exisent repository

Id	22
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Sebastian Huber
Closed by	Amar Takhar
Created	2024-07-26T19:07:12.554Z
Closed	2024-10-07T22:15:43.140Z
Updated	2024-10-07T22:15:43.213Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/22
Merges	1

Summary

There is a link to a non existent repository here:

- https://gitlab.rtems.org/rtems/docs/rtems-docs/-/blob/f1cd233fa1aeabcc000dfbbb3444d88202d2b2ff/eng/test-framework.rst?page=3#L2418
- https://git.rtems.org/sebh/rtems-gtest.git

@sebhub , what is going on with this repo? Thanks.

Steps to reproduce

Author: Amar Takhar 2024-07-26T19:07:12.744Z

assigned to @sebhub

Author: Amar Takhar 2024-08-19T19:52:32.949Z

mentioned in issue #31

Author: Amar Takhar 2024-08-19T19:52:49.340Z

@sebhub any update for this? I would like to get these fixed thanks.

Author: Sebastian Huber 2024-08-21T12:16:25.162Z

I have currently no back up of this repository available. I would like to move it to my private gitlab area.

Author: Amar Takhar 2024-10-07T21:37:45.281Z

This has been archived here: https://ftp.rtems.org/pub/rtems/archive/misc/rtems/rtems-gtest-2018-11-15.tar.xz

Author: Gedare Bloom 2024-10-07T21:41:09.159Z

mentioned in merge request !53

3.1.1.24 30 - C Classic API manual SMP link points to git.rtems.org

Id	30
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Gedare Bloom
Created	2024-08-18T01:39:52.159Z
Closed	2024-10-07T20:16:48.598Z
Updated	2024-10-07T20:18:30.888Z
Milestone	6.1
Labels	doc, smp
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/30
Merges	0

https://docs.rtems.org/branches/master/c-user/symmetric_multiprocessing_services.html#per-processor-data reference the `percpudata.h` file in the old repo.

Author: Chris Johns 2024-08-18T01:40:21.685Z

changed title from **C Classic API manu SMP link points to git.rtems.org** to **C Classic API manu{+al+} SMP link points to git.rtems.org**

Author: Chris Johns 2024-08-18T01:55:30.516Z

The SMP needs some work. There are a number of references to web sites that need to be updated or the references removed.

Author: Chris Johns 2024-08-18T01:57:36.118Z

I cannot see a link in the SMP section in the C manual to the “SMP Schedulers” and “Directives” section of “Scheduling Concepts” of the C API manual. I think it would be helpful to have links.

Author: Gedare Bloom 2024-10-07T20:16:48.305Z

This was fixed by !11. I’ll migrate the other comments to a new issue.

Author: Gedare Bloom 2024-10-07T20:18:30.766Z

mentioned in issue #36

3.1.1.25 31 - Update link to rtems-gtest

Id	31
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Sebastian Huber
Closed by	Amar Takhar
Created	2024-08-19T19:41:52.838Z
Closed	2024-08-19T19:52:32.444Z
Updated	2024-08-19T19:52:32.456Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/31
Merges	0

Summary

This link needs to be updated in the engineering manual:

- `https://git.rtems.org/sebh/rtems-gtest.git/`
- https://gitlab.rtems.org/rtems/docs/rtems-docs/-/blob/main/eng/test-framework.rst?ref_type=heads&plain=1#L2418

Author: Amar Takhar 2024-08-19T19:41:52.944Z

assigned to @sebhub

Author: Amar Takhar 2024-08-19T19:52:32.148Z

This is a duplicate of #22

3.1.1.26 18 - Checking if Sphinx is between 1.3 and 5.9

Id	18
State	closed
Type	ISSUE
Author	Sebastian Huber
Closed by	Sebastian Huber
Created	2024-07-03T18:55:35.260Z
Closed	2024-07-04T05:27:14.273Z
Updated	2024-07-04T05:28:23.881Z
Milestone	6.1
Labels	doc::sphinx
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/18
Merges	0

Summary

I naively installed Sphinx through pip in a virtual environment and got:

```
Checking if Sphinx is between 1.3 and 5.9 : Sphinx version is too new: 7.3
```

Is this version limitation still applicable?

Author: Joel Sherrill 2024-07-03T22:42:14.934Z

Weird. I use the sphinx provided with Rocky 9 and it reports “sphinx-build 7.2.6.” I do not seem to be tripping that.

And I do not see “is between 1.3” when I grep rtems-docs. common/waf.py has this:

```
# If you do not want to check for a maximum version, set it to None.
sphinx_min_version = (1, 3)
sphinx_max_version = None
```

Are you up to date?

Author: Chris Johns 2024-07-03T22:42:14.906Z

Where is there a need to cap the version at 5.9?

Author: Amar Takhar 2024-07-03T22:18:29.437Z

I forget what broke in Sphinx however I am re-working the build system for the documentation to allow individual docs to build again and fix some things that were broken as well as bring us up to date.

You can target a specific version with:

```
pip install sphinx==5.3.0
```

You can remove it first and re-install. I do not think it's worth updating yet because as far as I know the rendering issues have not been resolved.

Author: Chris Johns 2024-07-03T22:48:37.244Z

I am using 7.3.7. My configure is:

```
Setting top to                           : /opt/work/chris/rtems/docs/
↪rtems-docs.git
Setting out to                           : /opt/work/chris/rtems/docs/
↪rtems-docs.git/build
Checking for program 'git'               : /usr/local/bin/git
Checking for program 'sphinx-build'      : /opt/work/chris/rtems/r-py-3/
↪bin/sphinx-build
Checking for program 'aspell'            : not found
Checking if Sphinx is at least 1.3       : yes (7.3)
Checking Sphinx Options                  : none
Checking Sphinx Nit-Pick mode            : no
Checking for 'sphinx-rtd-theme'          : found
Checking for 'sphinx.ext.autodoc'        : found
Checking for 'sphinx.ext.coverage'       : found
Checking for 'sphinx.ext.doctest'        : found
Checking for 'sphinx.ext.graphviz'       : found
Checking for 'sphinx.ext.intersphinx'    : found
Checking for 'sphinx.ext.mathjax'        : found
Checking for 'sphinxcontrib.bibtex'      : found
Checking for 'sphinxcontrib.jquery'      : found
```

The build result is:

```
Waf: Leaving directory `/opt/work/chris/rtems/docs/rtems-docs.git/build'
'build' finished successfully (42.631s)
```

Host:

```
FreeBSD torea 14.0-RELEASE FreeBSD 14.0-RELEASE #0 releng/14.0-n265380-
↪f9716eee8ab4: Fri Nov 10 05:57:23 UTC 2023     root@releng1.nyi.
↪freebsd.org:/usr/obj/usr/src/amd64.amd64/sys/GENERIC amd64
```

I am not sure what the issue is?

Author: Amar Takhar 2024-07-03T22:48:37.217Z

No idea I just remember the latest version breaking the theme some time ago and it was capped? Was that fixed?

Author: Chris Johns 2024-07-03T22:49:16.982Z

Yes

Author: Chris Johns 2024-07-03T22:52:00.753Z

After reading the question in the description by @sebhub I see this is a question and not a problem. @sebhub no it should not be a problem. Where is the limit stated?

Author: Sebastian Huber 2024-07-04T05:28:23.896Z

Sorry for the trouble, this was caused by a configuration error on my side. The rtems-docs submodule in rtems-central is pretty outdated right now.

Author: Chris Johns 2024-07-04T05:28:23.863Z

No problem and thanks for the update.

3.1.1.27 14 - Update POSIX Compliance Guide for New Standards Editions

Id	14
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Kinsey Moore
Created	2024-06-14T17:12:11.774Z
Closed	2024-06-18T01:46:14.969Z
Updated	2024-06-18T01:46:15.410Z
Milestone	6.1
Labels	posix::compliance
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/14
Merges	1

Summary

The POSIX Compliance Guide is based on a spreadsheet which has not been updated in a few years. The FACE Technical Standard, Edition 3.2 and C17 both need to be added. Also there are improvements to RTEMS which need to be accounted for.

Steps to reproduce

Author: Joel Sherrill 2024-06-14T17:12:11.855Z

assigned to @joel

Author: Joel Sherrill 2024-06-14T17:14:01.064Z

mentioned in merge request !19

3.1.1.28 8 - Document Merge Request Workflow

Id	8
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Amar Takhar
Created	2024-05-02T22:44:58.978Z
Closed	2024-05-18T04:02:23.469Z
Updated	2024-05-22T21:41:29.400Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/8
Merges	1

Document Merge Request Workflow

1. Document how to add comments to specific lines that are being reviewed or adding a comment to the top level
2. When you a merge request you land on the page with all the comments and you need to find the specific area you wish to comment on.
3. How to update a Merge Request with changes
4. Make a draft merge request if you want to review it first or it is a RFC
5. Consider using the quick commands accessed using ?

Author: Chris Johns 2024-05-02T23:34:22.366Z

marked this issue as related to #9

Author: Gedare Bloom 2024-05-16T16:53:36.385Z

mentioned in merge request !10

Author: Gedare Bloom 2024-05-22T21:41:29.379Z

mentioned in issue administration/gitlab#11

3.1.1.29 5 - Contributing guidance is outdated

Id	5
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Gedare Bloom
Created	2024-04-29T17:46:24.755Z
Closed	2024-05-02T04:59:46.379Z
Updated	2024-05-22T21:41:29.368Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/5
Merges	2

Summary

Contribution guidance needs to be updated for using Gitlab.

Steps to reproduce

Author: Gedare Bloom 2024-04-29T17:46:24.839Z

assigned to @gedare

Author: Gedare Bloom 2024-04-29T17:46:30.433Z

created branch 5-contributing-guidance-is-outdated to address this issue

Author: Gedare Bloom 2024-04-29T17:47:04.582Z

mentioned in merge request !4

Author: Gedare Bloom 2024-05-01T15:22:36.801Z

mentioned in merge request !5

Author: Gedare Bloom 2024-05-22T21:41:29.340Z

mentioned in issue administration/gitlab#11

3.1.1.30 4 - Rewrite bug user story

Id	4
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Gedare Bloom
Created	2024-04-29T17:17:49.690Z
Closed	2024-04-30T15:09:02.707Z
Updated	2024-05-22T21:41:29.129Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/4
Merges	1

Summary

Update guidance for how user's should submit bug reports to Gitlab

Steps to reproduce

Author: Gedare Bloom 2024-04-29T17:17:49.773Z

assigned to @gedare

Author: Gedare Bloom 2024-04-29T17:17:55.416Z

created branch 4-rewrite-bug-user-story to address this issue

Author: Gedare Bloom 2024-04-29T17:19:05.353Z

mentioned in merge request !3

Author: Gedare Bloom 2024-05-22T21:41:29.056Z

mentioned in issue administration/gitlab#11

3.1.1.31 10 - Manuals refer to git.rtems.org

Id	10
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Amar Takhar
Created	2024-05-16T18:45:00.248Z
Closed	2024-05-18T04:03:52.361Z
Updated	2024-05-18T04:03:52.429Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/10
Merges	1

Summary

Several of the manuals have references to git.rtems.org URLs that should be updated to gitlab.rtems.org

Steps to reproduce

Author: Gedare Bloom	2024-05-16T18:45:00.323Z

assigned to @gedare

Author: Gedare Bloom	2024-05-16T19:12:28.996Z

mentioned in merge request !11

3.1.1.32 2 - Rewrite trac links to gitlab

Id	2
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Gedare Bloom
Created	2024-04-29T14:58:32.944Z
Closed	2024-04-29T20:14:47.535Z
Updated	2024-04-29T20:14:47.579Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/2
Merges	1

Summary

Reflect Trac to Gitlab migration

Steps to reproduce

Author: Gedare Bloom 2024-04-29T14:58:33.051Z

assigned to @gedare

Author: Gedare Bloom 2024-04-29T14:58:42.169Z

created branch 2-rewrite-trac-links-to-gitlab to address this issue

Author: Gedare Bloom 2024-04-29T14:59:26.808Z

mentioned in merge request !1

3.1.1.33 3 - sync git.rtems.org

Id	3
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Gedare Bloom
Created	2024-04-29T15:08:46.739Z
Closed	2024-04-29T20:13:42.555Z
Updated	2024-04-29T20:13:42.653Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/work_items/3
Merges	1

Summary

pull commits from git.rtems.org lost by transition

Steps to reproduce

Author: Gedare Bloom 2024-04-29T15:08:46.846Z

assigned to @gedare

Author: Gedare Bloom 2024-04-29T15:09:04.491Z

created branch 3-sync-git-rtems-org to address this issue

Author: Gedare Bloom 2024-04-29T15:09:26.055Z

mentioned in merge request !2

3.1.2 Merge Requests

3.1.2.1 44 - posix-users/input_and_output.rst: Update AIO docs

Id	44
State	merged
Merged by	Joel Sherrill
Merged at	2024-09-12T23:04:58.707Z
Created	2024-08-25T19:34:13.937Z
Updated	2025-09-19T02:36:48.159Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/44
Commit	effcf101343d87d2f7722f36905ecdcf400fe195

posix-users/input_and_output.rst: Update AIO docs

Updated documentation after some changes to the AIO interface. This commit adds updates after these MR:

rtems/rtos/rtems!118+

rtems/rtos/rtems!128+

rtems/rtos/rtems!188+

Author: Amar Takhar 2024-09-01T12:31:17.917Z

Is this meant to be draft?

Author: Alessandro Nardin 2024-09-01T12:31:17.917Z

my mistake, this can be marked as ready.

Author: Alessandro Nardin 2024-08-26T12:08:11.764Z

marked this merge request as **ready**

Author: Alessandro Nardin 2024-09-01T12:31:17.936Z

resolved all threads

Author: Alessandro Nardin 2024-09-03T09:45:06.793Z

changed the description

Author: Alessandro Nardin 2024-09-03T09:46:45.051Z

added 1 commit

- f00bf92f - posix-users/input_and_output.rst: Update AIO docs

Compare with previous version

Author: Joel Sherrill 2024-09-04T09:47:32.733Z

Use the markup for method around lio_listio.

Successful is spelled incorrectly.

Author: Alessandro Nardin 2024-09-04T09:46:21.728Z

changed this line in version 3 of the diff

Author: Alessandro Nardin 2024-09-04T09:47:32.733Z

corrected

Author: Joel Sherrill 2024-09-12T22:16:05.442Z

In the notes, document that the signal is sent to the process not the thread making the request. And that when using this with sigwait(), it is important to ensure the signal specified is masked by all threads except the one doing the sigwait().

Author: Alessandro Nardin 2024-09-12T22:16:05.442Z

added it in the notes, let me know if i should go in more detail.

Author: Alessandro Nardin 2024-09-04T09:46:22.322Z

added 1 commit

- 971e7f0c - posix-users/input_and_output.rst: Update AIO docs

Compare with previous version

Author: Alessandro Nardin 2024-09-12T09:08:43.476Z

added 1 commit

- effcf101 - added changes after lio_listio() modification.

Compare with previous version

Author: Joel Sherrill 2024-09-12T22:16:05.462Z

resolved all threads

Author: Joel Sherrill 2024-09-12T22:16:11.454Z

approved this merge request

3.1.2.2 42 - user/bsps/x86_64: Update amd64 documentation

Id	42
State	merged
Merged by	Amar Takhar
Merged at	2024-10-16T04:44:03.022Z
Created	2024-08-13T17:57:24.659Z
Updated	2025-09-19T02:36:46.408Z
Milestone	6.1
Labels	arch:x86_64, doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/42
Commit	87c8ac70d7a656d42f3bfb6187af4cc05c1b7448

Summary

Update the documentation regarding the amd64 BSP

Closes #15

Author: Matheus Pecoraro 2024-08-13T17:58:06.071Z

changed the description

Author: Matheus Pecoraro 2024-10-09T20:28:27.139Z

@amar The one thing left in this MR is documenting the FreeBSD boot image. We had talked having an already ready one available for download, I'd like to know where it would be hosted and how should I add this to the documentation? Should there be a section with the download link but also explaining how to create it?

Author: Amar Takhar 2024-10-09T20:28:27.139Z

Yes we need to document how it's created from scratch as for where to put it we can find a place on the RTEMS FTP for now. Do you have a download URL for the image we can use? I'll talk about it with @chris.

Author: Matheus Pecoraro 2024-10-09T20:28:27.139Z

I have it uploaded here: https://drive.google.com/drive/folders/1c0YcrCCXoL4As99S0dH9iWIvELxM_ieX

Author: Joel Sherrill 2024-10-09T20:28:27.139Z

@amar @chris Do either of you have suggested home for this image? It is keeping this MR from being able to be resolved.

Author: Amar Takhar 2024-10-09T20:28:27.139Z

@chris @joel I'm not sure where this should go. Also we have the question about how to handle versioning. For now I have put it here:

- https://ftp.rtems.org/pub/rtems/archive/misc/FreeBSD/boot/2024-10-01/

I put it under a date in case we have to update it we'll know what version it is.

Author: Amar Takhar 2024-10-09T20:28:27.139Z

@mpec Sorry for the delay I completely forgot about this and just came across it now the update is above for the URL the docs can be updated with this URL.

Author: Joel Sherrill 2024-10-09T20:28:27.139Z

@mpec Please update to include the new URL.

Author: Matheus Pecoraro 2024-10-09T20:28:27.139Z

URL and section on the FreeBSD boot image added.

Author: Kinsey Moore 2024-08-14T01:51:43.576Z

Oxford comma.

Author: Matheus Pecoraro 2024-08-14T01:51:01.212Z

changed this line in version 2 of the diff

Author: Kinsey Moore 2024-08-14T01:51:45.369Z

This should be two separate clauses, either joined by a semicolon or separated by a period.

Author: Matheus Pecoraro 2024-08-14T01:51:01.593Z

changed this line in version 2 of the diff

Author: Kinsey Moore 2024-08-14T01:51:47.550Z

This needs a comma between “First” and “create”.

Author: Matheus Pecoraro 2024-08-14T01:51:01.931Z

changed this line in version 2 of the diff

Author: Kinsey Moore 2024-08-14T01:51:49.306Z

The comma here should be a colon.

Author: Matheus Pecoraro 2024-08-14T01:51:02.275Z

changed this line in version 2 of the diff

Author: Matheus Pecoraro 2024-08-14T01:51:02.455Z

added 1 commit

- 48cf9f34 - user/bsps/x86_64: Update amd64 documentation

Compare with previous version

Author: Matheus Pecoraro 2024-08-14T09:04:18.003Z

Author: Matheus Pecoraro 2024-10-09T20:27:21.028Z

added 14 commits

- 48cf9f34...7817d7a3 - 13 commits from branch `rtems/docs:main`
- 46452b47 - user/bsps/x86_64: Update amd64 documentation

Compare with previous version

Author: Matheus Pecoraro 2024-10-09T20:28:27.161Z

resolved all threads

Author: Matheus Pecoraro 2024-10-09T20:28:43.627Z

marked this merge request as **ready**

Author: Amar Takhar 2024-10-16T04:43:31.593Z

approved this merge request

Author: Amar Takhar 2024-10-16T04:43:48.025Z

added 5 commits

- 46452b47...8bafd238 - 4 commits from branch `rtems/docs:main`
- 87c8ac70 - user/bsps/x86_64: Update amd64 documentation

Compare with previous version

3.1.2.3 43 - Add section “Debugging” to RTEMS documentation

Id	43
State	merged
Merged by	Amar Takhar
Merged at	2024-08-19T17:35:31.713Z
Created	2024-08-18T11:33:59.445Z
Updated	2025-09-19T02:36:44.378Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/43
Commit	6dac3891c3e753ed63edaad651af67180630f042

Summary

This MR adds a new section - Debugging - to the RTEMS documentation.

This adds the Documentation required for the changes caused by MRs https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/98 and https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/35.

Author: Christian Mauderer 2024-08-19T06:33:42.924Z

Please don’t add editor-specific configurations.

Author: Suraj Kumar 2024-08-19T06:33:42.924Z

I had added that by mistake. I will squash this along with the others.

Author: Suraj Kumar 2024-08-19T06:33:42.924Z

This is now fixed @c-mauderer

Author: Christian Mauderer 2024-08-19T06:35:59.468Z

Is there some reason for the & or is it just meant as an and? I'm not a native speaker so maybe it's quite common to write it like that. But it's something I would need a moment to think about while reading. From my point of view, that's usually not good for a manual.

Author: Suraj Kumar 2024-08-19T06:35:59.468Z

Yep sure, I will make this change

Author: Suraj Kumar 2024-08-18T17:05:17.675Z

changed this line in version 2 of the diff

Author: Suraj Kumar 2024-08-19T06:35:59.468Z

Fixed

Author: Christian Mauderer 2024-08-19T07:22:30.487Z

I think I would move the *Short term* to the first point and call it *Suggested safe method*. Instead of *Long term* I would use *Lazy unsafe method*. Just to make it clear that the RTEMS project is not recommending the unsafe method.

Author: Suraj Kumar 2024-08-18T17:05:18.397Z

changed this line in version 2 of the diff

Author: Suraj Kumar 2024-08-19T07:22:30.487Z

Changed

Author: Christian Mauderer 2024-08-19T07:22:30.487Z

Like I said, I most likely would also swap the first and second point so that the save method is the first one. But let's wait whether someone else will also ask for that or whether everyone else is OK with that order.

Author: Suraj Kumar 2024-08-19T07:22:30.487Z

On second thought, I feel like swapping the 1st and 2nd points makes sense. Should I just go ahead and do that?

Author: Christian Mauderer 2024-08-19T07:22:30.487Z

Like I said: I would move the save method to the first point. So if I convinced you of that: Yes, please swap them.

Author: Suraj Kumar 2024-08-19T07:22:30.487Z

This is done, please check it out now

Author: Christian Mauderer 2024-08-19T07:22:30.487Z

Looks good. Thanks.

Author: Christian Mauderer 2024-08-19T06:38:07.344Z

Are you sure, you want to use the short form ``b`` instead of the long (but better readable) ``break``?

Author: Suraj Kumar 2024-08-18T17:05:18.814Z

changed this line in version 2 of the diff

Author: Suraj Kumar 2024-08-19T06:38:07.344Z

Changed

Author: Christian Mauderer 2024-08-19T06:40:03.894Z

Maybe it's because I'm not a native speaker but somehow that sentence feels odd. Shouldn't it be something like

```
... low level high speed serial interface provided by modern processors␣
↪as a means ...
```

Beneath that: I think I would use ``most`` instead of ``modern``. I don't think I have seen much processors that don't provide a JTAG (or a derived version of it).

Author: Suraj Kumar 2024-08-19T06:40:03.894Z

I had copied this word for word from the older documentation and did not want to touch as I do not have much knowledge about JTAG debugging. Would you like me to still modify this?

Author: Suraj Kumar 2024-08-18T17:39:20.064Z

changed this line in version 5 of the diff

Author: Suraj Kumar 2024-08-19T06:40:03.894Z

@c-mauderer Let me know what you think of this framing instead. I read up on OpenOCD a bit

Author: Christian Mauderer 2024-08-19T06:40:03.894Z

I think your new version is better readable. Thank you.

Author: Christian Mauderer 2024-08-19T06:49:44.880Z

More general note regarding that chapter: I think it's partially copied from ``10. 6 Debugging`` of the current manual, right? If yes: Can you please remove the sections that are replaced by that? I don't like having the same information twice in a manual. Beneath that, it's possible that ``git`` detects that and marks the text as moved instead of added.

Author: Suraj Kumar 2024-08-19T06:49:44.880Z

I don't think I follow what you are referring to? Are there repeating sections anywhere?

If I am not wrong, I removed the Debugging section from underneath Executables and made it standalone, and wrote everything from scratch except the JTAG and OpenOCD parts. Please let me know where information is repeating so I can rectify it.

Author: Christian Mauderer 2024-08-19T06:49:44.880Z

Your patches don't remove the ``user/exe/debugging.rst``. So even if you removed the link to that file in ``user/exe/index.rst``, the file itself is still there. If you replaced ``user/exe/debugging.rst`` please remove that file.

Author: Suraj Kumar 2024-08-19T06:49:44.880Z

Oops, that is a slip up. I fixed that. Thanks for catching it. I had removed it in my test environment but forgot to when pushing

Author: Christian Mauderer 2024-08-19T06:45:17.253Z

Do you need the empty lines? Has it side-effects like starting a new enumeration after each empty line?

Author: Suraj Kumar 2024-08-19T06:45:17.253Z

If you are referring to lines 11 and 17 here, then yes. When I built without those newlines they rendered something like this:

```
A debugger allows us to: #. Set breakpoints to pause execution at␣
↪specific points
```

Turns out ReST needs a newline in most places in order to have formatting take effect.

And nope, when I rendered they all load well, you can take a look here from my local build:

!`image.png <https://gitlab.rtems.org/-/project/uploads/5e4b004e7c9b7fe14f09a303a01dd9b8/image.png>`_{width=747 height=395}

I hope that clarifies things

Author: Christian Mauderer 2024-08-19T06:45:17.253Z

No, I meant the lines between the points of the enumeration. You have:

```
#. Set breakpoints to pause execution at specific points

#. Step through code line-by-line or instruction by instruction

#. Inspect/modify variables and memory

#. Monitor a program's call stack and thread states
```

What I would expect:

```
#. Set breakpoints to pause execution at specific points
#. Step through code line-by-line or instruction by instruction
```

(continues on next page)

(continued from previous page)

```
#. Inspect/modify variables and memory
#. Monitor a program's call stack and thread states
```

But both seems to work without problems. So it should be OK.

Author: Suraj Kumar 2024-08-19T07:17:22.310Z

changed this line in version 8 of the diff

Author: Christian Mauderer 2024-08-19T07:15:28.097Z

Additionally to the comments: You should think about squashing the commits. I think some of them look like intermediate work versions.

Author: Suraj Kumar 2024-08-19T07:15:28.097Z

Yes I will squash the commit where I accidentally added the `.vscode` file as well. That was an accident

Author: Christian Mauderer 2024-08-19T07:15:28.097Z

I would also squash the commits that add the files except if there is a sensible reason to split them. If I would submit this patch, I most likely would only use one. But two steps could be fine too:

1. Move the debugging section to a top level.
2. Rework the debugging section.

Author: Suraj Kumar 2024-08-18T17:05:20.488Z

added 1 commit

- 62dc0c74 - user/debugging: Add section for debugging with GDB on RTEMS

Compare with previous version

Author: Suraj Kumar 2024-08-18T17:06:18.057Z

added 1 commit

- 9264d1af - user/debugging: Add section for debugging with GDB on RTEMS

Compare with previous version

Author: Suraj Kumar 2024-08-18T17:13:01.251Z

added 4 commits

- e575db89 - user/debugging: Add section for debugging on RTEMS
- d5315af8 - user/index.rst: Add section - Debugging
- c043b70e - user/debugging: Add section for debugging with GDB on RTEMS
- efea78c5 - user/debugging: Add section for debugging with GDB on RTEMS

Compare with previous version

Author: Suraj Kumar 2024-08-18T17:39:21.554Z

added 1 commit

- 3383e487 - user/debugging: Add section for debugging with GDB on RTEMS

Compare with previous version

Author: Suraj Kumar 2024-08-18T19:34:37.494Z

Author: Suraj Kumar 2024-08-19T06:44:11.199Z

added 1 commit

- 44933026 - user/exe: Removed debugging.rst file to avoid repetition

Compare with previous version

Author: Christian Mauderer 2024-08-19T07:22:43.394Z

That line is now longer than 80 characters. I noted a few more like the warning in line 37 or the line 43. Please re-check the line length in your patches. Sometimes it's not avoidable to have longer lines. But for the text blocks it shouldn't be a problem.

Author: Suraj Kumar 2024-08-19T07:17:22.840Z

changed this line in version 8 of the diff

Author: Suraj Kumar 2024-08-19T07:22:43.394Z

Thanks for catching this. I have fixed this across the board. Please check out the changes now

Author: Christian Mauderer 2024-08-19T07:22:43.394Z

Looks good.

Author: Suraj Kumar 2024-08-19T06:54:02.170Z

added 1 commit

- b6f9ec27 - Move the debugging section to a top level.

Compare with previous version

Author: Suraj Kumar 2024-08-19T07:17:23.079Z

added 1 commit

- 6dac3891 - Move the debugging section to a top level.

Compare with previous version

Author: Christian Mauderer 2024-08-19T07:22:43.428Z

resolved all threads

Author: Suraj Kumar 2024-08-19T07:30:50.674Z

changed the description

Author: Christian Mauderer 2024-08-19T07:31:22.734Z

approved this merge request

Author: Suraj Kumar 2024-08-19T07:32:17.142Z

marked this merge request as **ready**

3.1.2.4 46 - user/bsps/atsam: Migrate from BSP README.md

Id	46
State	merged
Merged by	Amar Takhar
Merged at	2024-09-13T17:00:38.767Z
Created	2024-09-13T14:16:30.219Z
Updated	2025-09-19T02:36:27.150Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/46
Commit	5ed7ab3de7b754a2fd8157c08c3ff601f23dd177

Summary

user/bsps/atsam: Migrate from BSP README.md

Update and migrate the BSP README.md to documentation.

Updates rtems/rtos/rtems#5088

Author: Amar Takhar 2024-09-13T17:00:34.010Z

approved this merge request

3.1.2.5 48 - user: Add –release option to Rust instructions

Id	48
State	merged
Merged by	Amar Takhar
Merged at	2024-09-20T18:29:42.094Z
Created	2024-09-19T17:28:13.868Z
Updated	2025-09-19T02:36:26.853Z
Milestone	6.1
Labels	ci::possible, lang::rust
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/48
Commit	0b2d95d52507da01d43992fb27951859026142f1

Summary

user: Add –release option to Rust instructions

This is a workaround for #32.

Close #32

Author: Amar Takhar 2024-09-20T13:14:11.056Z

Hi there Frank did you mean to leave this as a draft?

Author: Frank Kuehndel 2024-09-20T13:14:11.056Z

First of all, our CI pipeline is happy with this change. That was what I wanted to test.

Rust community will likely fix this bug but it may need some time. I am out of office for the next two weeks and I am unsure whether to merge it or wait till afterwards.

Author: Amar Takhar 2024-09-20T13:14:02.691Z

Also is it worth linking the issue in the docs to note this is a workaround and not considered a permanent fix? Thanks.

Author: Frank Kuehndel 2024-09-20T13:14:02.691Z

I will add a note.

Author: Frank Kuehndel 2024-09-20T08:54:09.627Z

added 1 commit

- ae3eef9a - user: Explain –release option

Compare with previous version

Author: Frank Kuehndel 2024-09-20T13:13:59.036Z

user.pdf [html.tgz](/uploads/f53c87dcc61bd40677b7467af17b6ec9/html.tgz)

Author: Frank Kuehndel 2024-09-20T13:13:59.036Z

Our CI likes this change too. I removed *Draft* so it can be merged. When the bug is fixed, the patches can be reverted.

Author: Frank Kuehndel 2024-09-20T12:59:18.223Z

marked this merge request as **ready**

Author: Frank Kuehndel 2024-09-20T13:14:11.076Z

resolved all threads

Author: Joel Sherrill 2024-09-20T18:21:14.262Z

Can you squash the two commits? I'm ok with the change otherwise.

Author: Frank Kuehndel 2024-09-20T18:21:14.262Z

@joel Done.

Author: Frank Kuehndel 2024-09-20T18:18:20.568Z

added 1 commit

- 0b2d95d5 - user: Add –release option to Rust instructions

Compare with previous version

Author: Frank Kuehndel 2024-09-20T18:21:14.282Z

resolved all threads

Author: Amar Takhar 2024-09-20T18:29:35.233Z

approved this merge request

Author: Amar Takhar 2024-09-20T18:36:54.628Z

@frank_k Thank you for taking the time to fix this had no idea it was broken great to see it working again!

Author: Frank Kuehndel 2024-09-20T18:36:54.597Z

You are welcome!

3.1.2.6 131 - common: waf bugfix for msys2

Id	131
State	merged
Merged by	Chris Johns
Merged at	2025-01-20T22:32:20.050Z
Assignee(s)	Gedare Bloom
Created	2025-01-20T18:57:15.727Z
Updated	2025-01-20T22:32:21.469Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/131
Commit	ffda0a61a97b56a52882c74a8b10cde8d3888e32

Summary

common: waf bugfix for msys2

Fixes #69

Author: Gedare Bloom 2025-01-20T18:57:16.032Z

assigned to @gedare

Author: Chris Johns 2025-01-20T22:32:14.561Z

approved this merge request

3.1.2.7 117 - common/eng/user: Update docs links

Id	117
State	merged
Merged by	Chris Johns
Merged at	2025-01-16T23:43:24.277Z
Assignee(s)	Kinsey Moore
Created	2025-01-14T20:14:56.920Z
Updated	2025-01-16T23:43:25.609Z
Milestone	6.1
Labels	doc::sphinx
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/117
Commit	8fee1649032c6b139bc0789ca90f563b31f65d88

Summary

common/eng/user: Update docs links

Links have been updated to modern locations where possible and near-equivalents, otherwise.

Updates #44

Author: Kinsey Moore 2025-01-14T20:14:57.137Z

assigned to @opticron

Author: Chris Johns 2025-01-16T23:42:16.994Z

added 3 commits

- f1af60d2...c5f8b54a - 2 commits from branch `rtems/docs:6`
- 8fee1649 - common/eng/user: Update docs links

Compare with previous version

Author: Chris Johns 2025-01-16T23:43:16.126Z

approved this merge request

3.1.2.8 115 - eng/user: Replace references to master where possible

Id	115
State	merged
Merged by	Chris Johns
Merged at	2025-01-16T23:41:18.686Z
Assignee(s)	Kinsey Moore
Created	2025-01-14T04:01:21.222Z
Updated	2025-01-16T23:41:20.312Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/115
Commit	c5f8b54a274e13b856c4aa563605a103b40d076c

Summary

eng/user: Replace references to master where possible

This removes references to master and replaces them with main or more appropriate terms where possible.

Closes rtems/docs/rtems-docs#44

Author: Kinsey Moore 2025-01-14T04:01:21.890Z

assigned to @opticron

Author: Kinsey Moore 2025-01-14T04:05:33.672Z

This does not actually fix the docs.rtems.com URLs that contain “master”.

Author: Kinsey Moore 2025-01-14T04:05:33.672Z

Noted in administration/infra#2

Author: Kinsey Moore 2025-01-14T04:04:44.480Z

resolved all threads

Author: Kinsey Moore 2025-01-14T04:05:33.701Z

resolved all threads

Author: Chris Johns 2025-01-16T23:39:58.757Z

added 2 commits

- e9cd5ce7 - 1 commit from branch `rtems/docs:6`
- c5f8b54a - eng/user: Replace references to master where possible

Compare with previous version

Author: Chris Johns 2025-01-16T23:41:11.558Z

approved this merge request

3.1.2.9 113 - user/cpu-supplment: Fix minor typos

Id	113
State	merged
Merged by	Chris Johns
Merged at	2025-01-16T23:37:14.770Z
Assignee(s)	Kinsey Moore
Created	2025-01-14T03:19:20.731Z
Updated	2025-01-16T23:37:16.818Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/113
Commit	e9cd5ce72b4300fcb47a44be959ef6cde37e6a17

Summary

user/cpu-supplment: Fix minor typos

Closes #53

Author: Kinsey Moore 2025-01-14T03:19:20.939Z

assigned to @opticron

Author: Chris Johns 2025-01-16T23:37:08.771Z

approved this merge request

3.1.2.10 105 - waf: update waf to waf-2.1.4

Id	105
State	merged
Merged by	Amar Takhar
Merged at	2024-12-22T02:18:00.556Z
Assignee(s)	Chris Johns
Reviewer(s)	Joel Sherrill, Kinsey Moore, Amar Takhar
Created	2024-12-22T00:51:39.674Z
Updated	2024-12-22T02:18:02.190Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/105
Commit	9a8c3beaef87e9a322d2068c933df2d532abb0c3

Summary

waf: update waf to waf-2.1.4

Closes #62

Author: Chris Johns 2024-12-22T00:51:39.840Z

requested review from @amar, @joel, and @opticron

Author: Chris Johns 2024-12-22T00:51:39.878Z

assigned to @chris

Author: Amar Takhar 2024-12-22T02:17:42.440Z

approved this merge request

3.1.2.11 99 - common: remove dead code

Id	99
State	merged
Merged by	Kinsey Moore
Merged at	2024-12-16T14:49:07.185Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Chris Johns
Created	2024-12-04T19:01:26.896Z
Updated	2024-12-16T14:49:08.663Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/99
Commit	b72e70157237e220adf768628656340f10a64e55

Summary

common: remove dead code

The per-host latex package support is no longer used. Delete it.

Fixes #60.

Closes #60

Author: Gedare Bloom 2024-12-04T19:03:54.306Z

Tested on Ubuntu.

Author: Gedare Bloom 2024-12-04T19:04:04.010Z

assigned to @gedare

Author: Gedare Bloom 2024-12-04T19:04:12.251Z

requested review from @chris

Author: Kinsey Moore 2024-12-05T19:53:05.174Z

added 2 commits

- 3c9a21fc - 1 commit from branch `rtems/docs:6`
- b72e7015 - common: remove dead code

Compare with previous version

Author: Kinsey Moore 2024-12-16T14:38:18.497Z

approved this merge request

3.1.2.12 98 - user/bsps/raspberrypi4: running on qemu

Id	98
State	merged
Merged by	Gedare Bloom
Merged at	2024-12-04T21:31:27.139Z
Assignee(s)	Kinsey Moore
Created	2024-12-02T17:01:03.636Z
Updated	2024-12-04T21:31:29.227Z
Milestone	6.1
Labels	backport
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/98
Commit	3c9a21fc8364b646574bdc1ea05120d6bdd33751

Summary

user/bsps/raspberrypi4: running on qemu

(cherry picked from commit ce7a8b132e3775064f0485c3a2a5435c01b2cf76)

Co-authored-by: Ning Yang <yangn0@qq.com>

closes #61

Author: Kinsey Moore 2024-12-02T17:01:03.822Z

assigned to @opticron

Author: Gedare Bloom 2024-12-04T21:28:33.256Z

added 1 commit

- 3c9a21fc - user/bsps/raspberrypi4: running on qemu

Compare with previous version

Author: Gedare Bloom 2024-12-04T21:29:13.042Z

changed the description

Author: Gedare Bloom 2024-12-04T21:31:14.440Z

approved this merge request

3.1.2.13 94 - sphinx: Remove digest strings and fix sidebar

Id	94
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-27T15:05:41.760Z
Assignee(s)	Chris Johns, Amar Takhar
Reviewer(s)	Chris Johns, Amar Takhar
Created	2024-11-26T05:28:35.166Z
Updated	2024-11-27T15:05:43.439Z
Milestone	6.1
Labels	doc, doc::sphinx
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/94
Commit	ca3080f0f71515375afe97f781ed6e7db4c64436

Summary

sphinx: Remove digest strings and fix sidebar

Inliner is old there are no alternatives so remove the ?digest= and ?v= strings so itcan build the source from the new theme.

Also fix the html_sidebars from the commandline use singlehtml_sidebars.index. The behaviour of html_sidebars was changed in:

https://github.com/sphinx-doc/sphinx/pull/12600

It will no longer take a string from the commandline.

Fixes: #57, #58

(cherry picked from commit dccbedbe7912449fa019ba8cb06195ffebde1f8d)

Co-authored-by: Amar Takhar amar@rtems.org

Author: Chris Johns 2024-11-26T05:28:35.360Z

requested review from @chris

Author: Chris Johns 2024-11-26T05:28:35.399Z

assigned to @amar and @chris

Author: Chris Johns 2024-11-26T05:28:52.236Z

requested review from @amar

Author: Kinsey Moore 2024-11-27T15:05:28.542Z

approved this merge request

3.1.2.14 91 - riscv/niosv: Updated configuration INI default values to match MR !270

Id	91
State	merged
Merged by	Chris Johns
Merged at	2024-11-22T04:41:36.404Z
Assignee(s)	Kinsey Moore
Created	2024-11-22T04:36:26.290Z
Updated	2024-11-22T17:26:39.803Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/91
Commit	6b5b322a0af1af11a35bc20cbe92cb23c5a3b45d

Summary

riscv/niosv: Updated configuration INI default values to match MR !270

(cherry picked from commit 7223a364006d71ed44302bfdfed0c97f256efd88)

Co-authored-by: Kevin <kirspkt@gmail.com>

Author: Kinsey Moore 2024-11-22T04:36:26.512Z

assigned to @opticron

Author: Chris Johns 2024-11-22T04:41:31.541Z

approved this merge request

Author: Frank Kuehndel 2024-11-22T17:26:39.676Z

mentioned in issue #57

3.1.2.15 83 - Change theme to sphinx-book-theme

Id	83
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-22T00:13:12.540Z
Assignee(s)	Amar Takhar
Created	2024-11-14T22:46:20.876Z
Updated	2024-11-22T00:13:14.324Z
Milestone	6.1
Labels	doc::sphinx
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/83
Commit	9e9c54735c94300a48f5f7c71a0dfa4d2b8e77ec

Summary

Change theme to sphinx-book-theme

Sphinx booktheme is a more modern theme based off of of the PyData theme for science.

It is cleaner and more suitable for the RTEMS documentation. Works very well for mobile and is easier to navigate for large, complex documents.

This also includes the refreshed logo and favicon

Some other cleanups to conf.py to make it easier to manage.

Author: Amar Takhar 2024-11-14T22:46:21.054Z

assigned to @amar

Author: Kinsey Moore 2024-11-20T15:30:01.748Z

added 7 commits

- 1cf85467...06dadefd - 3 commits from branch `rtems/docs:main`
- 96d6bf6a - Change theme to sphinx-book-theme
- 384c4f17 - Remove right sidebar for singlehtml.
- 8a0bf2bc - Add version text beneath logo.
- 5b5ef862 - Support version dropdown.

Compare with previous version

Author: Kinsey Moore 2024-11-22T00:12:51.796Z

added 5 commits

- d17d6257 - 1 commit from branch `rtems/docs:main`
- 3d978ed8 - Change theme to sphinx-book-theme
- 2f93e9d1 - Remove right sidebar for singlehtml.
- 6278967c - Add version text beneath logo.
- 9e9c5473 - Support version dropdown.

Compare with previous version

Author: Kinsey Moore 2024-11-22T00:13:05.425Z

approved this merge request

3.1.2.16 88 - user: refactor migration to add release highlights

Id	88
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-21T23:44:12.108Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Chris Johns
Created	2024-11-20T21:53:24.084Z
Updated	2024-11-21T23:44:15.213Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/88
Commit	d17d6257f351adfd843d033a426e3751ece4c0f6

Summary

user: refactor migration to add release highlights

Closes #48.

Also replace specific advice about API changes to point users to read the release notes.

Author: Gedare Bloom 2024-11-20T21:53:24.343Z

assigned to @gedare

Author: Gedare Bloom 2024-11-20T21:55:53.168Z

requested review from @gedare

Author: Gedare Bloom 2024-11-20T21:56:07.697Z

requested review from @chris and removed review request for @gedare

Author: Chris Johns 2024-11-21T23:43:52.237Z

approved this merge request

3.1.2.17 86 - README: Clarify waf invocation in Building

Id	86
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-20T15:05:15.344Z
Assignee(s)	Gedare Bloom
Created	2024-11-18T20:48:57.161Z
Updated	2024-11-20T15:05:18.295Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/86
Commit	06dadefd69d89589015867ca4208464927d44b5b

Summary

README: Clarify waf invocation in Building

Updates #54.

Author: Gedare Bloom 2024-11-18T20:48:57.371Z

assigned to @gedare

Author: Kinsey Moore	2024-11-20T15:05:02.462Z

approved this merge request

3.1.2.18 84 - user: mention GitLab in migration/v5-to-v6

Id	84
State	merged
Merged by	Chris Johns
Merged at	2024-11-17T22:13:29.643Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Chris Johns
Created	2024-11-17T20:45:52.120Z
Updated	2024-11-17T22:13:33.306Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/84
Commit	89f9764047b1729ef235cb9a5cea7d7753a8a54e

Summary

user: mention GitLab in migration/v5-to-v6

Fixes #11.

Also adds a shorthand to generate links for Discord.

Author: Chris Johns	2024-11-17T22:10:42.958Z

assigned to @gedare

Author: Chris Johns	2024-11-17T22:11:11.488Z

requested review from @chris

Author: Chris Johns	2024-11-17T22:13:23.156Z

approved this merge request

3.1.2.19 80 - user: Update Tracing - Event Recording

Id	80
State	merged
Merged by	Chris Johns
Merged at	2024-11-15T00:44:13.208Z
Assignee(s)	Sebastian Huber, Amar Takhar
Created	2024-11-12T23:38:37.949Z
Updated	2024-11-15T00:44:16.132Z
Milestone	6.1
Labels	tool
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/80
Commit	6d100a7334c9d665dec4343b239b1ae9e925574b

Summary

Author: Sebastian Huber 2024-11-12T23:38:38.043Z

assigned to @sebhub

Author: Chris Johns 2024-11-12T23:40:24.156Z

Great looking images. This is impressive.

How do they look in a PDF because they are large and detailed images?

Author: Sebastian Huber 2024-11-12T23:48:18.559Z

added 1 commit

- 6a417a29 - user: Update Tracing - Event Recording

Compare with previous version

Author: Sebastian Huber 2024-11-13T00:16:08.957Z

It is all right on a monitor, I haven't printed it out.

Author: Chris Johns 2024-11-13T00:16:08.957Z

Yeah they are great and the scale of what is happen is fantastic. I am not sure you can reduce it and maintain the "wow" factor so if we can have a look and decide it would help :smile:

Author: Sebastian Huber 2024-11-13T00:16:08.957Z

I am not sure what you mean. The images are scaled down automatically according to the width option.

Author: Sebastian Huber 2024-11-13T00:16:08.957Z

user.pdf

Author: Chris Johns 2024-11-13T00:16:08.957Z

Looks great. Thanks.

Author: Chris Johns 2024-11-13T00:16:08.975Z

resolved all threads

Author: Chris Johns 2024-11-14T23:36:33.945Z

Is this for all tasks in a system all the time?

Author: Sebastian Huber 2024-11-13T00:45:51.648Z

changed this line in version 3 of the diff

Author: Sebastian Huber 2024-11-13T00:45:52.287Z

changed this line in version 3 of the diff

Author: Chris Johns 2024-11-13T00:55:51.680Z

Also:

> When the application on the target system terminates, the latest...

Author: Chris Johns 2024-11-14T23:36:30.543Z

Are the events transfered using TCP, the console or both?

Author: Chris Johns 2024-11-14T23:36:26.942Z

Should you mention the tool is built and installed when the RSB builds your tool chain?

Author: Chris Johns 2024-11-13T00:48:40.608Z

CTF explained?

Author: Sebastian Huber 2024-11-13T00:48:40.608Z

I moved a block from the analysis to the transfer section.

Author: Sebastian Huber 2024-11-13T00:45:54.030Z

added 1 commit

- d089c7c6 - user: Update Tracing - Event Recording

Compare with previous version

Author: Sebastian Huber 2024-11-13T00:47:25.091Z

I rearranged it a bit:

user.pdf

Author: Sebastian Huber 2024-11-13T00:52:38.657Z

added 1 commit

- e5165c27 - user: Update Tracing - Event Recording

Compare with previous version

Author: Sebastian Huber 2024-11-14T00:46:58.615Z

added 3 commits

- e5165c27...9e8141cb - 2 commits from branch `rtems/docs:main`
- 6d100a73 - user: Update Tracing - Event Recording

Compare with previous version

Author: Sebastian Huber 2024-11-14T23:36:33.964Z

resolved all threads

Author: Kinsey Moore 2024-11-15T00:21:54.051Z

assigned to @amar

Author: Chris Johns 2024-11-15T00:44:04.920Z

approved this merge request

3.1.2.20 82 - user/zynqmp: Reword for BSP renaming

Id	82
State	merged
Merged by	Gedare Bloom
Merged at	2024-11-13T22:40:55.356Z
Assignee(s)	Kinsey Moore
Created	2024-11-13T21:59:51.263Z
Updated	2024-11-13T22:40:57.685Z
Milestone	6.1
Labels	arch:aarch64, doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/82
Commit	9e8141cb5ec9d1244ecb1e5f0fdb73fc6f02ce51

Summary

Author: Kinsey Moore 2024-11-13T21:59:51.442Z

assigned to @opticron

Author: Gedare Bloom 2024-11-13T22:40:50.900Z

approved this merge request

3.1.2.21 76 - Add website icons.

Id	76
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-10T21:51:43.357Z
Assignee(s)	Amar Takhar
Created	2024-11-09T03:31:18.522Z
Updated	2024-11-10T21:51:44.844Z
Milestone	6.1
Labels	website
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/76
Commit	8974f46a9c9544b08e26a46c9b9d5d5e0144f575

Summary

Author: Amar Takhar 2024-11-09T03:31:18.684Z

assigned to @amar

Author: Kinsey Moore 2024-11-10T21:51:14.521Z

added 8 commits

- 2c807fe6...ddf5919f - 6 commits from branch `rtems/docs:main`
- 073dd1e2 - Add website icons.
- 8974f46a - Fix directory name png -> icons

Compare with previous version

Author: Kinsey Moore 2024-11-10T21:51:35.233Z

approved this merge request

3.1.2.22 74 - shell: Added flashdev documentation

Id	74
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-10T21:44:48.676Z
Assignee(s)	Aaron Nyholm
Created	2024-11-08T03:22:47.340Z
Updated	2024-11-10T21:44:51.772Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/74
Commit	ddf5919fbcd07cb1d22fc2062077e997fc84ec87

Summary

shell: Added flashdev documentation

Closes #50

Author: Chris Johns 2024-11-08T03:23:37.549Z

assigned to @eagleirony

Author: Kinsey Moore 2024-11-10T21:40:53.140Z

added 9 commits

- f463a77b...fdf76518 - 8 commits from branch `rtems/docs:main`
- ddf5919f - shell: Added flashdev documentation

Compare with previous version

Author: Kinsey Moore 2024-11-10T21:44:44.055Z

approved this merge request

3.1.2.23 45 - Add BeagleV-Fire Board Documentation

Id	45
State	merged
Merged by	Gedare Bloom
Merged at	2024-11-09T21:46:17.575Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Joel Sherrill
Created	2024-08-27T20:32:48.503Z
Updated	2024-11-09T21:46:17.562Z
Milestone	6.1
Labels	arch:riscv, doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/45
Commit	bc9870e7002ece12690629b65f04257c780b7193

This merge request adds documentation for the BeagleV-Fire board. The new content provides detailed steps for setting up and configuring the BeagleV-Fire board with RTEMS, including: * Introduction to BeagleV-Fire Board * Information on the existing base BSP and support for the riscv/beaglevfire BSP variant * Explained config.ini file for building the riscv/beaglevfire BSP variant. * Explanation of both uni-processing and multi-processing modes. * Step-by-step commands for configuring and building RTEMS for BeagleV-Fire * Instructions on how to convert .exe files to .elf and generate payloads using the HSS payload generator. * Steps for setting up UART communication from the host PC. * Instructions for transferring the payload binary to the BeagleV-Fire board via the eMMC/SD card. * Commands and expected output to validate the successful loading and execution of the payload.

Author: Joel Sherrill 2024-11-09T21:43:51.357Z

This still sounds like a final report. The Base BSP has since been enhanced to include X, Y, and Z. We shouldn't need the github reference since it should all be in gitlab.rtems.org. And make sure that it all is. :)

Author: Purva Yeshi 2024-11-09T21:43:51.357Z

Got it. I'll update the documentation to reflect that the BSP is already in place, and I'll remove the BSP links.

Author: Gedare Bloom 2024-11-09T21:43:13.240Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-11-09T21:43:41.961Z

Some lines look well over 80 columns. Make a pass.

Author: Purva Yeshi 2024-11-09T21:43:41.961Z

Okay, I'll adjust the lines to be within 80 characters.

Author: Gedare Bloom 2024-11-09T21:43:14.115Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-11-09T21:43:36.991Z

Why wouldn't SMP be supported. I suspect it is just not required.

Author: Purva Yeshi 2024-11-09T21:43:36.991Z

Understood. Should I remove the SMP use cases from the documentation, or would you prefer I modify them to clarify that SMP is supported but just not required in this scenario?

Author: Joel Sherrill 2024-11-09T21:43:36.991Z

I think I would be prone to leave it alone and delete the sentence "This mode is suitable for . . . "

Author: Purva Yeshi 2024-11-09T21:43:36.991Z

Alright.

Author: Gedare Bloom 2024-11-09T21:43:15.059Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-11-09T21:43:30.070Z

This isn't needed. It is generic across all BSPs. No need to repeat.

Author: Purva Yeshi 2024-11-09T21:43:30.070Z

Okay sure.

Author: Gedare Bloom 2024-11-09T21:43:16.028Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-11-09T21:43:24.573Z

I thought the exe file was an elf file. Please confirm whether this step is needed or not.

Author: Purva Yeshi 2024-11-09T21:43:24.573Z

Yes, that step is needed for HSS. HSS requires a .bin file, and there is a command in HSS that converts an .elf file into a .bin file using the hss-payload-generator. So, we need to convert the .exe file into an .elf file first.

Author: Gedare Bloom 2024-11-09T21:43:24.573Z

this is just copying it directly, might as well do `mv hello.exe hello.elf`

Author: Gedare Bloom 2024-11-09T21:43:16.830Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-11-09T21:32:32.485Z

This ultimately needs to be an RSB generated executable package. Resolve this by filing an issue in the rtems-source-builder project and citing it in the reply. Make sure that issue says to update this text when the RSB supports HSS.

Author: Purva Yeshi 2024-11-09T21:32:32.485Z

I've created an issue on the RTEMS Source Builder project to request the addition of support for HSS payload generation. You can view the issue here

Author: Gedare Bloom 2024-11-09T21:43:17.484Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-11-09T21:44:17.698Z

Add introductory paragraph with something like the output should be similar to the following:”

Author: Purva Yeshi 2024-11-09T21:44:17.698Z

Got it, I’ll add an introductory paragraph to explain that the output should look similar to what follows.

Author: Chris Johns 2024-10-24T23:36:19.584Z

requested review from @joel

Author: Joel Sherrill 2024-10-25T14:00:35.178Z

@purva_yeshi Could you please address the comments against this merge request? It is close to being ready and we would like to include this in 6.1. Thanks.

Author: Gedare Bloom 2024-10-26T19:14:53.299Z

Author: Gedare Bloom 2024-11-09T21:44:22.837Z

This first requires `make` in that directory.

Author: Gedare Bloom 2024-11-09T21:44:27.972Z

This is with the Debug serial console. Note that the 6-pin connector is NOT compatible with 6-pin FTDI cables, it seems some of the `NC` are actually connected somewhere, and driving signals on them causes problems. Use a 3-pin/breakout of an FTDI with only GND, TX, and RX.

Author: Gedare Bloom 2024-11-09T21:43:19.599Z

changed this line in version 2 of the diff

Author: Gedare Bloom 2024-11-09T21:44:32.380Z

This will vary by host. Probably should refer to the BeagleV-Fire documentation. This is probably going to be `ttyUSB#` on Linux hosts.

Author: Gedare Bloom 2024-11-09T21:43:20.452Z

changed this line in version 2 of the diff

Author: Gedare Bloom 2024-11-09T21:44:38.398Z

Don't write this. Provide instructions for how to figure out which device it is.

Author: Gedare Bloom 2024-11-09T21:43:21.524Z

changed this line in version 2 of the diff

Author: Chris Johns 2024-11-08T00:30:58.392Z

assigned to @gedare

Author: Gedare Bloom 2024-11-09T21:43:22.058Z

added 38 commits

- 6e1467d1...7701ba65 - 35 commits from branch `rtems/docs:main`
- f7e32458 - Add build process for BeagleV-Fire
- 5ea41a6f - riscv: update beaglevfire documentation
- bc9870e7 - riscv: fix nesting levels for polarfire, kendryte, beaglevfire

Compare with previous version

Author: Gedare Bloom 2024-11-09T21:44:38.416Z

resolved all threads

Author: Gedare Bloom 2024-11-09T21:46:05.352Z

approved this merge request

3.1.2.24 64 - user: Update for zynqmp renaming

Id	64
State	merged
Merged by	Chris Johns
Merged at	2024-10-31T23:13:33.231Z
Assignee(s)	Kinsey Moore
Created	2024-10-24T13:04:48.460Z
Updated	2024-10-31T23:13:34.581Z
Milestone	6.1
Labels	arch:aarch64, arch:arm
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/64
Commit	b03cb42e0be516691869183cedfaf43641a0d1d9

Summary

Author: Kinsey Moore 2024-10-24T13:04:48.985Z

assigned to @opticron

Author: Chris Johns 2024-10-31T23:03:08.224Z

approved this merge request

Author: Kinsey Moore 2024-10-31T23:06:46.705Z

added 37 commits

- 178d3cb4...a1ae88db - 36 commits from branch `rtems/docs:main`
- b03cb42e - user: Update for zynqmp renaming

Compare with previous version

Author: Kinsey Moore 2024-10-31T23:07:00.252Z

reset approvals from @chris by pushing to the branch

Author: Chris Johns 2024-10-31T23:13:28.533Z

approved this merge request

3.1.2.25 69 - versal: Update BSP names for changes in RTEMS

Id	69
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-31T23:02:57.884Z
Assignee(s)	Kinsey Moore
Created	2024-10-25T19:57:35.032Z
Updated	2024-10-31T23:02:59.066Z
Milestone	6.1
Labels	arch:aarch64, doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/69
Commit	a1ae88dbb62ca78159d6d9added505d6ee061024

Summary

Author: Kinsey Moore 2024-10-25T19:57:35.448Z

assigned to @opticron

Author: Chris Johns 2024-10-31T23:01:45.200Z

approved this merge request

Author: Kinsey Moore 2024-10-31T23:02:16.636Z

added 5 commits

- d8e799e5...bebbeae9 - 4 commits from branch `rtems/docs:main`
- a7ddb915 - versal: Update BSP names for changes in RTEMS

Compare with previous version

Author: Kinsey Moore 2024-10-31T23:02:49.439Z

added 2 commits

- 88817842 - 1 commit from branch `rtems/docs:main`
- a1ae88db - versal: Update BSP names for changes in RTEMS

Compare with previous version

3.1.2.26 70 - Add icons used for GitLab

Id	70
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-31T23:02:31.360Z
Assignee(s)	Amar Takhar
Created	2024-10-27T20:41:00.027Z
Updated	2024-10-31T23:02:33.752Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/70
Commit	88817842212890a242a308b373c3a1fd001778f8

Summary

Add icons used for GitLab

These will eventually be used elsewhere as well.

Author: Amar Takhar 2024-10-27T20:41:00.186Z

assigned to @amar

Author: Chris Johns 2024-10-31T23:00:33.415Z

approved this merge request

Author: Kinsey Moore 2024-10-31T23:02:08.416Z

added 5 commits

- fce2fc70...bebbeae9 - 4 commits from branch `rtems/docs:main`
- 88817842 - Add icons used for GitLab

Compare with previous version

3.1.2.27 73 - user/start: fix instructions for running rtems-test and use replaceables

Id	73
State	merged
Merged by	Chris Johns
Merged at	2024-10-29T23:32:16.097Z
Created	2024-10-29T23:14:45.545Z
Updated	2024-10-31T22:53:48.384Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/73
Commit	bebbeae9cdbabb7479ee8a3116d3e817ab22dc53

Summary

Author: Gedare Bloom 2024-10-29T23:15:41.126Z

added 1 commit

- 81cdc84c - user/start: fix instructions for running rtems-test and use replaceables

Compare with previous version

Author: Chris Johns 2024-10-29T23:31:51.699Z

Why do you need to add the `--rtems-tools` path? The `rtems-test` command should search under its install prefix and if built with all the tools it should be OK?

Author: Gedare Bloom 2024-10-29T23:25:38.304Z

changed this line in version 3 of the diff

Author: Gedare Bloom 2024-10-29T23:31:51.699Z

Yes, you're right. I was running in a checked-out repo `./rtems-test` and that needs the path. I reverted this part.

Author: Chris Johns 2024-10-29T23:31:51.699Z

Yes you need the `--rtems-tools` option in that case but that is a developers option and not what the user normally sees.

Author: Gedare Bloom 2024-10-29T23:25:38.526Z

added 1 commit

- bebbeae9 - user/start: use replaceables in bsp-test

Compare with previous version

Author: Chris Johns 2024-10-29T23:31:51.716Z

resolved all threads

Author: Chris Johns 2024-10-29T23:32:09.206Z

approved this merge request

Author: Amar Takhar 2024-10-31T22:53:48.200Z

mentioned in issue rtems/rtos/rtems#4695

3.1.2.28 72 - user: migrate content and remove installation section

Id	72
State	merged
Merged by	Amar Takhar
Merged at	2024-10-29T22:44:12.369Z
Created	2024-10-29T22:37:07.135Z
Updated	2024-10-30T03:45:16.451Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/72
Commit	4b0ed80eb32247eeef16d1cb0d6d141680e64ae6

Summary

The installation section is outdated and redundant with the quick start. Move some of the content to other places (mostly in the quick start) and delete the section.

Author: Amar Takhar 2024-10-29T22:44:07.812Z

Is this missing a closes/updates #43 in the commit message?

Author: Gedare Bloom 2024-10-29T22:44:07.812Z

added

Author: Amar Takhar 2024-10-29T22:44:07.812Z

Thanks!

Author: Gedare Bloom 2024-10-29T22:41:44.323Z

added 1 commit

- 4b0ed80e - user/installation: remove

Compare with previous version

Author: Amar Takhar 2024-10-29T22:43:53.675Z

approved this merge request

Author: Amar Takhar 2024-10-29T22:44:07.830Z

resolved all threads

Author: Amar Takhar 2024-10-30T03:45:16.261Z

mentioned in issue #42

3.1.2.29 68 - Use replaceables in shell examples.

Id	68
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-25T12:38:32.386Z
Assignee(s)	Amar Takhar
Reviewer(s)	Chris Johns
Created	2024-10-25T07:10:58.130Z
Updated	2024-10-25T12:38:35.758Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/68
Commit	a3cfaea265cb6b5af8f0eb6cb5f4ace32873ecf3

Summary

Use replaceables in shell examples.

Closes rtems/rtos/rtems#4648

Author: Amar Takhar 2024-10-25T07:10:58.494Z

requested review from @chris

Author: Amar Takhar 2024-10-25T07:10:58.522Z

assigned to @amar

Author: Amar Takhar 2024-10-25T07:13:09.695Z

mentioned in issue #41

Author: Kinsey Moore 2024-10-25T12:38:11.624Z

approved this merge request

Author: Kinsey Moore 2024-10-25T12:38:18.602Z

added 3 commits

- ea559f44...6b50a596 - 2 commits from branch `rtems/docs:main`
- a3cfaea2 - Use replaceables in shell examples.

Compare with previous version

3.1.2.30 67 - Migrate deprecating interfaces from wiki to user manual.

Id	67
State	merged
Merged by	Chris Johns
Merged at	2024-10-25T05:48:13.438Z
Assignee(s)	Amar Takhar
Reviewer(s)	Chris Johns
Created	2024-10-25T05:32:33.487Z
Updated	2024-10-25T05:48:17.511Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/67
Commit	6b50a596f7d0ef00c9bd979c15dc586ac2024895

Summary

Migrate deprecating interfaces from wiki to user manual.

Closes #24

Author: Amar Takhar 2024-10-25T05:32:33.788Z

requested review from @chris

Author: Amar Takhar 2024-10-25T05:32:33.807Z

assigned to @amar

Author: Chris Johns 2024-10-25T05:47:39.723Z

approved this merge request

3.1.2.31 66 - Update from IRC to Discord

Id	66
State	merged
Merged by	Chris Johns
Merged at	2024-10-25T03:27:02.211Z
Assignee(s)	Amar Takhar
Reviewer(s)	Chris Johns
Created	2024-10-25T03:21:49.284Z
Updated	2024-10-25T03:27:05.685Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/66
Commit	f25589deb0d7c248f5cda8b1ba50eda9452d360c

Summary

Update from IRC to Discord

Closes #39

Author: Amar Takhar 2024-10-25T03:24:37.746Z

requested review from @chris

Author: Amar Takhar 2024-10-25T03:24:38.996Z

assigned to @amar

Author: Chris Johns 2024-10-25T03:26:52.677Z

approved this merge request

3.1.2.32 61 - Add new logo SVGs

Id	61
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-24T23:42:39.153Z
Assignee(s)	Amar Takhar
Created	2024-10-22T19:25:58.223Z
Updated	2024-10-24T23:42:42.198Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/61
Commit	2cafea3f43db17f7f0355078449acd77527e2dd3

Summary

This also includes an SVG + script for the new favicon

Author: Amar Takhar 2024-10-22T19:25:58.459Z

assigned to @amar

Author: Amar Takhar 2024-10-23T01:17:36.309Z

added 1 commit

- 7499dcfc - Add new favicon SVG

Compare with previous version

Author: Amar Takhar 2024-10-23T01:21:08.394Z

added 2 commits

- fad717b6 - Add new logo SVGs
- 943eaaa8 - Add new favicon SVG

Compare with previous version

Author: Amar Takhar 2024-10-23T01:21:27.732Z

changed title from **Add {-missing reference to user doc-}s** to **Add {+new logo SVG+}s**

Author: Amar Takhar 2024-10-23T01:21:27.757Z

changed the description

Author: Amar Takhar 2024-10-23T01:24:01.650Z

added 1 commit

- 4dd8f0c4 - Add new favicon SVG

Compare with previous version

Author: Christian Mauderer 2024-10-23T06:42:27.990Z

For the non inkscape versions: Would it make sense to convert the text to a path? Otherwise, the logo will only be displayed correctly if the font `Helvetica Black, Heavy` is installed. The German ubuntuusers wiki lists the Helvetica family as non-free font and therefore Ubuntu seems to not provide that font by default.

Author: Amar Takhar 2024-10-23T06:42:27.990Z

Good catch! It was supposed to be and it looks like I forgot to do that.

The font is historical which is why we stuck with it. I will fix this

Author: Amar Takhar 2024-10-23T06:42:27.990Z

This is done.

Author: Christian Mauderer 2024-10-23T06:43:34.439Z

Great. Thanks.

Author: Amar Takhar 2024-10-23T06:42:22.274Z

added 2 commits

- d867426c - Add new logo SVGs
- 75bd2ac2 - Add new favicon SVG

Compare with previous version

Author: Amar Takhar 2024-10-23T06:42:28.017Z

resolved all threads

Author: Amar Takhar 2024-10-24T08:05:50.560Z

added 1 commit

- 65e25c5b - Add new favicon SVG.

Compare with previous version

Author: Amar Takhar 2024-10-24T23:42:01.302Z

FYI binaries will be coming with the new theme refresh.

Author: Kinsey Moore 2024-10-24T23:42:17.297Z

added 9 commits

- 65e25c5b...411d6b43 - 7 commits from branch `rtems/docs:main`
- 226c1216 - Add new logo SVGs
- 2cafea3f - Add new favicon SVG.

Compare with previous version

Author: Kinsey Moore 2024-10-24T23:42:27.710Z

approved this merge request

3.1.2.33 52 - user: Document ZynqMP RPU BSP variants

Id	52
State	merged
Merged by	Chris Johns
Merged at	2024-10-24T23:35:43.842Z
Assignee(s)	Sebastian Huber
Created	2024-10-07T01:50:06.050Z
Updated	2024-10-24T23:35:47.172Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/52
Commit	411d6b435c0429854896697f7ab858f16207cc5c

Summary

Author: Sebastian Huber 2024-10-07T01:50:06.626Z

assigned to @sebhub

Author: Sebastian Huber 2024-10-07T01:50:16.890Z

restored source branch `document-arm-zynqmp-rpu-bsp`

Author: Chris Johns 2024-10-07T06:32:39.329Z

Looks good. Would it be possible to include a small paragraph about the memory map and how the users create a suitable hole in the APU address map to accommodate the R5 cores?

Author: Kinsey Moore 2024-10-24T23:25:11.836Z

approved this merge request

Author: Kinsey Moore 2024-10-24T23:25:41.608Z

added 12 commits

- a05b51ca...f2a2431c - 11 commits from branch `rtems/docs:main`
- deb79a2a - user: Document ZynqMP RPU BSP variants

Compare with previous version

Author: Chris Johns 2024-10-24T23:35:28.893Z

added 3 commits

- deb79a2a...e44cb50d - 2 commits from branch `rtems/docs:main`
- 411d6b43 - user: Document ZynqMP RPU BSP variants

Compare with previous version

3.1.2.34 59 - Add missing reference to user docs

Id	59
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-24T23:27:54.872Z
Assignee(s)	Amar Takhar
Created	2024-10-22T18:56:32.887Z
Updated	2024-10-24T23:27:56.792Z
Milestone	6.1
Labels	doc::sphinx
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/59
Commit	2858a72bdd6ab669a47d4cd43ac5775613cd5047

Summary

Add missing reference to user docs

Also make it more clear where missing references need to be fixed.

Author: Amar Takhar 2024-10-22T18:56:33.132Z

assigned to @amar

Author: Kinsey Moore 2024-10-24T23:27:15.839Z

approved this merge request

Author: Kinsey Moore 2024-10-24T23:27:31.468Z

added 5 commits

- 432c8e73...f2a2431c - 4 commits from branch `rtems/docs:main`
- 2858a72b - Add missing reference to user docs

Compare with previous version

3.1.2.35 60 - Update waf to 2.1.2 to match RTEMS

Id	60
State	merged
Merged by	Chris Johns
Merged at	2024-10-24T23:24:41.915Z
Assignee(s)	Amar Takhar
Reviewer(s)	Chris Johns
Created	2024-10-22T18:58:26.284Z
Updated	2024-10-24T23:24:43.893Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/60
Commit	f2a2431cc18a4ec96a19294b672bfe0418f58c01

Summary

This also brings us to Python 3.

Author: Amar Takhar 2024-10-22T18:58:26.618Z

assigned to @amar

Author: Amar Takhar 2024-10-23T01:19:45.172Z

changed title from **{-Add missing reference to user docs-}** to **{+Update waf to 2.1.2 to match RTEMS+}**

Author: Amar Takhar 2024-10-23T01:19:45.217Z

changed the description

Author: Amar Takhar 2024-10-23T01:20:26.893Z

added 1 commit

- a0e6f689 - Update waf to 2.1.2 to match RTEMS

Compare with previous version

Author: Chris Johns 2024-10-24T23:24:03.745Z

requested review from @chris

Author: Chris Johns 2024-10-24T23:24:10.662Z

added 4 commits

- a0e6f689...459e9428 - 3 commits from branch `rtems/docs:main`
- f2a2431c - Update waf to 2.1.2 to match RTEMS

Compare with previous version

Author: Chris Johns 2024-10-24T23:24:34.773Z

approved this merge request

3.1.2.36 62 - eng: Update the release procedure

Id	62
State	merged
Merged by	Joel Sherrill
Merged at	2024-10-24T22:41:00.624Z
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar, Gedare Bloom, Joel Sherrill
Created	2024-10-22T23:34:43.582Z
Updated	2024-10-24T22:41:03.485Z
Milestone	6.1
Labels	doc::software-engineering
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/62
Commit	459e942893f9c652b279240da00a1c81ff49b2a4

Update the release procedure.

Updates rtems/rtos/rtems#5037

Author: Chris Johns 2024-10-22T23:34:43.837Z

assigned to @chris

Author: Amar Takhar 2024-10-22T23:51:22.472Z

requested review from @amar, @joel, and @gedare

Author: Amar Takhar 2024-10-22T23:59:42.569Z

Looks great to me. Just a note pushing to repositories is disabled and we can add tags / branches online which is restricted to the maintainer level and above. It's great for now so we can preserve what needs to be done when CI is up and running there will be a lot more involvement in setting up tags and branches.

Author: Amar Takhar 2024-10-22T23:56:24.460Z

Also thanks for adding `-modified` that's really handy to have.

Author: Joel Sherrill 2024-10-24T05:37:44.184Z

Spelling.

Author: Chris Johns 2024-10-24T05:42:55.103Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-10-24T05:37:25.208Z

Checksum – one word

Author: Chris Johns 2024-10-24T05:42:56.255Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-10-24T05:37:03.095Z

coverpage should be two words.

Author: Chris Johns 2024-10-24T05:42:57.620Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-10-24T05:35:25.974Z

means to rationale?

Author: Chris Johns 2024-10-24T05:35:25.974Z

Changed to:

> The release numbering scheme changed with RTEMS 5. The project moved to two release numbers from the traditional three numbers. The major number was not being used and there was no easy clear process we could use to decide when to increment it. The major number role was deprecated and the numbers moved one to the left.

Author: Chris Johns 2024-10-24T05:43:00.149Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-10-24T05:32:05.862Z

can

Author: Chris Johns 2024-10-24T05:43:02.214Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-10-24T05:31:20.744Z

What is a “valid version controlled repository”?

Author: Chris Johns 2024-10-24T05:31:20.744Z

I valid version controlled repository is one where the commands and tools used to access a repository can access it and report its status. The language is attempting to be non-specific as well as handling implementation issues like a users `git` commands are stuffed and do not work. In that case the release label is the default (`not-released`).

Author: Joel Sherrill 2024-10-24T05:27:04.219Z

This doesn’t account for vendor specific versioning past the RTEMS source baseline.

Author: Gedare Bloom 2024-10-24T05:27:04.219Z

I think it allows it, as I think the label may include further . within it?

Author: Chris Johns 2024-10-24T05:27:04.219Z

Yes a release label is a string and could be `joel-3.4.5.beta` creating a version string of `6.1.0-joel-3.4.5.beta` and for `rtems.git` it would be `6.1.0.joel-3.4.5.beta`.

Author: Joel Sherrill 2024-10-24T05:25:00.504Z

required instead of require?

Author: Chris Johns 2024-10-24T05:43:11.422Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-10-24T05:24:33.469Z

deployment?

Author: Chris Johns 2024-10-24T05:43:13.253Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-10-24T05:24:03.002Z

or, ?

Author: Chris Johns 2024-10-24T05:43:14.862Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-10-24T05:13:52.679Z

functionally if spelled wrong but I think it should probably be functional.

Author: Chris Johns 2024-10-24T05:43:18.629Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-10-24T05:13:17.939Z

Is there a difference between index.txt and README.txt? The descriptions look quite similar.

Author: Chris Johns 2024-10-24T05:13:17.939Z

They are generated from a single markdown file. If you drop into the directory on ftp.rtems.org you get the web page and if you `wget` the release for an offline site you can see the same data as text.

Author: Joel Sherrill 2024-10-24T04:59:36.631Z

What about net services and lwip? Is this intended to be a complete list?

Update: Probably is a complete list. Just confused by diff. Mark resolved if the list is complete.

Author: Chris Johns 2024-10-24T05:24:27.614Z

The list is:

- `rtems.git`
- `rtems-deployment.git`
- `rtems-docs.git`
- `rtems-examples.git`
- `rtems-libbsd.git`
- `rtems-lwip.git`
- `rtems-net-legacy.git`
- `rtems-net-services.git`
- `rtems-release.git`
- `rtems-source-builder.git`
- `rtems-tools.git`
- `rtems_waf.git`

Author: Joel Sherrill 2024-10-24T04:56:52.855Z

The the

Author: Chris Johns 2024-10-24T04:56:52.855Z

English band from the ’80s?

Author: Joel Sherrill 2024-10-24T04:55:11.071Z

Are there specific permissions and owners on the files and directories that should be checked?

Author: Chris Johns 2024-10-24T04:55:11.071Z

Yes. There is a separation of the administrator related functions and the release process and the responsibilities of the release manager. The admin side is a work in progress and I can fill both roles but we need to move to a more formal approach.

The perms are set so only @amar and I myself have access. I have done this to minimize possible mistakes as `dispatch@` access lets the user see the ftp files and to enforce once a release is public no one can touch the released file tree.

Author: Joel Sherrill 2024-10-24T04:50:09.324Z

“an in” is missing a word.

Author: Joel Sherrill 2024-10-24T04:49:38.867Z

If you install, is this included? Something similar? Can you tell the version of an installed BSP build?

Author: Chris Johns 2024-10-24T04:49:38.867Z

Thanks, I have added some mode about this.

The version detail in the `VERISON` file is parsed and then embedded into the tool or package being built. In `rtems.git` it is a header file that is installed plus the version string is compiled into an object file. The `rtems all` command prints all known version details. The tests also print this detail with each test so a capture of the test output lets you know the release the test output is from.

In the RSB the `VERSION` data is added to the GCC version string and you can see that by invoking `gcc` with the `--version` option. For example:

```
aarch64-rtems6-gcc (GCC) 13.3.0 20240521 (RTEMS 6, RSB␣
↪8fc070bc4a6b4382e4fefbe5872aebb009f976e9, Newlib 1b3dcfd)
```

This procedure deals with releases where the git hash is replaced by the release string. A vendor making an RTEMS package for users is encouraged to embed something about themselves using the release label.

Author: Joel Sherrill 2024-10-23T17:48:04.041Z

Most of these are minor. Feel free to mark comments as resolved if the solution is obvious.

Author: Gedare Bloom 2024-10-24T04:39:32.140Z

typo: number

Author: Gedare Bloom 2024-10-24T04:38:56.370Z

This sentence seems wrong as the number should increment with each release made on that branch.

Author: Chris Johns 2024-10-24T04:38:56.370Z

I have updated the sentence so I hope it is better.

Author: Gedare Bloom 2024-10-24T04:36:49.798Z

s/need/needed

Author: Gedare Bloom 2024-10-24T04:33:27.022Z

This line implies that a `.` is not allowed within the release label.

Author: Chris Johns 2024-10-24T04:33:27.022Z

Yes it does. Thanks and fixed.

Author: Chris Johns 2024-10-24T05:37:44.228Z

resolved all threads

Author: Chris Johns 2024-10-24T05:43:56.355Z

added 3 commits

- e6deaaed...41af37d1 - 2 commits from branch `rtems/docs:main`
- 459e9428 - eng: Update the release procedure

Compare with previous version

Author: Joel Sherrill 2024-10-24T22:40:47.044Z

approved this merge request

3.1.2.37 56 - Update cpu_usage_statistics.rst: insert missing fullstop; delete remnants of a...

Id	56
State	merged
Merged by	Amar Takhar
Merged at	2024-10-14T21:52:13.466Z
Created	2024-10-14T12:32:47.380Z
Updated	2024-10-14T21:52:24.668Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/56
Commit	a2c1eb5392a96c9eca2fb07ab87b245d6917783e

Summary

Update cpu_usage_statistics.rst: insert missing fullstop; delete remnants of a reformulated sentence.

Author: Amar Takhar 2024-10-14T21:52:04.401Z

approved this merge request

Author: Amar Takhar 2024-10-14T21:52:21.717Z

Good catch! Thank you for the submission!

3.1.2.38 11 - Resolve “Manuals refer to git.rtems.org”

Id	11
State	merged
Merged by	Amar Takhar
Merged at	2024-05-18T04:03:52.155Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Chris Johns
Created	2024-05-16T19:12:25.274Z
Updated	2024-10-07T20:16:48.772Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/11
Commit	62ef5d66e47a1757e858d3384cf428f9dce8269c

Summary

Rewrites most of the links to point to gitlab. A few are still remaining that should be cleaned up later.

Closes #10

Author: Gedare Bloom 2024-05-16T19:12:25.396Z

requested review from @chris

Author: Gedare Bloom 2024-05-16T19:12:25.415Z

assigned to @gedare

Author: Gedare Bloom 2024-05-16T19:13:30.061Z

added 12 commits

- 07c13c07...9134a174 - 4 commits from branch `rtems/docs:main`
- 401bec9e - user/start: fix git.rtems.org links
- 59bbe982 - user/installation/developer: fix links to git.rtems.org
- 0a79c27b - user/deployment/index.rst: fix links to git.rtems.org
- 2e25946d - user/bld/index.rst: fix links to git.rtems.org
- 9d303608 - user/tracing/tracelinker.rst: fix links to git.rtems.org
- 16f871b2 - eng/release-process.rst: fix links to git.rtems.org
- 61343276 - filesystem/trivial_ftp.rst: fix link to git.rtems.org
- 1c7ae3d9 - legacy-networking/quick_start.rst: fix link to git.rtems.org

Compare with previous version

Author: Gedare Bloom 2024-05-17T14:37:21.309Z

added 8 commits

- 37144d24 - user/start: fix git.rtems.org links
- 00a8abee - user/installation/developer: fix links to git.rtems.org
- 2af863fd - user/deployment/index.rst: fix links to git.rtems.org
- 3b90b657 - user/bld/index.rst: fix links to git.rtems.org
- a6f9e3ea - user/tracing/tracelinker.rst: fix links to git.rtems.org
- d627eab2 - eng/release-process.rst: fix links to git.rtems.org
- b56b5d46 - filesystem/trivial_ftp.rst: fix link to git.rtems.org
- fb68c842 - legacy-networking/quick_start.rst: fix link to git.rtems.org

Compare with previous version

Author: Gedare Bloom 2024-05-17T14:38:43.410Z

added 1 commit

- 91a4d7ad - user/glossary: fix link to yaffs2

Compare with previous version

Author: Amar Takhar 2024-05-18T04:02:37.496Z

added 11 commits

- 91a4d7ad...335051ef - 2 commits from branch `rtems/docs:main`
- ddff023c - user/start: fix git.rtems.org links
- 62216d82 - user/installation/developer: fix links to git.rtems.org
- 14772d08 - user/deployment/index.rst: fix links to git.rtems.org
- 3a61ecf1 - user/bld/index.rst: fix links to git.rtems.org
- 179390e3 - user/tracing/tracelinker.rst: fix links to git.rtems.org
- 86c21d47 - eng/release-process.rst: fix links to git.rtems.org
- 70516131 - filesystem/trivial_ftp.rst: fix link to git.rtems.org
- 1f4d3a24 - legacy-networking/quick_start.rst: fix link to git.rtems.org
- 62ef5d66 - user/glossary: fix link to yaffs2

Compare with previous version

Author: Amar Takhar 2024-05-18T04:03:43.938Z

approved this merge request

Author: Amar Takhar 2024-05-18T04:04:24.519Z

dammit this went in as a merge commit argh!

Author: Amar Takhar 2024-05-18T04:05:25.882Z

oh, no it didn't, I was about to get really upset with myself.

Author: Gedare Bloom 2024-10-07T20:16:48.646Z

mentioned in issue #30

3.1.2.39 29 - user: Swap to https from ssh

Id	29
State	merged
Merged by	Amar Takhar
Merged at	2024-07-08T16:00:22.217Z
Assignee(s)	Kinsey Moore
Created	2024-07-08T15:56:46.442Z
Updated	2024-10-07T17:45:31.050Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/29
Commit	af7030d0f767e7578968487690ca926680b7698e

Summary

user: Swap to https from ssh

Users running through the getting started process won't be likely to have a GitLab account and so SSH access is out of reach for them. This changes all new-user-facing repository clones to HTTP to avoid issues in this process.

Author: Kinsey Moore 2024-07-08T15:56:46.594Z

assigned to @opticron

Author: Amar Takhar 2024-07-08T16:00:12.624Z

Adding @gedare so he is away it's been changed.

Author: Amar Takhar 2024-07-08T16:00:15.596Z

approved this merge request

Author: Amar Takhar 2024-10-07T17:45:30.911Z

mentioned in issue #12

3.1.2.40 47 - posix-compliance: Update API tracking csv to account for lio_listio

Id	47
State	merged
Merged by	Amar Takhar
Merged at	2024-09-18T16:47:46.321Z
Assignee(s)	Joel Sherrill
Created	2024-09-18T16:00:30.381Z
Updated	2024-09-18T16:47:48.943Z
Milestone	6.1
Labels	api::posix, doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/47
Commit	a76aab88d2f30b5f143d2a28b4b5bcf71d03c5ec

Summary

posix-compliance: Update API tracking csv to account for lio_listio

It was previously marked as returning ENOSYS. Thanks to a successful GSoC project, it is now implemented.

Updates rtems/programs/gsoc#29

Author: Joel Sherrill 2024-09-18T16:00:30.633Z

assigned to @joel

Author: Amar Takhar 2024-09-18T16:47:23.023Z

approved this merge request

Author: Amar Takhar 2024-09-18T16:47:35.181Z

added 23 commits

- 7bbdbe01...5ed7ab3d - 22 commits from branch `rtems/docs:main`
- a76aab88 - posix-compliance: Update API tracking csv to account for lio_listio

Compare with previous version

3.1.2.41 30 - Simplify system termination procedure

Id	30
State	merged
Merged by	Sebastian Huber
Merged at	2024-08-24T08:43:46.831Z
Assignee(s)	Sebastian Huber
Created	2024-07-17T17:05:33.307Z
Updated	2024-08-24T08:43:49.122Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/30
Commit	b48c84bc4906d74ae644f005ae485e108cdb006d

Summary

In the system termination procedure, everything after invoking the fatal extensions is essentially dead code. Simplify the procedure and provide a reasonable safe fall-back for badly configured applications. Just execute an idle loop with maskable interrupts disabled.

This removes the need for CPU ports to provide a fatal halt handler.

Update https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/5067

Author: Sebastian Huber 2024-07-17T17:05:33.404Z

assigned to @sebhub

Author: Sebastian Huber 2024-07-17T17:06:52.757Z

marked this merge request as **draft**

Author: Sebastian Huber 2024-07-18T08:59:16.070Z

marked this merge request as **ready**

Author: Sebastian Huber 2024-07-18T08:59:16.092Z

changed the description

Author: Amar Takhar 2024-07-23T02:31:25.303Z

changed the description

Author: Kinsey Moore 2024-07-25T22:16:06.069Z

added 5 commits

- 9df51f3a...f1cd233f - 4 commits from branch `rtems/docs:main`
- 46f4ca5b - Simplify system termination procedure

Compare with previous version

Author: Kinsey Moore 2024-08-14T20:55:11.644Z

“were” -> “are”

Author: Sebastian Huber 2024-08-14T20:55:11.644Z

Actually, right now in the code, the fatal extensions are invoked without explicitly disabling maskable interrupts. After a second look, I think this should be changed as well to:

```
void _Terminate(
Internal_errors_Source the_source,
Internal_errors_t      the_error
)
{
ISR_Level level;

_ISR_Local_disable( level );
(void) level;
_User_extensions_Fatal( the_source, the_error );

/*
* Everything after invoking the fatal extensions is essentially dead code.
* At least one fatal extension of the initial extension sets should not
* return and for example reset the system.  See section "System Termination
* Procedure" in the RTEMS Classic API Guide.
*
* The following code is only executed in badly configured applications.
*/
_CPU_Thread_Idle_body( 0 );
}
```

Author: Sebastian Huber 2024-08-08T02:06:41.781Z

changed this line in version 3 of the diff

Author: Kinsey Moore 2024-07-25T22:19:47.201Z

requested changes

Author: Sebastian Huber 2024-07-26T11:07:23.309Z

marked this merge request as **draft**

Author: Sebastian Huber 2024-08-08T02:06:41.974Z

added 6 commits

- 46f4ca5b...05f9a3d5 - 5 commits from branch `rtems/docs:main`
- 6dd848a6 - Simplify system termination procedure

Compare with previous version

Author: Sebastian Huber 2024-08-08T02:21:46.682Z

marked this merge request as **ready**

Author: Sebastian Huber 2024-08-08T02:21:46.705Z

changed the description

Author: Gedare Bloom 2024-08-14T20:54:12.278Z

approved this merge request

Author: Gedare Bloom 2024-08-14T20:55:11.668Z

resolved all threads

Author: Sebastian Huber 2024-08-24T08:43:10.448Z

added 7 commits

- 6dd848a6...6dac3891 - 6 commits from branch `rtems/docs:main`
- b48c84bc - Simplify system termination procedure

Compare with previous version

3.1.2.42 9 - user: Add docu for use of Rust with RTEMS

Id	9
State	merged
Merged by	Chris Johns
Merged at	2024-05-23T23:19:55.260Z
Assignee(s)	Chris Johns
Created	2024-05-14T15:12:28.169Z
Updated	2024-08-19T08:55:18.213Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/9
Commit	19c80796df62ec384f04092c09e24ac34f5dc705

Summary

This merge request was originally a patch (v2) on the mailing list. The introductory text to the patch can be found here:

https://lists.rtems.org/pipermail/devel/2024-February/077260.html

The mailing list discussion to the patch can be found here:

https://lists.rtems.org/pipermail/devel/2024-February/077289.html

The current status is

```
On 3/19/24 03:24, Chris Johns wrote:
[...]


  Sorry Frank, I have been busy with other changes. It is on my list but I have
  will need to reread the thread when I have time.
```

Author: Amar Takhar 2024-05-18T04:01:42.586Z

assigned to @chris

Author: Chris Johns 2024-05-23T23:17:54.507Z

These links will not longer be there. The `rtems-bsps` command in a the RTEMS RTOS (`rtems.git`) provides these lists.

Author: Frank Kuehndel 2024-05-23T23:17:54.507Z

Thanks for the hint. I remove the links and mention the rtems-bsps command instead.

Author: Frank Kuehndel 2024-05-23T11:38:04.545Z

changed this line in version 3 of the diff

Author: Chris Johns 2024-05-23T23:17:43.810Z

If you change `6` to `@rtems-ver-major@` the version will be maintained for you.

Author: Frank Kuehndel 2024-05-23T23:17:43.810Z

I replace “6” everywhere where it is used as RTEMS version.

Is there a way to know in advance by which number `@rtems-ver-major@` will be replaced? I am running a script which parses the shell instructions out of the page sources for testing the instructions. The script needs to replace `@rtems-ver-major@`. I currently hard coded “6” but the day will come when this is wrong.

Author: Frank Kuehndel 2024-05-23T11:38:05.446Z

changed this line in version 3 of the diff

Author: Chris Johns 2024-05-23T23:17:32.192Z

Maybe fixed up the `6` but the other values are ok. I suggest a comment that the tool versions may vary.

Author: Frank Kuehndel 2024-05-23T23:17:32.192Z

As written above, I replace all “6”. I also add a comment that the version numbers may to match the ones a reader may see.

Author: Frank Kuehndel 2024-05-23T11:38:06.030Z

changed this line in version 3 of the diff

Author: Chris Johns 2024-05-21T11:28:36.016Z

Thanks for post the MR. I have pointed out a few minor issues.

Author: Frank Kuehndel 2024-05-22T12:46:42.278Z

added 12 commits

- b50d4200...62ef5d66 - 11 commits from branch `rtems/docs:main`
- 308ae0d8 - Merge branch rtems-docs:main into fk-rust-02

Compare with previous version

Author: Frank Kuehndel 2024-05-23T11:38:06.251Z

added 1 commit

- 19c80796 - user: Update docu for use of Rust with RTEMS

Compare with previous version

Author: Frank Kuehndel 2024-08-12T18:29:19.296Z

@chris Many thanks for the review. I implemented your suggestions and I updated a few other parts. My latest changes are part of this merge request, now.

How to proceed? This merge request contains 3 patches, now. One of them is a true merge of 11 commits (i.e. not a singe line of commit histories but Gitlab produced a graph of parallel commits) made to rtems-docs while my first patch was on hold. Can this stay as it is or shall I open a new merge request which contains only a single patch and withdraw this merge request?

Author: Chris Johns 2024-08-12T18:29:19.296Z

@frank_k I had not notice this when I reviewed the comments and your changes. I now see there was a merge branch. How did you make the merge commit?

If you need to update you need to rebase your branch locally and force push and not add onto the branch.

Author: Frank Kuehndel 2024-08-12T18:29:19.296Z

I though Gitlab would take care of the workflow. What happens was that I first needed to update my branch of my personal fork of Gitlab “rtems-docs” to the latest state. All which Gitlab offered for this purpose was a “Merge” button. So I used that and pulled the result onto my laptop to fix the issues you had found.

Since I found this process not RTEMS-like, I wrote the comment above.

If I would had rebased my branch locally and forced push it onto Gitlab, would that not confuse Gitlab? Would Gitlab still be able to show your comments with the correct files and show the differences with the changes I had made in the mean time?

There seems to be no merge in current rtems-docs. Did you manually remove the merge and rebase the commits or did Gitlab that automatically?

Author: Chris Johns 2024-05-23T23:17:54.525Z

resolved all threads

Author: Chris Johns 2024-05-23T23:19:50.481Z

approved this merge request

Author: Frank Kuehndel 2024-08-12T18:30:29.247Z

From my point of view, this merge request is done and can be closed. The documentation is already merge into rtems-docs. Maybe @chris needs to resolve the open thread - or do I have to do that? Yet, beside of this its done.

By the way, I did set up a CI job which automatically carries out the instructions in the Rust-for-RTEMS doc on our servers and checks the results. It found the last incident last week where apparently a bug in Rust was introduced and removed in the meantime.

Author: Amar Takhar 2024-08-12T18:30:29.247Z

When it is merged it is considered complete. 'closed' is a state that happens when it does not get merged. I just resolved the open thread.

That is great about the CI we will have this setup eventually here. great to hear about others doing it!

Author: Amar Takhar 2024-08-12T18:29:19.318Z

resolved all threads

Author: Amar Takhar 2024-08-12T18:30:29.271Z

resolved all threads

Author: Frank Kuehndel 2024-08-19T08:55:17.334Z

mentioned in issue rtems/tools/rtems-source-builder#29

3.1.2.43 39 - Add Intel NIOS V BSP to RISC-V section of user's manual

Id	39
State	merged
Merged by	Amar Takhar
Merged at	2024-08-14T19:05:03.375Z
Created	2024-08-06T12:47:29.119Z
Updated	2024-08-14T19:05:03.357Z
Milestone	6.1
Labels	arch:riscv
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/39
Commit	14a8d31eb5b101d88b17c2f7a73872b44187ece9

Summary

Added a NIOS V section to the RTEMS User's Manual under the RISC-V architecture.

Issue #5101

Author: Chris Johns 2024-08-07T02:59:26.930Z

marked this merge request as **draft**

Author: Chris Johns 2024-08-07T02:59:54.270Z

Please review the documentation standard here https://gitlab.rtems.org/rtems/docs/rtems-docs#documentation-standard and the line length. Thanks

Author: Kevin Kirspel 2024-08-07T13:30:47.159Z

added 1 commit

- e42fbcd2 - Updated the file to be compliant with RTEMS Document standards (i.e line length)

Compare with previous version

Author: Joel Sherrill 2024-08-12T20:39:32.623Z

Capitalise Verilog

Author: Kevin Kirspel 2024-08-12T20:37:11.489Z

changed this line in version 3 of the diff

Author: Kevin Kirspel 2024-08-12T20:39:32.623Z

Capitalized Verilog in latest commit.

Author: Joel Sherrill 2024-08-12T21:26:15.098Z

Does this impact the multilib used?

On other architectures, this is detected via cpp predefines from GCC and on the RISC-V, it looks the same. Looking at riscv-context-switch.S, it appears that (__riscv_flen > 0) is used to enable the FP context switch.

Author: Kevin Kirspel 2024-08-12T21:26:15.098Z

Yes, the NIOS_IS_NIOSVG and NIOS_HAS_FP flags select what ABI is used in the YML files since the developer may choose a V/m, V/g. or V/g with FPU.

Author: Kevin Kirspel 2024-08-12T20:37:12.599Z

added 1 commit

- f7be47ed - Changed verilog to Verilog

Compare with previous version

Author: Joel Sherrill 2024-08-12T21:26:15.118Z

resolved all threads

Author: Joel Sherrill 2024-08-12T21:26:22.774Z

approved this merge request

Author: Amar Takhar 2024-08-12T21:30:53.476Z

Hi @kirspelk this is still marked as draft is it ready? If so you can unmark it and merge it.

Author: Kevin Kirspel 2024-08-14T06:06:14.933Z

What's the workflow for marking as draft and marking as ready. When I submitted the merge request initially, it was marked as ready. Chris changed it to draft after having given feedback for changes. I haven't touched the ready status since.

Author: Amar Takhar 2024-08-14T06:06:14.933Z

Good catch I looked but now that you mention it I did see that he marked it as a draft @chris does this still need to be set to draft?

The workflow is typically the one who sets the draft removes it but not always sometimes it's set to draft in the case where we want to make sure it's not merged yet. We're still sorting out documentation and a new feature is coming in GitLab 17.2 that will help with this immensely and make the use of draft not as necessary.

Author: Chris Johns 2024-08-14T06:06:14.933Z

No. I marked it draft to stop it bring approved and merged. If the questions are resolved it can be changed.

Author: Amar Takhar 2024-08-14T00:50:02.745Z

resolved all threads

Author: Amar Takhar 2024-08-14T06:06:14.954Z

resolved all threads

Author: Amar Takhar 2024-08-14T06:06:25.147Z

marked this merge request as **ready**

Author: Amar Takhar 2024-08-14T06:08:54.194Z

@kirspelk this MR needs to be rebased it can't be done via the interface I'll approve it once it's done thanks.

Author: Kevin Kirspel 2024-08-14T14:15:26.931Z

added 3 commits

- f7be47ed...6f47251e - 2 commits from branch `rtems/docs:main`
- 3eb5f9c4 - Merge branch rtems-docs:main into main

Compare with previous version

Author: Kevin Kirspel 2024-08-14T14:24:16.658Z

It created an extra commit when I updated my fork. Will this be a problem?

Author: Joel Sherrill 2024-08-14T15:40:42.518Z

Can you rebase and get rid of that one? You probably will have to push force after that.

Author: Kevin Kirspel 2024-08-14T16:11:39.060Z

added 3 commits

- f7be47ed...6f47251e - 2 commits from branch `rtems/docs:main`
- f9ac9738 - Merge branch 'main' of https://gitlab.rtems.org/rtems/docs/rtems-docs

Compare with previous version

Author: Kevin Kirspel 2024-08-14T16:19:10.847Z

added 5 commits

- f7be47ed...6f47251e - 2 commits from branch `rtems/docs:main`
- d9d446c0 - Added Intel NIOS V BSP to RISC-V
- 00d5a3f5 - Updated the file to be compliant with RTEMS Document standards (i.e line length)
- 14a8d31e - Changed verilog to Verilog

Compare with previous version

Author: Kevin Kirspel 2024-08-14T19:04:43.111Z

OK, I figured it out. It's properly rebased now. There is an ongoing conversation in the merge request for the RTEMS repo about the README.md documentation that is in the BSP directory. We may want to hold off on this merge until that discussion has been concluded because I may need to add documentation here.

Author: Amar Takhar 2024-08-14T19:04:43.111Z

That's OK just create a new MR if that ends up happening.

Author: Amar Takhar 2024-08-14T19:04:43.135Z

resolved all threads

3.1.2.44 14 - Spelling corrections.

Id	14
State	merged
Merged by	Joel Sherrill
Merged at	2024-05-25T22:42:44.638Z
Assignee(s)	Amar Takhar
Created	2024-05-25T22:23:42.344Z
Updated	2024-08-10T00:40:56.970Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/14
Commit	5fe30b37f9e876b8763463359e47ed0e076eec15

Summary

Author: Amar Takhar 2024-05-25T22:24:39.770Z

contains no changes?!

Author: Amar Takhar 2024-05-25T22:25:55.297Z

Ohh haha my change is on the wrong branch! That's a first.

Author: Amar Takhar 2024-05-25T22:26:28.068Z

added 1 commit

- 5fe30b37 - Spelling corrections.

Compare with previous version

Author: Amar Takhar 2024-05-25T22:33:17.602Z

changed title from **Spelling** to **Spelling{+ corrections.+}**

Author: Joel Sherrill 2024-05-25T22:42:39.522Z

approved this merge request

Author: Amar Takhar 2024-05-25T22:58:28.227Z

assigned to @amar

3.1.2.45 20 - eng: Document assert-in-set action

Id	20
State	merged
Merged by	Gedare Bloom
Merged at	2024-06-18T15:44:49.495Z
Assignee(s)	Sebastian Huber
Created	2024-06-17T09:16:20.909Z
Updated	2024-08-10T00:40:44.548Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/20
Commit	e7f358f7b90decf1e3b7344c7ba856f37f46cd2f

Summary

Author: Sebastian Huber 2024-06-17T09:16:21.005Z

assigned to @sebhub

Author: Gedare Bloom 2024-06-18T06:36:35.425Z

“is in the”?

Author: Sebastian Huber 2024-06-18T05:53:46.146Z

changed this line in version 2 of the diff

Author: Sebastian Huber 2024-06-18T06:36:35.425Z

Thanks, I fixed this.

Author: Sebastian Huber 2024-06-18T05:53:46.297Z

added 5 commits

- 82557a6e...05d72243 - 4 commits from branch `rtems/docs:main`
- e7f358f7 - eng: Document assert-in-set action

Compare with previous version

Author: Sebastian Huber 2024-06-18T06:36:35.445Z

resolved all threads

Author: Gedare Bloom 2024-06-18T15:44:39.629Z

approved this merge request

3.1.2.46 21 - c-user: Document typedef parameters

Id	21
State	merged
Merged by	Kinsey Moore
Merged at	2024-06-17T20:25:48.985Z
Assignee(s)	Sebastian Huber
Created	2024-06-17T09:16:55.630Z
Updated	2024-08-10T00:40:44.413Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/21
Commit	000d760efe9f3b0323abd951e475a2967ffb4493

Summary

Author: Sebastian Huber 2024-06-17T09:16:55.702Z

assigned to @sebhub

Author: Gedare Bloom 2024-06-17T20:21:45.235Z

approved this merge request

Author: Gedare Bloom 2024-06-18T06:38:21.351Z

It looks like some of these changes still need to be regenerated into `cpukit/include/rtems/extension.h`?

Author: Sebastian Huber 2024-06-18T06:38:21.320Z

The Doxygen generator already produced documentation for the parameters.

3.1.2.47 17 - Fix rtems version

Id	17
State	merged
Merged by	Kinsey Moore
Merged at	2024-06-17T20:27:03.746Z
Created	2024-06-13T06:45:03.389Z
Updated	2024-08-10T00:40:44.208Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/17
Commit	ae3d5cfc3b26727853f9fd6371fb76493ffcdeab

Summary

Fix RTEMS version in the RSB BSP Build section

Author: Kinsey Moore 2024-06-17T20:26:41.179Z

added 2 commits

- 000d760e - 1 commit from branch `rtems/docs:main`
- ae3d5cfc - Fix rtems version

Compare with previous version

Author: Kinsey Moore 2024-06-17T20:26:54.219Z

approved this merge request

3.1.2.48 24 - c-user: Document INTERNAL_ERROR_CANNOT_DISABLE_DATA_CACHE

Id	24
State	merged
Merged by	Amar Takhar
Merged at	2024-06-25T04:11:41.539Z
Assignee(s)	Sebastian Huber
Created	2024-06-21T08:58:05.340Z
Updated	2024-08-10T00:40:29.551Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/24
Commit	9cc4ac748ce18eed4ab48bf97878561eb89a88f3

Summary

Author: Sebastian Huber 2024-06-21T08:58:05.745Z

assigned to @sebhub

Author: Sebastian Huber 2024-06-21T09:06:44.483Z

added 1 commit

- 4ca3be89 - c-user: Document INTERNAL_ERROR_CANNOT_DISABLE_DATA_CACHE

Compare with previous version

Author: Gedare Bloom 2024-06-22T23:00:43.027Z

added 1 commit

- 7380f910 - c-user: fix typo in directives.rst

Compare with previous version

Author: Gedare Bloom 2024-06-24T16:40:20.987Z

approved this merge request

Author: Amar Takhar 2024-06-25T04:11:30.580Z

added 7 commits

- 7380f910...6ef24ab6 - 5 commits from branch `rtems/docs:main`
- ec0fee08 - c-user: Document INTERNAL_ERROR_CANNOT_DISABLE_DATA_CACHE
- 9cc4ac74 - c-user: fix typo in directives.rst

Compare with previous version

3.1.2.49 22 - c-user: Mention RTEMS_INTERRUPT_LOCK_NEEDS_OBJECT

Id	22
State	merged
Merged by	Kinsey Moore
Merged at	2024-06-21T16:37:33.917Z
Assignee(s)	Sebastian Huber
Created	2024-06-21T06:13:12.584Z
Updated	2024-08-10T00:40:29.448Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/22
Commit	a9519ba9c9b530478f49657ff7fddb27dc2e5e7d

Summary

Author: Sebastian Huber 2024-06-21T06:13:12.673Z

assigned to @sebhub

Author: Kinsey Moore 2024-06-21T16:37:25.951Z

“ususued” and “neededd” need to be fixed.

Author: Sebastian Huber 2024-06-21T16:33:56.994Z

changed this line in version 2 of the diff

Author: Kinsey Moore 2024-06-21T14:35:27.695Z

requested changes

Author: Kinsey Moore 2024-06-21T14:46:29.118Z

approved this merge request

Author: Kinsey Moore 2024-06-21T14:46:32.064Z

unapproved this merge request

Author: Sebastian Huber 2024-06-21T16:33:57.168Z

added 1 commit

- a9519ba9 - c-user: Mention RTEMS_INTERRUPT_LOCK_NEEDS_OBJECT

Compare with previous version

Author: Kinsey Moore 2024-06-21T16:37:25.969Z

resolved all threads

Author: Kinsey Moore 2024-06-21T16:37:31.028Z

approved this merge request

3.1.2.50 23 - c-user: Clarify system termination procedure

Id	23
State	merged
Merged by	Gedare Bloom
Merged at	2024-06-22T22:56:46.468Z
Assignee(s)	Sebastian Huber
Created	2024-06-21T08:07:35.496Z
Updated	2024-08-10T00:40:29.332Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/23
Commit	bd2c53ace9e875c2d702ffe11d096eb48867eca8

Summary

Author: Sebastian Huber 2024-06-21T08:07:37.408Z

assigned to @sebhub

Author: Sebastian Huber 2024-06-21T08:08:56.851Z

mentioned in merge request rtems/rtos/rtems!28

Author: Gedare Bloom 2024-06-22T22:55:30.576Z

added 1 commit

- 8e86c248 - c-user: fix typos in background.rst

Compare with previous version

Author: Gedare Bloom 2024-06-22T22:56:01.510Z

approved this merge request

Author: Gedare Bloom 2024-06-22T22:56:07.242Z

added 3 commits

- a9519ba9 - 1 commit from branch `rtems/docs:main`
- 3372985e - c-user: Clarify system termination procedure
- bd2c53ac - c-user: fix typos in background.rst

Compare with previous version

3.1.2.51 18 - raspberrypi4.rst: Documation for the gpio driver

Id	18
State	merged
Merged by	Gedare Bloom
Merged at	2024-06-22T22:58:52.396Z
Created	2024-06-13T06:55:51.613Z
Updated	2024-08-10T00:40:29.211Z
Milestone	6.1
Labels	arch:arm, doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/18
Commit	7baf18014ef406db14a15cfacabe94990313f207

https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/59#note_107057

Author: Ning Yang 2024-06-13T06:56:02.645Z

mentioned in merge request rtems/rtos/rtems!59

Author: Ning Yang 2024-06-14T11:13:18.741Z

Author: Gedare Bloom 2024-06-21T08:40:55.186Z

This needs updating for API-level name changes.

Author: Ning Yang 2024-06-21T08:40:55.186Z

Done.

Author: Ning Yang 2024-06-21T08:38:11.661Z

added 1 commit

- 8c2c4334 - raspberrypi4.rst: Documation for the gpio driver

Compare with previous version

Author: Ning Yang 2024-06-21T08:40:55.203Z

resolved all threads

Author: Gedare Bloom 2024-06-22T22:58:28.234Z

approved this merge request

Author: Gedare Bloom 2024-06-22T22:58:35.889Z

added 9 commits

- 8c2c4334...bd2c53ac - 8 commits from branch `rtems/docs:main`
- 7baf1801 - raspberrypi4.rst: Documation for the gpio driver

Compare with previous version

3.1.2.52 25 - user/raspberrypi: Update copyright and stale info

Id	25
State	merged
Merged by	Gedare Bloom
Merged at	2024-06-24T16:44:35.543Z
Assignee(s)	Kinsey Moore
Created	2024-06-24T13:08:31.099Z
Updated	2024-08-10T00:40:29.025Z
Milestone	6.1
Labels	arch:arm, doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/25
Commit	6ef24ab6ae11f72d550df19311a0e41b727e42f7

Summary

Author: Kinsey Moore 2024-06-24T13:08:31.269Z

assigned to @opticron

Author: Gedare Bloom 2024-06-24T16:44:27.246Z

approved this merge request

3.1.2.53 28 - c-user: Document timeout/try_wait function for counting semaphore

Id	28
State	merged
Merged by	Sebastian Huber
Merged at	2024-07-04T05:33:28.635Z
Created	2024-07-02T08:56:58.742Z
Updated	2024-08-10T00:40:19.093Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/28
Commit	cc7fd6eacc2a8a40ff222f84c003651f8f413cc4

Summary

Document timeout/try_wait function for self-contained object counting semaphore.

Related to https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/5055

Author: Sebastian Huber 2024-07-02T18:47:25.116Z

approved this merge request

Author: xiaojun zheng 2024-07-03T00:39:27.879Z

changed the description

Author: Sebastian Huber 2024-07-04T05:32:57.788Z

added 2 commits

- 427902a9 - 1 commit from branch `rtems/docs:main`
- cc7fd6ea - c-user: Document timeout/try_wait function for counting semaphore

Compare with previous version

3.1.2.54 26 - posix-users/input_and_output.rst: Update AIO Documentation

Id	26
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-02T20:03:50.304Z
Created	2024-06-27T19:13:04.090Z
Updated	2024-08-10T00:40:18.908Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/26
Commit	427902a9a2822aac1d82a16603ddeb8aee96ecc2

Summary

posix-users/input_and_output.rst: Update AIO Documentation

Updated the POSIX API guide related to asynchronous input and output. These changes follow recent corrections made to the implementation, see: https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/5039

Author: Joel Sherrill 2024-07-02T19:36:09.927Z

Look at clock.rst to see how returning -1 and setting errno is done. I think the main thing you missed is the markup on errno itself.

`clock.rst:On error, this routine returns -1 and sets ````errno`` to one of the following:```

Author: Joel Sherrill 2024-07-02T19:37:11.978Z

Add a blank line above.

Author: Alessandro Nardin 2024-07-02T16:18:01.100Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-07-02T19:34:44.588Z

In the background hints at the thread(s) servicing requests. Are they mentioned anywhere?

Author: Joel Sherrill 2024-07-02T19:36:21.699Z

Same errno comment.

Author: Alessandro Nardin 2024-07-02T16:18:01.602Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-07-02T19:37:00.437Z

Same comments as above. A section on the configuration of the thread is needed. I don't remember what the user can specify.

Author: Alessandro Nardin 2024-07-02T19:37:00.437Z

For thread configuration, are you referring to AIO_MAX_THREADS and AIO_MAX_QUEUE_SIZE ?

Author: Joel Sherrill 2024-07-02T19:37:00.437Z

Yes. Are they hard-coded or configurable?

May want a ticket to make them configurable and then close this.

Resolved by making another ticket. The limit is not currently configurable.

Author: Joel Sherrill 2024-06-28T16:32:26.868Z

Generally it was the same comments repeated for each method. Just sweep the file with my suggestions.

Author: Alessandro Nardin 2024-07-02T16:18:02.125Z

added 2 commits

- 7b3db9d6 - 1 commit from branch `rtems/docs:main`
- 427902a9 - posix-users/input_and_output.rst: Update AIO Documentation

Compare with previous version

Author: Joel Sherrill 2024-07-02T19:37:11.996Z

resolved all threads

Author: Joel Sherrill 2024-07-02T19:37:23.833Z

approved this merge request

Author: Alessandro Nardin 2024-07-02T19:56:11.541Z

marked this merge request as **ready**

3.1.2.55 31 - posix-user: Add getrusage

Id	31
State	merged
Merged by	Amar Takhar
Merged at	2024-07-18T05:31:00.028Z
Assignee(s)	Chris Johns
Created	2024-07-18T04:57:17.864Z
Updated	2024-08-10T00:40:05.679Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/31
Commit	adc039aad6163135b61172500b0203fb2d753a3d

This MR add POSIX User documentation for `getrusage` . See rtems/rtos/rtems!116 and rtems/rtos/rtems#5062.

Author: Chris Johns 2024-07-18T04:57:18.065Z

assigned to @chris

Author: Amar Takhar 2024-07-18T05:29:52.409Z

execution

Author: Chris Johns 2024-07-18T05:29:42.083Z

changed this line in version 2 of the diff

Author: Chris Johns 2024-07-18T05:29:52.409Z

Fixed. Thanks.

Author: Chris Johns 2024-07-18T05:29:42.290Z

added 1 commit

- adc039aa - posix-user: Add getrusage

Compare with previous version

Author: Chris Johns 2024-07-18T05:29:52.433Z

resolved all threads

Author: Amar Takhar 2024-07-18T05:30:55.338Z

approved this merge request

3.1.2.56 40 - Minor cleanup

Id	40
State	merged
Merged by	Amar Takhar
Merged at	2024-08-09T21:57:54.584Z
Assignee(s)	Kinsey Moore
Created	2024-08-09T21:27:26.549Z
Updated	2024-08-10T00:39:50.344Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/40
Commit	6f47251e964de612ddc3a36487e0a7d7f31db884

Summary

Correct spelling and a page title.

Author: Kinsey Moore 2024-08-09T21:27:26.696Z

assigned to @opticron

Author: Amar Takhar 2024-08-09T21:57:49.870Z

approved this merge request

3.1.2.57 38 - Remove old references to devel.rtems.org

Id	38
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-28T12:11:21.549Z
Created	2024-07-27T00:06:58.274Z
Updated	2024-07-28T12:11:23.111Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/38
Commit	05f9a3d56b45e700104d22bf40881ef89fff5d91

Summary

Remove old references to devel.rtems.org

Some were deleted as the content was imported.

Other references were updated.

There is content that still needs to be imported and I have opened issues to handle this:

-
-
-

Author: Amar Takhar 2024-07-27T00:09:45.786Z

added 1 commit

- 05f9a3d5 - Remove old references to devel.rtems.org

Compare with previous version

Author: Amar Takhar 2024-07-27T00:10:32.967Z

changed the description

Author: Joel Sherrill 2024-07-28T12:10:15.376Z

Deleting this would lose the idea that something needs to be done. I think this info is in the software engineering guide so reference it instead.

Author: Amar Takhar 2024-07-28T12:10:15.376Z

I removed it because the content was imported it wasn't? I'll check again thanks

Author: Amar Takhar 2024-07-28T12:10:15.376Z

Yes the content of that file is from the wiki .. not sure what you're asking here? Someone has already done the transition but forgot to remove the comment. Am I missing something?

Author: Joel Sherrill 2024-07-28T04:48:38.342Z

Turn reviewing this into an issue and assign it to me. I think this is at least an unfair or out of date statement

Author: Amar Takhar 2024-07-28T04:48:38.590Z

created #27 to continue this discussion

Author: Joel Sherrill 2024-07-28T04:15:16.390Z

requested changes

Author: Amar Takhar 2024-07-28T04:48:38.597Z

mentioned in issue #27

Author: Joel Sherrill 2024-07-28T12:10:15.396Z

resolved all threads

Author: Joel Sherrill 2024-07-28T12:11:17.126Z

approved this merge request

3.1.2.58 37 - Update old git.rtems.org links to GitLab

Id	37
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-26T19:36:09.219Z
Assignee(s)	Amar Takhar
Created	2024-07-26T19:23:08.843Z
Updated	2024-07-26T19:48:05.328Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/37
Commit	dd440be74b2ec837c0d0b4b385ea74018d2c2fc5

Summary

Update old git.rtems.org links to GitLab

Some console output I updated to to just be gitlab.rtems.org. I doubt anyone would notice but any references to git.rtems.org aren't good.

Author: Amar Takhar 2024-07-26T19:23:08.998Z

assigned to @amar

Author: Amar Takhar 2024-07-26T19:23:32.600Z

Note this MR has a dependency.

Author: Kinsey Moore 2024-07-26T19:32:53.055Z

added 4 commits

- 2cc38939...03a27eed - 3 commits from branch `rtems/docs:main`
- dd440be7 - Update old git.rtems.org links to GitLab

Compare with previous version

Author: Kinsey Moore 2024-07-26T19:35:59.169Z

approved this merge request

Author: Joel Sherrill 2024-07-26T19:48:05.977Z

The site review.rtems.org does not exist. I don't know why this was ever here. Can it be deleted in this pass?

Author: Amar Takhar 2024-07-26T19:48:05.977Z

It's not used anywhere it'll be killed eventually not working on content with these changes.

Author: Joel Sherrill 2024-07-26T19:47:22.637Z

Does this need to point somewhere else?

Author: Amar Takhar 2024-07-26T19:47:22.637Z

Not working on fixing content these are something Gedare is working on.

Author: Joel Sherrill 2024-07-26T19:47:18.719Z

Both of these are deadends also

Author: Amar Takhar 2024-07-26T19:47:18.719Z

Not working on fixing content these are something Gedare is working on.

Author: Joel Sherrill 2024-07-26T19:46:57.366Z

This probably should be closed with an issue to update this to use gitlab processes.

Author: Amar Takhar 2024-07-26T19:46:57.366Z

That is under @gedare I'm not updating any of these docs.

Author: Joel Sherrill 2024-07-26T19:37:22.387Z

Feel free to resolve with an issue as appropriate. Gedare was supposed to be addressing development process documentation changes so assign to him where applicable.

Author: Amar Takhar 2024-07-26T19:48:05.999Z

resolved all threads

3.1.2.59 36 - Update source browser URLs to GitLab

Id	36
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-26T19:32:39.307Z
Assignee(s)	Amar Takhar
Created	2024-07-26T18:43:28.925Z
Updated	2024-07-26T19:32:40.966Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/36
Commit	03a27eed6be2f8b348e9565d550ecbb31a99c193

Summary

Author: Amar Takhar 2024-07-26T18:43:29.078Z

assigned to @amar

Author: Kinsey Moore 2024-07-26T19:32:26.986Z

added 3 commits

- 5512eb3f...3ce7a357 - 2 commits from branch `rtems/docs:main`
- 03a27eed - Update source browser URLs to GitLab

Compare with previous version

Author: Kinsey Moore 2024-07-26T19:32:33.770Z

approved this merge request

3.1.2.60 35 - Point to new LICENSE.md

Id	35
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-26T19:29:41.129Z
Assignee(s)	Amar Takhar
Created	2024-07-26T18:24:35.245Z
Updated	2024-07-26T19:29:42.403Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/35
Commit	3ce7a357f665871b6194b69f8d7292b53811f2e9

Summary

Point to new LICENSE.md

I didn't link directly to the licenses as we'll be moving the file around and there is a TOC. The less anchors the better any explanations should happen in the LICENSE.md file.

Author: Amar Takhar 2024-07-26T18:24:35.389Z

assigned to @amar

Author: Kinsey Moore 2024-07-26T19:29:12.626Z

approved this merge request

Author: Kinsey Moore 2024-07-26T19:29:26.819Z

added 2 commits

- 39ef1665 - 1 commit from branch `rtems/docs:main`

- 3ce7a357 - Point to new LICENSE.md

Compare with previous version

3.1.2.61 34 - Remove mention of MAINTAINERS file

Id	34
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-26T19:28:55.463Z
Assignee(s)	Amar Takhar
Created	2024-07-26T18:19:28.921Z
Updated	2024-07-26T19:28:57.631Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/34
Commit	39ef166585c7d867bf710abfe85c2e93d3b4e939

Summary

Remove mention of MAINTAINERS file

See rtems/rtos/rtems!131

Author: Amar Takhar 2024-07-26T18:19:29.114Z

assigned to @amar

Author: Kinsey Moore 2024-07-26T19:28:52.426Z

approved this merge request

3.1.2.62 33 - Convert LICENSE file to MarkDown

Id	33
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-25T22:15:53.833Z
Assignee(s)	Amar Takhar
Created	2024-07-20T04:56:24.384Z
Updated	2024-07-25T22:15:55.937Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/33
Commit	f1cd233fa1aeabcc000dfbbb3444d88202d2b2ff

Summary

Author: Amar Takhar 2024-07-20T04:56:24.937Z

assigned to @amar

Author: Joel Sherrill 2024-07-24T18:14:47.084Z

This is probably “resolve by filing issue”. Do we want the headings to be the real name of the license? Include an SPDX tag in the section? The anchor could be the SPDX name.

Author: Amar Takhar 2024-07-24T18:15:38.857Z

When I convert documentation I don’t make changes to the documentation at the same time. That way you can track old to new. If we want to change contents we should do that after it’s been converted. I do make some changes when the old content is really bad but titles I keep the same so the old ‘License 2’ can be tracked to its new place and then we can change it.

Author: Amar Takhar 2024-07-24T18:14:47.110Z

resolved all threads

Author: Kinsey Moore 2024-07-25T22:15:50.163Z

approved this merge request

3.1.2.63 32 - user/stm32h7: Separate comment block

Id	32
State	merged
Merged by	Gedare Bloom
Merged at	2024-07-18T20:52:25.517Z
Assignee(s)	Kinsey Moore
Created	2024-07-18T18:14:35.327Z
Updated	2024-07-18T20:52:27.021Z
Milestone	6.1
Labels	arch:arm, doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/32
Commit	cb0031be487abef46ad92ad81f76bffa6a37a6a9

Summary

user/stm32h7: Separate comment block

The comment blocks at the end of the console section are being rendered since they are not appropriately separated from the text block. This change prevents them from rendering as was intended.

Author: Kinsey Moore 2024-07-18T18:14:35.501Z

assigned to @opticron

Author: Gedare Bloom 2024-07-18T20:52:19.212Z

approved this merge request

3.1.2.64 27 - posix-compliance: Update tracking CSV for published POSIX-2024 (Issue 8)

Id	27
State	merged
Merged by	Chris Johns
Merged at	2024-07-02T01:49:15.101Z
Assignee(s)	Joel Sherrill
Reviewer(s)	Gedare Bloom
Created	2024-07-01T18:45:02.291Z
Updated	2024-07-02T01:49:17.326Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/27
Commit	7b3db9d6c1a7ecfa2c9ff9fe1f939081de17e743

Summary

POSIX-2024 (Issue 8) was recently published. The information in that column was double-checked versus the published edition.

RTEMS support for new Issue 8 functions was checked.

standards.rst was updated to mention Issue 8 and use the word function not method.

Author: Joel Sherrill 2024-07-01T18:45:02.420Z

requested review from @gedare

Author: Joel Sherrill 2024-07-01T18:45:03.378Z

assigned to @joel

Author: Amar Takhar 2024-07-01T18:49:53.556Z

added 13 commits

- bce15fb7...9cc4ac74 - 12 commits from branch `rtems/docs:main`
- 9063fb34 - posix-compliance: Update API spreadsheet

Compare with previous version

Author: Joel Sherrill 2024-07-01T19:51:39.438Z

added 1 commit

- 7b3db9d6 - posix-compliance: Update API spreadsheet

Compare with previous version

Author: Chris Johns 2024-07-02T01:49:09.742Z

approved this merge request

3.1.2.65 19 - posix-compliance: Update tracking CSV and standards descriptions

Id	19
State	merged
Merged by	Kinsey Moore
Merged at	2024-06-18T01:46:14.674Z
Assignee(s)	Joel Sherrill
Reviewer(s)	Chris Johns, Gedare Bloom
Created	2024-06-14T17:13:56.561Z
Updated	2024-06-18T01:46:17.604Z
Milestone	6.1
Labels	posix::compliance
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/19
Commit	05d72243c44d687ca0b7373ea7656593d04e6549

Summary

posix-compliance: Update tracking CSV and standards descriptions

Adds C17, FACE Technical Standard, Edition 3.2 and includes various updates to RTEMS support.

Closes #14

Author: Joel Sherrill 2024-06-14T17:13:56.688Z

requested review from @chris and @gedare

Author: Joel Sherrill 2024-06-14T17:13:56.703Z

assigned to @joel

Author: Gedare Bloom 2024-06-17T20:39:21.390Z

added 1 commit

- 2dde95b6 - standards.rst: fix typo

Compare with previous version

Author: Gedare Bloom 2024-06-17T20:39:50.760Z

approved this merge request

Author: Gedare Bloom 2024-06-17T20:40:16.598Z

added 4 commits

- 2dde95b6...ae3d5cfc - 2 commits from branch `rtems/docs:main`
- 6a2d014e - posix-compliance: Update tracking CSV and standards descriptions
- 05d72243 - standards.rst: fix typo

Compare with previous version

3.1.2.66 16 - user/testing: Update documentation for RTEMS 6

Id	16
State	merged
Merged by	Amar Takhar
Merged at	2024-06-08T00:52:21.571Z
Assignee(s)	Kinsey Moore
Created	2024-06-07T02:57:02.486Z
Updated	2024-06-08T00:52:22.670Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/16
Commit	989e939db7aa62f22830fe8c26ea188b32044591

Summary

Updates https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/4960

Author: Kinsey Moore 2024-06-07T02:57:02.645Z

assigned to @opticron

Author: Kinsey Moore 2024-06-07T02:57:22.969Z

added 6 commits

- d740bc4a...d196c8bc - 5 commits from branch `rtems/docs:main`
- 989e939d - user/testing: Update documentation for RTEMS 6

Compare with previous version

Author: Gedare Bloom 2024-06-07T22:20:32.362Z

approved this merge request

3.1.2.67 8 - c-user: Document get/set interrupt priority

Id	8
State	merged
Merged by	Chris Johns
Merged at	2024-05-28T21:20:40.931Z
Created	2024-05-02T14:02:35.000Z
Updated	2024-05-28T21:20:42.483Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/8
Commit	d196c8bc5cfd0ae064262b98fc2753249189927e

Summary

Update #5002.

Author: Sebastian Huber 2024-05-08T07:43:12.856Z

added 1 commit

- a72be6ec - c-user: Document get/set interrupt priority

Compare with previous version

Author: Chris Johns 2024-05-25T08:50:05.113Z

Is this the state for not supported by the processor? This is not mentioned and I think it is important to mention.

Author: Sebastian Huber 2024-05-25T08:50:05.113Z

This text is basically the same for all interrupt vector related functions. If it is not clear, then we should find a better standard text for this error.

Author: Chris Johns 2024-05-25T08:50:05.113Z

I am not sure how that relates? Are you saying all interrupts calls a required to return a specific error code for the exact same reasons?

Author: Sebastian Huber 2024-05-25T08:50:05.113Z

Yes, for the RTEMS_INVALID_ID, there is a common text:

```
grep -rn RTEMS_INVALID_ID c-user/interrupt/ -A 2
c-user/interrupt/directives.rst:1230::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-1231-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-1232-    ``vector``.
--
c-user/interrupt/directives.rst:1319::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-1320-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-1321-    ``vector``.
--
c-user/interrupt/directives.rst:1440::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-1441-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-1442-    ``vector``.
--
c-user/interrupt/directives.rst:1527::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-1528-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-1529-    ``vector``.
--
c-user/interrupt/directives.rst:1601::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-1602-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-1603-    ``vector``.
--
c-user/interrupt/directives.rst:1661::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-1662-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-1663-    ``vector``.
--
c-user/interrupt/directives.rst:1723::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-1724-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-1725-    ``vector``.
--
c-user/interrupt/directives.rst:1802::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-1803-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-1804-    ``vector``.
--
c-user/interrupt/directives.rst:1859::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-1860-    There was no interrupt vector␣
```

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```
↪associated with the number specified by
c-user/interrupt/directives.rst-1861-    ``vector``.
--
c-user/interrupt/directives.rst:1921::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-1922-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-1923-    ``vector``.
--
c-user/interrupt/directives.rst:1984::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-1985-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-1986-    ``vector``.
--
c-user/interrupt/directives.rst:2058::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-2059-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-2060-    ``vector``.
--
c-user/interrupt/directives.rst:2128::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-2129-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-2130-    ``vector``.
--
c-user/interrupt/directives.rst:2206::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-2207-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-2208-    ``vector``.
--
c-user/interrupt/directives.rst:2276::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-2277-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-2278-    ``vector``.
--
c-user/interrupt/directives.rst:2522::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-2523-    There was no interrupt server␣
↪associated with the index specified by
c-user/interrupt/directives.rst-2524-    ``server_index``.
--
c-user/interrupt/directives.rst:2533::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-2534-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-2535-    ``vector``.
--
c-user/interrupt/directives.rst:2620::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-2621-    There was no interrupt server␣
↪associated with the index specified by
c-user/interrupt/directives.rst-2622-    ``server_index``.
--
c-user/interrupt/directives.rst:2624::c:macro:`RTEMS_INVALID_ID`
```

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```
c-user/interrupt/directives.rst-2625-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-2626-    ``vector``.
--
c-user/interrupt/directives.rst:2700::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-2701-    There was no interrupt server␣
↪associated with the index specified by
c-user/interrupt/directives.rst-2702-    ``server_index``.
--
c-user/interrupt/directives.rst:2764::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-2765-    There was no interrupt server␣
↪associated with the server index specified by
c-user/interrupt/directives.rst-2766-    ``server_index``.
--
c-user/interrupt/directives.rst:2822::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-2823-    There was no interrupt server␣
↪associated with the index specified by
c-user/interrupt/directives.rst-2824-    ``server_index``.
--
c-user/interrupt/directives.rst:2876::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-2877-    There was no interrupt server␣
↪associated with the index specified by
c-user/interrupt/directives.rst-2878-    ``server_index``.
--
c-user/interrupt/directives.rst:2944::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-2945-    There was no interrupt server␣
↪associated with the index specified by
c-user/interrupt/directives.rst-2946-    ``source_server_index``.
--
c-user/interrupt/directives.rst:2948::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-2949-    There was no interrupt server␣
↪associated with the index specified by
c-user/interrupt/directives.rst-2950-    ``destination_server_index``.
--
c-user/interrupt/directives.rst:2952::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-2953-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-2954-    ``vector``.
--
c-user/interrupt/directives.rst:3022::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-3023-    There was no interrupt server␣
↪associated with the index specified by
c-user/interrupt/directives.rst-3024-    ``server_index``.
--
c-user/interrupt/directives.rst:3026::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-3027-    There was no interrupt vector␣
↪associated with the number specified by
c-user/interrupt/directives.rst-3028-    ``vector``.
--
```

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```
c-user/interrupt/directives.rst:3087::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-3088-    There was no interrupt server␣
↪associated with the index specified by
c-user/interrupt/directives.rst-3089-    ``server_index``.
--
c-user/interrupt/directives.rst:3354::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-3355-    There was no interrupt server␣
↪associated with the index specified by
c-user/interrupt/directives.rst-3356-    ``server_index``.
--
c-user/interrupt/directives.rst:3438::c:macro:`RTEMS_INVALID_ID`
c-user/interrupt/directives.rst-3439-    There was no interrupt server␣
↪associated with the index specified by
c-user/interrupt/directives.rst-3440-    ``server_index``.
```

Author: Chris Johns 2024-05-25T08:50:05.113Z

All I am asking is there is a reminder to the user to check the BSP specifics to find out if the feature is supported. With out this a new user or a user that does not know the BSP or RTEMS may assume what they are doing is the reason.

Author: Chris Johns 2024-05-25T08:49:59.854Z

But they can use the attach calls or should they be naked?

Author: Sebastian Huber 2024-05-25T08:49:59.854Z

If this works or not depends on the architecture and chip.

Author: Chris Johns 2024-05-25T08:49:59.854Z

Then I suggest this be explained.

Author: Sebastian Huber 2024-05-24T08:47:15.779Z

changed this line in version 3 of the diff

Author: Chris Johns 2024-05-21T11:36:06.524Z

This is fine but I think the same issue as the code is the state when there is a lack of support. It could be confusing to a new user if the call fails and the BSP is missing the support.

Author: Sebastian Huber 2024-05-21T12:58:50.223Z

I would say that changing the interrupt priorities is something for experts. You have to know the constraints of the interrupt controller to work with them. The BSP documentation should address the implementation status.

Author: Sebastian Huber 2024-05-24T08:47:15.966Z

added 16 commits

- a72be6ec...b0e04597 - 15 commits from branch `rtems/docs:main`
- fda289c6 - c-user: Document get/set interrupt priority

Compare with previous version

Author: Sebastian Huber 2024-05-25T08:50:17.816Z

I updated the documentation do address the review comments.

Author: Chris Johns 2024-05-25T08:50:17.816Z

Looks good. Can you please rebase and resolve the threads you have addressed with the update. I cannot get a merge button until that happens. Thanks.

Author: Sebastian Huber 2024-05-25T08:50:17.833Z

resolved all threads

Author: Sebastian Huber 2024-05-25T08:50:30.100Z

added 6 commits

- fda289c6...e0fe7026 - 5 commits from branch `rtems/docs:main`
- 79201f7d - c-user: Document get/set interrupt priority

Compare with previous version

Author: Sebastian Huber 2024-05-25T08:53:27.287Z

added 1 commit

- 6810ec1a - c-user: Document get/set interrupt priority

Compare with previous version

Author: Chris Johns 2024-05-28T21:19:59.350Z

approved this merge request

Author: Chris Johns 2024-05-28T21:20:17.407Z

added 3 commits

- 6810ec1a...35cae580 - 2 commits from branch `rtems/docs:main`
- d196c8bc - c-user: Document get/set interrupt priority

Compare with previous version

3.1.2.68 15 - Fix parallel building

Id	15
State	merged
Merged by	Amar Takhar
Merged at	2024-05-27T04:02:10.656Z
Assignee(s)	Chris Johns
Created	2024-05-26T07:20:08.327Z
Updated	2024-05-27T04:02:11.522Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/15
Commit	35cae580e07128282c871a218738ea13331bb03e

Summary

Fix parallel building. An add group serialised the build

Author: Chris Johns 2024-05-26T07:20:10.583Z

assigned to @chris

Author: Chris Johns 2024-05-26T21:51:48.714Z

added 1 commit

- ee26182c - waf: Fix parallel building

Compare with previous version

Author: Amar Takhar 2024-05-27T04:01:07.377Z

approved this merge request

Author: Amar Takhar 2024-05-27T04:01:17.497Z

added 3 commits

- ee26182c...5fe30b37 - 2 commits from branch `rtems/docs:main`
- 35cae580 - waf: Fix parallel building

Compare with previous version

3.1.2.69 13 - Fix the README file name

Id	13
State	merged
Merged by	Amar Takhar
Merged at	2024-05-25T05:01:53.285Z
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Created	2024-05-25T05:01:13.755Z
Updated	2024-05-25T05:01:54.144Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/13
Commit	e0fe70265b822bff78fb837982138ed861ff2ae3

Summary

This fixes the basic mistake in !12

Author: Chris Johns 2024-05-25T05:01:13.877Z

requested review from @amar

Author: Chris Johns 2024-05-25T05:01:13.890Z

assigned to @chris

Author: Amar Takhar 2024-05-25T05:01:49.733Z

approved this merge request

3.1.2.70 12 - Move README to markdown

Id	12
State	merged
Merged by	Amar Takhar
Merged at	2024-05-25T04:57:20.180Z
Assignee(s)	Chris Johns
Created	2024-05-25T04:49:29.439Z
Updated	2024-05-25T05:01:16.182Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/12
Commit	39cabd5cb39da1d1e928df41744f85fac5a72811

Summary

Move the `README` to markdown and clean up the formatting

Author: Chris Johns 2024-05-25T04:49:29.633Z

assigned to @chris

Author: Chris Johns 2024-05-25T04:53:56.938Z

added 1 commit

- 39cabd5c - docs: Move README to markdown and clean up

Compare with previous version

Author: Amar Takhar 2024-05-25T04:57:11.940Z

approved this merge request

Author: Amar Takhar 2024-05-25T04:58:33.848Z

OK .. this is a first for me I can't believe I missed that.

Author: Amar Takhar 2024-05-25T04:58:41.458Z

Look at the filename...

Author: Chris Johns 2024-05-25T05:01:16.159Z

mentioned in merge request !13

3.1.2.71 10 - Resolve “Document Merge Request Workflow”

Id	10
State	merged
Merged by	Amar Takhar
Merged at	2024-05-18T04:02:23.243Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Chris Johns
Created	2024-05-16T16:53:32.583Z
Updated	2024-05-18T04:02:24.844Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/10
Commit	335051ef514d4a5dfb87730ece56e4efc3e8a7e6

Summary

Closes #8

Author: Gedare Bloom 2024-05-16T16:53:32.706Z

requested review from @chris

Author: Gedare Bloom 2024-05-16T16:53:32.726Z

assigned to @gedare

Author: Amar Takhar 2024-05-18T04:02:17.802Z

approved this merge request

3.1.2.72 5 - Resolve “Contributing guidance is outdated”

Id	5
State	merged
Merged by	Gedare Bloom
Merged at	2024-05-02T04:59:46.045Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Kinsey Moore
Created	2024-05-01T15:22:32.949Z
Updated	2024-05-02T04:59:48.265Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/5
Commit	9134a17428d704f8a9a55d80dd9147a3952fc563

Summary

Closes #5

Author: Gedare Bloom 2024-05-01T15:22:33.073Z

requested review from @opticron

Author: Gedare Bloom 2024-05-01T15:22:33.120Z

assigned to @gedare

Author: Chris Johns 2024-05-01T22:38:40.872Z

approved this merge request

Author: Amar Takhar 2024-05-01T22:41:28.873Z

Interesting this is still blocked I thought I set it up properly.

Author: Amar Takhar 2024-05-01T22:41:44.780Z

I think I might know what's going on.

Author: Gedare Bloom 2024-05-02T04:08:17.321Z

mentioned in merge request !6

3.1.2.73 3 - Resolve "Rewrite bug user story"

Id	3
State	merged
Merged by	Gedare Bloom
Merged at	2024-04-30T15:09:02.286Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Kinsey Moore
Created	2024-04-29T17:19:02.450Z
Updated	2024-04-30T15:09:03.819Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/3
Commit	c2404eada0240a8f5466c64e756ac5efa66309e2

Summary

Closes #4

Author: Gedare Bloom 2024-04-29T17:19:02.573Z

requested review from @opticron

Author: Gedare Bloom 2024-04-29T17:19:02.590Z

assigned to @gedare

Author: Gedare Bloom 2024-04-29T17:36:15.978Z

added 1 commit

- 246c735b - user/support/bugs: rewrite bug user story toward gitlab

Compare with previous version

Author: Gedare Bloom 2024-04-29T17:36:24.571Z

marked this merge request as **ready**

Author: Amar Takhar 2024-04-29T20:11:12.670Z

approved this merge request

Author: Kinsey Moore 2024-04-30T14:23:25.434Z

added 3 commits

- 246c735b...e327f319 - 2 commits from branch `main`
- c2404ead - user/support/bugs: rewrite bug user story toward gitlab

Compare with previous version

3.1.2.74 1 - Resolve “Rewrite trac links to gitlab”

Id	1
State	merged
Merged by	Gedare Bloom
Merged at	2024-04-29T20:14:47.265Z
Assignee(s)	Gedare Bloom
Created	2024-04-29T14:59:25.659Z
Updated	2024-04-29T20:14:48.134Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/1
Commit	e327f3191baa1a3b0c2968021d653c85cd3ac7f5

Summary

Closes #2

Author: Gedare Bloom 2024-04-29T14:59:25.843Z

assigned to @gedare

Author: Gedare Bloom 2024-04-29T15:21:27.666Z

added 2 commits

- 3dcc9f20 - user/zynqmp-rpu: Add load and debug information
- 5e0a4381 - common: rewrite trac links to gitlab

Compare with previous version

Author: Gedare Bloom 2024-04-29T15:21:49.244Z

marked this merge request as **ready**

Author: Amar Takhar 2024-04-29T20:14:37.024Z

I’m guessing this is not supposed to be part of this merge request?

Author: Gedare Bloom 2024-04-29T20:14:16.061Z

changed this file in version 2 of the diff

Author: Gedare Bloom 2024-04-29T20:14:16.301Z

added 2 commits

- 6a0e16b9 - 1 commit from branch `main`
- e327f319 - common: rewrite trac links to gitlab

Compare with previous version

Author: Gedare Bloom 2024-04-29T20:14:37.042Z

resolved all threads

3.1.2.75 2 - Resolve “sync git.rtems.org”

Id	2
State	merged
Merged by	Gedare Bloom
Merged at	2024-04-29T20:13:42.255Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Kinsey Moore
Created	2024-04-29T15:09:24.503Z
Updated	2024-04-29T20:13:43.384Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/2
Commit	6a0e16b96d354c063bdcc8665b6c007494eeb1fd

Summary

Closes #3

Author: Gedare Bloom 2024-04-29T15:09:24.630Z

requested review from @opticron

Author: Gedare Bloom 2024-04-29T15:09:24.652Z

assigned to @gedare

Author: Gedare Bloom 2024-04-29T15:15:12.556Z

added 1 commit

- 6a0e16b9 - user/zynqmp-rpu: Add load and debug information

Compare with previous version

Author: Gedare Bloom 2024-04-29T15:15:20.516Z

marked this merge request as **ready**

Author: Amar Takhar 2024-04-29T20:10:48.911Z

approved this merge request

3.1.2.76 118 - Make All the changes. (closed)

Id	118
State	closed
Closed by	vinay sagar
Created	2025-01-14T21:03:09.543Z
Closed	2025-01-15T13:39:23.935Z
Updated	2025-09-19T02:39:16.861Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/118
Commit	84b975b32a3c3f56e27322350be8fbb2f550babd

Summary

- Created a duplicated content directory to common directory and add the duplicate contents.
- include the content to required docs place.

Author: vinay sagar 2025-01-15T04:39:13.806Z

marked this merge request as **ready**

Author: vinay sagar 2025-01-15T04:39:13.843Z

changed the description

Author: vinay sagar 2025-01-15T04:40:48.855Z

added 4 commits

- e7336a29...0a607462 - 3 commits from branch `rtems/docs:main`
- b32aa7e0 - Make All the changes.

Compare with previous version

Author: vinay sagar 2025-01-15T04:48:01.314Z

added 2 commits

- e7336a29 - Make All the changes.

- 84b975b3 - Merge branch 'TEST-49' of https://gitlab.rtems.org/Vinay_Sagar/rtems-docs into TEST-49

Compare with previous version

3.1.2.77 122 - bsps: this is some pulls. (closed)

Id	122
State	closed
Closed by	vinay sagar
Created	2025-01-15T13:34:02.151Z
Closed	2025-01-15T13:39:24.515Z
Updated	2025-09-19T02:39:15.959Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/122
Commit	2b131ad8892b4337729a799c85bb1f5d61ed5bf7

Summary

bsps: this is some pulls.

bsps: this is some pulls.

3.1.2.78 121 - Main (closed)

Id	121
State	closed
Closed by	vinay sagar
Created	2025-01-15T13:02:40.546Z
Closed	2025-01-15T13:28:01.964Z
Updated	2025-09-19T02:39:14.852Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/121
Commit	8d3016c312df6bb7349d528e503c6b20dd2ae5e2

Summary

Author: vinay sagar 2025-01-15T13:21:13.965Z

added 5 commits

- e2d48b65 - bsps: his is some pulls.
- e4285c03 - beagle: add note on u-boot usage
- c876c81b - user: add host documentation for Rocky Linux
- 2e77add7 - user: update guidance for building on Ubuntu
- 8d3016c3 - Merge branch 'main' of https://gitlab.rtems.org/Vinay_Sagar/rtems-docs

Compare with previous version

3.1.2.79 7 - CODEOWNERS: mark general approvers as optional and add maintainer approvers (closed)

Id	7
State	closed
Assignee(s)	Amar Takhar
Closed by	Gedare Bloom
Created	2024-05-02T04:51:00.535Z
Closed	2024-05-02T05:08:06.500Z
Updated	2024-05-02T05:08:06.479Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/7
Commit	e59b13dd40f52a3d831967795b70a1681acbb84b

Summary

If this pattern works, we can use it on other repos (other than rtems.git)

Closes #6

Author: Gedare Bloom	2024-05-02T04:51:00.681Z

assigned to @amar

Author: Gedare Bloom	2024-05-02T05:08:06.016Z

the CODEOWNERS file is not modified through an MR

3.1.2.80 6 - Draft: Resolve “Merge Request Approval process is broken” (closed)

Id	6
State	closed
Assignee(s)	Amar Takhar
Closed by	Gedare Bloom
Created	2024-05-02T04:07:33.161Z
Closed	2024-05-02T04:49:03.064Z
Updated	2024-05-02T04:49:03.051Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/6
Commit	b1013983bea96c012e89c84b3847d9782e544d1c

Summary

Closes #6

Author: Gedare Bloom 2024-05-02T04:07:33.299Z

assigned to @amar

Author: Gedare Bloom 2024-05-02T04:08:16.735Z

If this looks good, I would like to test the logic out here and see if it frees up the blocked !5

If this pattern works, we can adopt it to the other repos (other than RTEMS.git).

3.1.2.81 4 - Resolve “Contributing guidance is outdated” (closed)

Id	4
State	closed
Assignee(s)	Gedare Bloom
Reviewer(s)	Kinsey Moore
Closed by	Gedare Bloom
Created	2024-04-29T17:47:02.875Z
Closed	2024-05-01T14:41:47.430Z
Updated	2024-05-01T14:41:47.416Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/4
Commit	6cbff66b666a3a997aa31b8dd48e90f8e11d3480

Summary

Closes #5

Author: Gedare Bloom 2024-04-29T17:47:03.007Z

requested review from @opticron

Author: Gedare Bloom 2024-04-29T17:47:03.299Z

assigned to @gedare

Author: Gedare Bloom 2024-04-29T20:03:59.462Z

added 3 commits

- dae2f951 - user: update installation section
- 855c6b36 - user: update contributing guidance in Support section
- 62d20bc9 - user: update merge approval description

Compare with previous version

Author: Gedare Bloom 2024-04-29T20:04:19.619Z

marked this merge request as **ready**

Author: Amar Takhar 2024-04-29T20:11:40.436Z

approved this merge request

Author: Kinsey Moore 2024-04-30T14:23:35.407Z

added 5 commits

- 62d20bc9...e327f319 - 2 commits from branch `main`
- b1237168 - user: update installation section
- 65157c46 - user: update contributing guidance in Support section
- 6b21418f - user: update merge approval description

Compare with previous version

Author: Gedare Bloom 2024-04-30T15:10:00.882Z

added 4 commits

- c2404ead - 1 commit from branch `main`
- b773c0af - user: update installation section
- d25958d4 - user: update contributing guidance in Support section
- 6cbff66b - user: update merge approval description

Compare with previous version

Author: Gedare Bloom 2024-04-30T15:11:36.326Z

This needs to be updated to reflect using forks and not direct MR from an Issue. Also may write documentation how to undo such a direct MR from an Issue and use this MR as a test case for the same.

3.2 RTEMS / Packages / LittlevGL

Go to *Issues* (page 796) or *Merge Requests* (page 804)

Issues Summary

4 - Waf update requires an update rtems_waf (page 797)
3 - Update waf to 2.1.4 : rtems/pkg/rtems-littlevgl (page 798)
2 - LittleVGL URL Broken (page 796)
1 - Update the rtems_waf submodule to GitLab (page 803)

Merge Requests Summary

5 - waf: Update waf to waf-2.1.4 (page 804)
3 - Update URLs to GitLab (page 805)
2 - Fix lvgl documentation URL and building the library (page 805)
1 - Update rtems_waf location (page 3307)

3.2.1 Issues

3.2.1.1 2 - LittleVGL URL Broken

Id	2
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Christian Mauderer
Closed by	Amar Takhar
Created	2024-03-19T15:26:29.000Z
Closed	2024-06-26T20:04:28.940Z
Updated	2025-09-19T01:03:40.084Z
Milestone	6.1
Labels	priority::normal, tickettype::defect
Link	https://gitlab.rtems.org/rtems/pkg/rtems-littlevgl/-/work_items/2
Merges	1

The URL https://docs.littlevgl.com/en/html/index.html used in the README.md appears to be broken.

If LittleVGL changed their domain or organization, rtems-littlevgl needs a review and update.

Author: Joel Sherrill 2024-06-11T14:33:01.613Z

assigned to @tracmigrate

Author: Joel Sherrill 2024-03-19T15:26:51.000Z

- **Owner** set to Christian Mauderer
- **Status** changed from *new* to *assigned*

Author: Joel Sherrill 2024-06-11T14:33:01.858Z

moved from rtems/rtos/rtems#5001

Author: Christian Mauderer 2024-06-12T05:58:21.564Z

changed the description

Author: Christian Mauderer 2024-06-12T05:58:21.615Z

assigned to @c-mauderer and unassigned @tracmigrate

Author: Christian Mauderer 2024-06-24T18:50:31.921Z

mentioned in merge request !2

3.2.1.2 4 - Waf update requires an update rtems_waf

Id	4
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-12-22T00:03:50.377Z
Closed	2024-12-22T03:39:29.503Z
Updated	2024-12-22T03:39:29.516Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-littlevgl/-/work_items/4
Merges	0

Summary

Updating `waf` to `waf-2.1.4` requires `rtems_waf` to be updated to fix the `opt.option_groups` call.

Author: Chris Johns 2024-12-22T00:03:50.522Z

assigned to @chris

Author: Chris Johns 2024-12-22T00:03:50.831Z

Author: Chris Johns 2024-12-22T00:07:59.583Z

mentioned in merge request !5

3.2.1.3 3 - Update waf to 2.1.4 : rtems/pkg/rtems-littlevgl

Id	3
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-12-04T22:18:45.763Z
Closed	2024-12-22T03:34:58.636Z
Updated	2024-12-22T03:34:58.649Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-littlevgl/-/work_items/3
Merges	0

Summary

The latest verison of waf fixes several issues on Windows. We also have a huge inconsistency in the version we're running which we should probably fix:

```
./rtems-deployment/waf       waf 2.0.24 (1af97c71f5a6756abf36d0f78ed8fd551596d7cb)
./rtems-docs/waf             waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
./rtems-examples/waf         waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-libbsd/waf           waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-littlevgl/waf        waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-lwip/waf             waf 2.0.18 (314689b8994259a84f0de0aaef74d7ce91f541ad)
./rtems-net-legacy/waf       waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems-net-services/waf     waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-tools/waf            waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems/waf                  waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
```

Steps to reproduce

3.2.1.3.2.1 Pre-set options

Author: Amar Takhar 2024-11-16T20:21:25.689Z

marked this issue as blocking rtems/docs/rtems-docs#54

Author: Amar Takhar 2024-11-16T20:21:31.439Z

changed the description

Author: Gedare Bloom 2024-11-17T00:11:44.128Z

Should we automate an approach to keep all our repos in sync with waf version?

Author: Amar Takhar 2024-11-17T00:19:39.724Z

Yeah I already have that written down but it's not that easy. We need to think about the workflow of how this should happen. There needs to be a process to test the new version against all the repositories to make sure it works and then update so we need to be more deliberate about it.

I have some ideas about it but the procedural part needs to be discussed: what's important enough to upgrade for and do we want to support one repo getting ahead of others to avoid increasing the size of our repositories or whether we care or not. Clearly the above is not great having `2.0` vs `2.1` Having said that `2.1.4` has fixes we really want for Windows.

Author: Amar Takhar 2024-11-17T01:08:46.506Z

See also: https://gitlab.com/ita1024/waf/-/issues/2452

Author: Amar Takhar 2024-11-17T03:50:21.836Z

assigned to @amar

Author: Amar Takhar 2024-11-17T04:22:19.639Z

After this update is done I'll create another issue for the next update. As we require an update we should collect reasons, issues and MRs until we trigger the next update. Of course a critical issue should be an immediate update but smaller things for instance if it's specific to one repo we can let that one repo get out of sync until we have more of are reason to update project-wide. otherwise we may end up update too often.

Author: Amar Takhar 2024-11-18T20:19:26.807Z

mentioned in merge request rtems/rtos/rtems!318

Author: Amar Takhar 2024-11-20T23:35:55.569Z

mentioned in commit amar/rtems-deployment@c8fd177b03fb5130697a7411d716f1542c6175b1

Author: Amar Takhar 2024-11-20T23:36:01.722Z

mentioned in commit amar/rtems-docs@ff70333104a0aaa05877df336d1bb1672b205b73

Author: Amar Takhar 2024-11-20T23:36:04.790Z

mentioned in commit amar/rtems-examples@8056cf5ccaaff51477096bdd3ae3850cecee957d

Author: Amar Takhar 2024-11-20T23:36:05.900Z

mentioned in commit amar/rtems-libbsd@2cac334d6a21b6006dfee4613d3da78eec26b1c8

Author: Amar Takhar 2024-11-20T23:36:08.424Z

mentioned in commit amar/rtems-littlevgl@7831e7125a6efe283e3c65efec1e24a96fdfc2ac

Author: Amar Takhar 2024-11-20T23:36:10.195Z

mentioned in commit amar/rtems-lwip@24f46d35dedf08807d6088443ab5c82e95c36ed8

Author: Amar Takhar 2024-11-20T23:36:12.174Z

mentioned in commit amar/rtems-net-legacy@8845824db452168140610db037ea0359e363cf1d

Author: Amar Takhar 2024-11-20T23:36:14.636Z

mentioned in commit amar/rtems-net-services@7bcc152d49267e5b5ca3c00c1707cc40b2ef95b6

Author: Amar Takhar 2024-11-20T23:36:17.086Z

mentioned in commit amar/rtems-tools@12a94b63506ad84ec1c4feed56d3ce2e85475d85

Author: Amar Takhar 2024-11-20T23:36:21.347Z

mentioned in commit amar/rtems@62baa874b823fea35b7cdea78734d277ada7b455

Author: Amar Takhar 2024-11-20T23:39:31.029Z

mentioned in merge request rtems/rtos/rtems!323

Author: Amar Takhar 2024-11-20T23:39:48.843Z

mentioned in merge request rtems/tools/rtems-tools!44

Author: Amar Takhar 2024-11-20T23:40:09.031Z

mentioned in merge request rtems/pkg/rtems-net-services!9

Author: Amar Takhar 2024-11-20T23:40:25.975Z

mentioned in merge request rtems/pkg/rtems-net-legacy!6

Author: Amar Takhar 2024-11-20T23:40:33.280Z

mentioned in merge request rtems/pkg/rtems-lwip!11

Author: Amar Takhar 2024-11-20T23:40:41.082Z

mentioned in merge request rtems/pkg/rtems-littlevgl!4

Author: Amar Takhar 2024-11-20T23:40:53.742Z

mentioned in merge request rtems/pkg/rtems-libbsd!25

Author: Amar Takhar 2024-11-20T23:41:01.964Z

mentioned in merge request rtems/rtos/rtems-examples!5

Author: Amar Takhar 2024-11-20T23:41:10.912Z

mentioned in merge request rtems/docs/rtems-docs!89

Author: Amar Takhar 2024-11-20T23:41:24.453Z

mentioned in merge request rtems/tools/rtems-deployment!13

Author: Gedare Bloom 2024-11-21T00:03:44.787Z

mentioned in commit gedare/rtems-docs@2f1694269539dc59177b203df1b8481ee52f989a

Author: Gedare Bloom 2024-11-21T00:04:29.322Z

mentioned in merge request rtems/docs/rtems-docs!85

Author: Gedare Bloom 2024-11-21T00:06:48.926Z

mentioned in commit gedare/rtems-docs@816d14787b8bb89e7830c9885946fa8dc6dadf79

Author: Amar Takhar 2024-11-22T10:02:29.944Z

mentioned in commit amar/rtems-docs@24cf46b966d77bada338422de2ead632f79beb89

Author: Amar Takhar 2024-11-24T23:02:01.254Z

mentioned in commit amar/rtems-docs@7582461dbcff0287bb8bc1a615734696a416b266

Author: Amar Takhar 2024-11-24T23:03:10.673Z

mentioned in commit amar/rtems-examples@ac68170083fc3b2e5ce9a63a6c64b4b2e5d7915f

Author: Amar Takhar 2024-11-24T23:03:49.371Z

mentioned in commit amar/rtems-libbsd@a2d65d78fbe832a50ca6c986936c9b0c16647739

Author: Amar Takhar 2024-11-24T23:06:27.181Z

mentioned in commit amar/rtems@03c5b7e88f165ea56487e78822cf0b8595c79cfa

Author: Amar Takhar 2024-11-25T01:33:09.501Z

mentioned in commit amar/rtems-docs@b9af7d8fad94c310f7d973c10b5a7c2da8d4e7e8

Author: Amar Takhar 2024-12-04T21:56:00.650Z

mentioned in commit amar/rtems@8d71cc5dc4a0e11fd7b8d7b5b94bb2e54d3a6f9e

Author: Gedare Bloom 2024-12-04T22:16:38.325Z

cloned to rtems/docs/rtems-docs#62

Author: Gedare Bloom 2024-12-04T22:17:50.530Z

cloned to rtems/tools/rtems-deployment#3

Author: Gedare Bloom 2024-12-04T22:18:09.565Z

cloned to rtems/rtos/rtems-examples#5

Author: Gedare Bloom 2024-12-04T22:18:26.985Z

cloned to rtems/pkg/rtems-libbsd#22

Author: Gedare Bloom 2024-12-04T22:18:50.312Z

cloned from rtems/rtos/rtems#5153

Author: Gedare Bloom 2024-12-04T22:18:45.925Z

assigned to @amar

Author: Gedare Bloom 2024-12-04T22:21:48.576Z

Author: Gedare Bloom 2024-12-04T22:46:42.579Z

Author: Chris Johns 2024-12-21T23:34:20.232Z

changed title from **Update waf to 2.1.4** to **Update waf to 2.1.4{+ : rtems/pkg/rtems-littlevgl+}**

Author: Chris Johns 2024-12-22T00:07:59.260Z

mentioned in merge request !5

3.2.1.4 1 - Update the rtems_waf submodule to GitLab

Id	1
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Christian Mauderer
Closed by	Chris Johns
Created	2024-06-11T09:52:20.389Z
Closed	2024-06-13T02:22:02.096Z
Updated	2024-06-13T02:22:02.138Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-littlevgl/-/work_items/1
Merges	1

Update the `rtems_waf` submodule to point to `gitlab.rtems.org`

Author: Christian Mauderer 2024-06-12T05:58:40.798Z

assigned to @c-mauderer

Author: Kinsey Moore 2024-06-12T15:47:07.661Z

mentioned in merge request !1

3.2.2 Merge Requests

3.2.2.1 5 - waf: Update waf to waf-2.1.4

Id	5
State	merged
Merged by	Amar Takhar
Merged at	2024-12-22T02:18:26.367Z
Assignee(s)	Chris Johns
Reviewer(s)	Joel Sherrill, Kinsey Moore, Amar Takhar
Created	2024-12-22T00:07:52.336Z
Updated	2024-12-22T02:18:31.342Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-littlevgl/-/merge_requests/5
Commit	74483de95abb185f6194e810b725d12b73c6a6cc

Summary

1. Update waf to waf-2.1.4
2. Update `rtems_waf` to get the options handling

Closes #3 #4

Author: Chris Johns 2024-12-22T00:07:52.505Z

requested review from @amar, @joel, and @opticron

Author: Chris Johns 2024-12-22T00:07:52.520Z

assigned to @chris

Author: Chris Johns 2024-12-22T00:13:25.029Z

changed target branch from `main` to `6`

Author: Amar Takhar 2024-12-22T02:18:08.958Z

approved this merge request

3.2.2.2 2 - Fix lvgl documentation URL and building the library

Id	2
State	merged
Merged by	Amar Takhar
Merged at	2024-06-26T20:04:28.691Z
Created	2024-06-24T18:50:29.071Z
Updated	2024-08-10T00:40:17.050Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-littlevgl/-/merge_requests/2
Commit	2022f56af43f69c357a953b47604cc40298de9b3

Summary

- Fix lvgl documentation URL (Fixes #2)
- Fix building of the library

Note: The library builds again with this. But I did not test whether it runs.

Author: Kinsey Moore 2024-06-25T17:49:39.282Z

approved this merge request

Author: Amar Takhar 2024-06-26T20:04:26.056Z

approved this merge request

3.2.2.3 3 - Update URLs to GitLab

Id	3
State	merged
Merged by	Vijay Banerjee
Merged at	2024-07-27T22:10:39.651Z
Assignee(s)	Amar Takhar
Created	2024-07-27T00:46:40.286Z
Updated	2024-07-27T22:10:40.916Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/pkg/rtems-littlevgl/-/merge_requests/3
Commit	debed02c7a7ee77e57efd63040a2371d705f9e77

Summary

Author: Amar Takhar 2024-07-27T00:46:40.471Z

assigned to @amar

Author: Kinsey Moore 2024-07-27T21:32:12.530Z

approved this merge request

Author: Amar Takhar 2024-07-27T21:54:46.239Z

This should be OK since it's a docs change hmm

Author: Vijay Banerjee 2024-07-27T22:08:46.488Z

approved this merge request

3.2.2.4 1 - Update rtems_waf location

Id	1
State	merged
Merged by	Chris Johns
Merged at	2024-06-13T02:22:01.897Z
Assignee(s)	Kinsey Moore
Created	2024-06-12T15:47:03.606Z
Updated	2024-06-13T02:22:03.068Z
Milestone	6.1
Labels	tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-littlevgl/-/merge_requests/1
Commit	27de236130b99be2067924b282b7994cc573027a

Summary

Closes #1

Author: Kinsey Moore 2024-06-12T15:47:03.788Z

assigned to @opticron

Author: Chris Johns 2024-06-13T02:21:58.890Z

approved this merge request

3.3 RTEMS / Packages / Legacy Networking Demos

Go to *Issues* (page 807) or *Merge Requests* (page 808)

Issues Summary

1 - SUPPORT file (page 807)

Merge Requests Summary

2 - Move contents of SUPPORT file into README.md (page 808)
1 - Convert README, DEBUG. and STATUS to MarkDown* (page 809)

3.3.1 Issues

3.3.1.1 1 - SUPPORT file

Id	1
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Amar Takhar, Joel Sherrill
Closed by	Joel Sherrill
Created	2024-07-20T05:22:02.717Z
Closed	2024-07-25T23:19:48.229Z
Updated	2024-07-25T23:19:48.314Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy-demos/-/work_items/1
Merges	1

Summary

What can we do with the `SUPPORT` file. Can it be merged into `README.md` when !1 is merged or should we delete it?

@joel?

Author: Amar Takhar 2024-07-20T05:22:02.823Z

assigned to @amar and @joel

Author: Joel Sherrill 2024-07-20T16:21:30.070Z

Feel free to merge it. But the contact information is old. Our area code is 256 and Google says that was split from 205 in 1998.

We no longer have a fax.

Include this link: https://rtems.com/contact

Copy the address from there. We still have the 256-722-9985 number

Author: Amar Takhar 2024-07-20T18:10:49.906Z

mentioned in merge request !2

3.3.2 Merge Requests

3.3.2.1 2 - Move contents of SUPPORT file into README.md

Id	2
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-25T23:19:47.992Z
Assignee(s)	Amar Takhar
Created	2024-07-20T18:10:46.418Z
Updated	2024-07-25T23:19:50.231Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy-demos/-/merge_requests/2
Commit	8fbf24b7058e01d04f65190a8723fe2039fd2681

Summary

Move contents of SUPPORT file into README.md

This removes all the static contact information and links directly to OARs website so we no longer have to worry about outdated information.

Closes #1

Author: Amar Takhar 2024-07-20T18:10:46.578Z

assigned to @amar

Author: Kinsey Moore 2024-07-25T22:29:15.831Z

added 4 commits

- d3253350...eec17432 - 2 commits from branch `rtems/pkg:main`
- 03cfacf3 - Convert README, DEBUG.* and STATUS to MarkDown
- fd14fc70 - Move contents of SUPPORT file into README.md

Compare with previous version

Author: Kinsey Moore 2024-07-25T23:01:31.982Z

added 2 commits

- 9937df43 - 1 commit from branch `rtems/pkg:main`
- 8fbf24b7 - Move contents of SUPPORT file into README.md

Compare with previous version

Author: Kinsey Moore 2024-07-25T23:01:45.832Z

approved this merge request

Author: Joel Sherrill 2024-07-25T23:19:43.890Z

approved this merge request

3.3.2.2 1 - Convert README, DEBUG.* and STATUS to MarkDown

Id	1
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-25T22:49:58.741Z
Assignee(s)	Amar Takhar
Reviewer(s)	Joel Sherrill
Created	2024-07-09T08:03:26.621Z
Updated	2024-07-25T22:50:00.450Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy-demos/-/merge_requests/1
Commit	9937df43d65972ef5347fe274f37d047d0181e94

Summary

Author: Amar Takhar 2024-07-09T08:03:26.769Z

requested review from @joel

Author: Amar Takhar 2024-07-09T08:03:26.785Z

assigned to @amar

Author: Amar Takhar 2024-07-09T08:04:10.712Z

@joel can that SUPPORT file be removed? If not what contents can I put into the README file. Thanks.

Author: Gedare Bloom 2024-07-10T05:46:11.237Z

approved this merge request

Author: Amar Takhar 2024-07-20T05:22:03.089Z

mentioned in issue #1

Author: Amar Takhar 2024-07-20T21:11:58.198Z

added 2 commits

- 083d05e6 - 1 commit from branch `rtems/pkg:main`
- fdf2696c - Convert README, DEBUG.* and STATUS to MarkDown

Compare with previous version

Author: Amar Takhar 2024-07-20T21:20:22.473Z

added 2 commits

- eec17432 - 1 commit from branch `rtems/pkg:main`
- c15a275f - Convert README, DEBUG.* and STATUS to MarkDown

Compare with previous version

Author: Kinsey Moore 2024-07-25T22:37:58.286Z

Given the mixed single quotes, the syntax highlighting suggests this is going to render incorrectly.

Author: Amar Takhar 2024-07-25T22:37:58.286Z

I didn't go through the content to fix anything but yeah I'll fix that.

Author: Amar Takhar 2024-07-25T22:37:58.286Z

Fixed, thanks!

Author: Kinsey Moore 2024-07-25T22:37:58.286Z

It looks like it's still messed up between line 42 and 53 since snoop is enclosed by non-matching quotes.

Author: Amar Takhar 2024-07-25T22:37:58.286Z

Figures I did search for more ”s but it’s right below the only other two in the file, doh, fixed.

Author: Amar Takhar 2024-07-25T22:37:02.495Z

changed this line in version 5 of the diff

Author: Amar Takhar 2024-07-25T22:24:29.154Z

resolved all threads

Author: Amar Takhar 2024-07-25T22:26:10.432Z

added 1 commit

- d2590454 - Convert README, DEBUG.* and STATUS to MarkDown

Compare with previous version

Author: Amar Takhar 2024-07-25T22:26:22.620Z

reset approvals from @gedare by pushing to the branch

Author: Kinsey Moore 2024-07-25T22:27:30.756Z

resolved all threads

Author: Amar Takhar 2024-07-25T22:37:03.534Z

added 1 commit

- 5f3f1905 - Convert README, DEBUG.* and STATUS to MarkDown

Compare with previous version

Author: Kinsey Moore 2024-07-25T22:37:46.545Z

approved this merge request

Author: Kinsey Moore 2024-07-25T22:37:58.308Z

resolved all threads

Author: Kinsey Moore 2024-07-25T22:38:00.208Z

added 3 commits

- 5f3f1905...eec17432 - 2 commits from branch `rtems/pkg:main`
- 9937df43 - Convert README, DEBUG.* and STATUS to MarkDown

Compare with previous version

Author: Joel Sherrill 2024-07-25T22:49:37.462Z

approved this merge request

3.4 RTEMS / Packages / Network Services

Go to *Issues* (page 23) or *Merge Requests* (page 24)

Issues Summary

9 - Update rtems_waf to fix VERSION load bug (page 813)
7 - Update waf to 2.1.4 : rtems/pkg/rtems-net-services (page 814)
4 - Build failure of NTP (page 820)
3 - Net services failing to build (page 821)
2 - Test binaries are installed in target directory (page 823)
1 - Update the rtems_waf submodule to Gitlab (page 824)

Merge Requests Summary

14 - rtems_waf: Update to fix loading VERSION (page 825)
10 - waf: Update waf to waf-2.1.4 (page 825)
8 - ntp: Ensure socketpair sockets are closed on exit (page 826)
7 - netservices.py: Prevent installation of test binaries (page 827)
5 - bsd/ntp: Handle exit() calls throughout the NTP codebase (page 827)
4 - bsd/ntp: Correct spelling in ntpsim.c (page 829)
3 - Rename COPYING.bsd -> LICENSE.md (page 832)
2 - Convert README to MarkDown (page 830)
1 - Update rtems_waf location (page 3307)

3.4.1 Issues

3.4.1.1 9 - Update rtems_waf to fix VERSION load bug

Id	9
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2025-01-08T03:45:11.964Z
Closed	2025-01-14T03:06:27.777Z
Updated	2025-01-14T03:06:27.803Z
Milestone	6.1
Labels	pkg::network-services
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/work_items/9
Merges	0

Update the `rtems_waf` submodule to fix a bug loading `VERSION` in releases.

Author: Chris Johns 2025-01-08T03:45:12.107Z

cloned from #8

Author: Chris Johns 2025-01-08T03:45:12.027Z

assigned to @chris

Author: Chris Johns 2025-01-08T03:45:34.181Z

Author: Chris Johns 2025-01-08T03:47:25.965Z

https://gitlab.rtems.org/rtems/tools/rtems_waf/-/issues/5

Author: Chris Johns 2025-01-08T04:46:44.895Z

mentioned in merge request !14

Author: Kinsey Moore 2025-01-14T03:06:27.431Z

The associated MR has been merged.

3.4.1.2 7 - Update waf to 2.1.4 : rtems/pkg/rtems-net-services

Id	7
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-12-04T22:19:33.407Z
Closed	2024-12-22T03:34:39.732Z
Updated	2024-12-22T03:34:39.745Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/work_items/7
Merges	0

Summary

The latest verison of waf fixes several issues on Windows. We also have a huge inconsistency in the version we're running which we should probably fix:

```
./rtems-deployment/waf       waf 2.0.24 (1af97c71f5a6756abf36d0f78ed8fd551596d7cb)
./rtems-docs/waf             waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
./rtems-examples/waf         waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-libbsd/waf           waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-littlevgl/waf        waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-lwip/waf             waf 2.0.18 (314689b8994259a84f0de0aaef74d7ce91f541ad)
```

(continues on next page)

(continued from previous page)

```
./rtems-net-legacy/waf       waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems-net-services/waf     waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-tools/waf            waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems/waf                  waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
```

Steps to reproduce

3.4.1.2.2.1 Pre-set options

Author: Amar Takhar 2024-11-16T20:21:25.689Z

marked this issue as blocking rtems/docs/rtems-docs#54

Author: Amar Takhar 2024-11-16T20:21:31.439Z

changed the description

Author: Gedare Bloom 2024-11-17T00:11:44.128Z

Should we automate an approach to keep all our repos in sync with waf version?

Author: Amar Takhar 2024-11-17T00:19:39.724Z

Yeah I already have that written down but it's not that easy. We need to think about the workflow of how this should happen. There needs to be a process to test the new version against all the repositories to make sure it works and then update so we need to be more deliberate about it.

I have some ideas about it but the procedural part needs to be discussed: what's important enough to upgrade for and do we want to support one repo getting ahead of others to avoid increasing the size of our repositories or whether we care or not. Clearly the above is not great having `2.0` vs `2.1` Having said that `2.1.4` has fixes we really want for Windows.

Author: Amar Takhar 2024-11-17T01:08:46.506Z

See also: https://gitlab.com/ita1024/waf/-/issues/2452

Author: Amar Takhar 2024-11-17T03:50:21.836Z

assigned to @amar

Author: Amar Takhar 2024-11-17T04:22:19.639Z

After this update is done I'll create another issue for the next update. As we require an update we should collect reasons, issues and MRs until we trigger the next update. Of course a critical issue should be an immediate update but smaller things for instance if it's specific to one repo we can let that one repo get out of sync until we have more of are reason to update project-wide. otherwise we may end up update too often.

Author: Amar Takhar 2024-11-18T20:19:26.807Z

mentioned in merge request rtems/rtos/rtems!318

Author: Amar Takhar 2024-11-20T23:35:55.569Z

mentioned in commit amar/rtems-deployment@c8fd177b03fb5130697a7411d716f1542c6175b1

Author: Amar Takhar 2024-11-20T23:36:01.722Z

mentioned in commit amar/rtems-docs@ff70333104a0aaa05877df336d1bb1672b205b73

Author: Amar Takhar 2024-11-20T23:36:04.790Z

mentioned in commit amar/rtems-examples@8056cf5ccaaff51477096bdd3ae3850cecee957d

Author: Amar Takhar 2024-11-20T23:36:05.900Z

mentioned in commit amar/rtems-libbsd@2cac334d6a21b6006dfee4613d3da78eec26b1c8

Author: Amar Takhar 2024-11-20T23:36:08.424Z

mentioned in commit amar/rtems-littlevgl@7831e7125a6efe283e3c65efec1e24a96fdfc2ac

Author: Amar Takhar 2024-11-20T23:36:10.195Z

mentioned in commit amar/rtems-lwip@24f46d35dedf08807d6088443ab5c82e95c36ed8

Author: Amar Takhar 2024-11-20T23:36:12.174Z

mentioned in commit amar/rtems-net-legacy@8845824db452168140610db037ea0359e363cf1d

Author: Amar Takhar 2024-11-20T23:36:14.636Z

mentioned in commit amar/rtems-net-services@7bcc152d49267e5b5ca3c00c1707cc40b2ef95b6

Author: Amar Takhar 2024-11-20T23:36:17.086Z

mentioned in commit amar/rtems-tools@12a94b63506ad84ec1c4feed56d3ce2e85475d85

Author: Amar Takhar 2024-11-20T23:36:21.347Z

mentioned in commit amar/rtems@62baa874b823fea35b7cdea78734d277ada7b455

Author: Amar Takhar 2024-11-20T23:39:31.029Z

mentioned in merge request rtems/rtos/rtems!323

Author: Amar Takhar 2024-11-20T23:39:48.843Z

mentioned in merge request rtems/tools/rtems-tools!44

Author: Amar Takhar 2024-11-20T23:40:09.031Z

mentioned in merge request rtems/pkg/rtems-net-services!9

Author: Amar Takhar 2024-11-20T23:40:25.975Z

mentioned in merge request rtems/pkg/rtems-net-legacy!6

Author: Amar Takhar 2024-11-20T23:40:33.280Z

mentioned in merge request rtems/pkg/rtems-lwip!11

Author: Amar Takhar 2024-11-20T23:40:41.082Z

mentioned in merge request rtems/pkg/rtems-littlevgl!4

Author: Amar Takhar 2024-11-20T23:40:53.742Z

mentioned in merge request rtems/pkg/rtems-libbsd!25

Author: Amar Takhar 2024-11-20T23:41:01.964Z

mentioned in merge request rtems/rtos/rtems-examples!5

Author: Amar Takhar 2024-11-20T23:41:10.912Z

mentioned in merge request rtems/docs/rtems-docs!89

Author: Amar Takhar 2024-11-20T23:41:24.453Z

mentioned in merge request rtems/tools/rtems-deployment!13

Author: Gedare Bloom 2024-11-21T00:03:44.787Z

mentioned in commit gedare/rtems-docs@2f1694269539dc59177b203df1b8481ee52f989a

Author: Gedare Bloom 2024-11-21T00:04:29.322Z

mentioned in merge request rtems/docs/rtems-docs!85

Author: Gedare Bloom 2024-11-21T00:06:48.926Z

mentioned in commit gedare/rtems-docs@816d14787b8bb89e7830c9885946fa8dc6dadf79

Author: Amar Takhar 2024-11-22T10:02:29.944Z

mentioned in commit amar/rtems-docs@24cf46b966d77bada338422de2ead632f79beb89

Author: Amar Takhar 2024-11-24T23:02:01.254Z

mentioned in commit amar/rtems-docs@7582461dbcff0287bb8bc1a615734696a416b266

Author: Amar Takhar 2024-11-24T23:03:10.673Z

mentioned in commit amar/rtems-examples@ac68170083fc3b2e5ce9a63a6c64b4b2e5d7915f

Author: Amar Takhar 2024-11-24T23:03:49.371Z

mentioned in commit amar/rtems-libbsd@a2d65d78fbe832a50ca6c986936c9b0c16647739

Author: Amar Takhar 2024-11-24T23:06:27.181Z

mentioned in commit amar/rtems@03c5b7e88f165ea56487e78822cf0b8595c79cfa

Author: Amar Takhar 2024-11-25T01:33:09.501Z

mentioned in commit amar/rtems-docs@b9af7d8fad94c310f7d973c10b5a7c2da8d4e7e8

Author: Amar Takhar 2024-12-04T21:56:00.650Z

mentioned in commit amar/rtems@8d71cc5dc4a0e11fd7b8d7b5b94bb2e54d3a6f9e

Author: Gedare Bloom 2024-12-04T22:16:38.325Z

cloned to rtems/docs/rtems-docs#62

Author: Gedare Bloom 2024-12-04T22:17:50.530Z

cloned to rtems/tools/rtems-deployment#3

Author: Gedare Bloom 2024-12-04T22:18:09.565Z

cloned to rtems/rtos/rtems-examples#5

Author: Gedare Bloom 2024-12-04T22:18:26.985Z

cloned to rtems/pkg/rtems-libbsd#22

Author: Gedare Bloom 2024-12-04T22:18:50.350Z

cloned to rtems/pkg/rtems-littlevgl#3

Author: Gedare Bloom 2024-12-04T22:19:03.866Z

cloned to rtems/pkg/rtems-lwip#4

Author: Gedare Bloom 2024-12-04T22:19:19.835Z

cloned to rtems/pkg/rtems-net-legacy#3

Author: Gedare Bloom 2024-12-04T22:19:38.123Z

cloned from rtems/rtos/rtems#5153

Author: Gedare Bloom 2024-12-04T22:19:33.542Z

assigned to @amar

Author: Gedare Bloom 2024-12-04T22:21:49.981Z

Author: Gedare Bloom 2024-12-04T22:46:42.839Z

Author: Chris Johns 2024-12-21T23:32:31.201Z

changed title from **Update waf to 2.1.4** to **Update waf to 2.1.4{+ : rtems/pkg/rtems-net-services+}**

Author: Chris Johns 2024-12-21T23:47:48.045Z

mentioned in merge request !10

3.4.1.3 4 - Build failure of NTP

Id	4
State	closed
Type	ISSUE
Author	Ning Yang
Assignee(s)	Chris Johns
Closed by	Ning Yang
Created	2024-11-07T06:00:40.145Z
Closed	2024-11-13T09:25:06.361Z
Updated	2024-11-13T09:25:06.373Z
Milestone	6.1
Labels	network, pkg::network-services
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/work_items/4
Merges	0

```
./waf configure --prefix=$HOME/RTEMS_devel/rtems/6 --rtems-bsps aarch64/zynqmp_
↪qemu
./waf
```

!`image <https://gitlab.rtems.org/-/project/uploads/5e70942a9ed81de58dc22d9639062871/image.png>`_

Author: Ning Yang 2024-11-07T06:01:18.919Z

changed title from **build {-error.-}** to **build {+failed+}**

Author: Chris Johns 2024-11-07T23:21:46.404Z

assigned to @chris

Author: Chris Johns 2024-11-13T09:25:04.463Z

It looks like POSIX is not enabled in the RTEMS build. The `configure` here should check for POSIX being enabled and fail with an error.

Author: Ning Yang 2024-11-13T09:25:04.432Z

It works. Thanks!

Author: Chris Johns 2024-11-07T23:24:16.939Z

changed title from **{-b-}uild fail{-ed-}** to **{+B+}uild fail{+ure of NTP+}**

3.4.1.4 3 - Net services failing to build

Id	3
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-10-24T06:54:37.622Z
Closed	2024-10-28T21:01:47.247Z
Updated	2024-10-28T21:01:47.259Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/work_items/3
Merges	0

The build is failing with:

```
+ ./waf distclean configure '--prefix=/opt/work/xia/rtems/6' '--rtems-tools=/opt/work/chris/rtems/deploy/rtems-deployment.git/build/tmp/sb-500-staging' '--rtems=/opt/work/chris/rtems/deploy/rtems-deployment.git/build/tmp/sb-500-staging' '--rtems-bsp=aarch64/k26'
Traceback (most recent call last):
File "/opt/work/chris/rtems/deploy/rtems-deployment.git/build/rtems-net-services-419e923cf5414e8b5655c5906a71bdcf938c43de-x86_64-freebsd14.1-1/rtems-net-services-419e923cf5414e8b5655c5906a71bdcf938c43de/.waf3-2.1.2-5b48554f897113218781486acfe4d78e/waflib/Scripting.py", line 122, in waf_entry_point
run_commands()
File "/opt/work/chris/rtems/deploy/rtems-deployment.git/build/rtems-net-services-
```

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```
↪419e923cf5414e8b5655c5906a71bdcf938c43de-x86_64-freebsd14.1-1/rtems-net-
↪services-419e923cf5414e8b5655c5906a71bdcf938c43de/.waf3-2.1.2-
↪5b48554f897113218781486acfe4d78e/waflib/Scripting.py", line 181, in run_commands
parse_options()
File "/opt/work/chris/rtems/deploy/rtems-deployment.git/build/rtems-net-services-
↪419e923cf5414e8b5655c5906a71bdcf938c43de-x86_64-freebsd14.1-1/rtems-net-
↪services-419e923cf5414e8b5655c5906a71bdcf938c43de/.waf3-2.1.2-
↪5b48554f897113218781486acfe4d78e/waflib/Scripting.py", line 161, in parse_
↪options
ctx.execute()
File "/opt/work/chris/rtems/deploy/rtems-deployment.git/build/rtems-net-services-
↪419e923cf5414e8b5655c5906a71bdcf938c43de-x86_64-freebsd14.1-1/rtems-net-
↪services-419e923cf5414e8b5655c5906a71bdcf938c43de/.waf3-2.1.2-
↪5b48554f897113218781486acfe4d78e/waflib/Options.py", line 202, in execute
super(OptionsContext,self).execute()
File "/opt/work/chris/rtems/deploy/rtems-deployment.git/build/rtems-net-services-
↪419e923cf5414e8b5655c5906a71bdcf938c43de-x86_64-freebsd14.1-1/rtems-net-
↪services-419e923cf5414e8b5655c5906a71bdcf938c43de/.waf3-2.1.2-
↪5b48554f897113218781486acfe4d78e/waflib/Context.py", line 92, in execute
self.recurse([os.path.dirname(g_module.root_path)])
File "/opt/work/chris/rtems/deploy/rtems-deployment.git/build/rtems-net-services-
↪419e923cf5414e8b5655c5906a71bdcf938c43de-x86_64-freebsd14.1-1/rtems-net-
↪services-419e923cf5414e8b5655c5906a71bdcf938c43de/.waf3-2.1.2-
↪5b48554f897113218781486acfe4d78e/waflib/Context.py", line 133, in recurse
user_function(self)
File "/opt/work/chris/rtems/deploy/rtems-deployment.git/build/rtems-net-services-
↪419e923cf5414e8b5655c5906a71bdcf938c43de-x86_64-freebsd14.1-1/rtems-net-
↪services-419e923cf5414e8b5655c5906a71bdcf938c43de/wscript", line 62, in options
rtems.options(opt)
File "/opt/work/chris/rtems/deploy/rtems-deployment.git/build/rtems-net-services-
↪419e923cf5414e8b5655c5906a71bdcf938c43de-x86_64-freebsd14.1-1/rtems-net-
↪services-419e923cf5414e8b5655c5906a71bdcf938c43de/rtems_waf/rtems.py", line 46,␣
↪in options
copts = opt.option_groups['configure options']
~~~~~~~~~~~~~~~~~^^^^^^^^^^^^^^^^^^^^^
```

Author: Chris Johns 2024-10-24T06:54:37.998Z

assigned to @chris

Author: Chris Johns 2024-10-24T20:52:22.184Z

This is fixed in 419e923cf5414e8b5655c5906a71bdcf938c43de yet I am seeing a build issue with RTEMS Deployment which implies the RSB packages are not updated. I am testing the merge request rtems/tools/rtems-source-builder!71.

The RSB update patch has:

```
-%define rtems_net_services_version␣
↪9b08a578ceece64ffda5ae0271e2d66ddc112524
+%define rtems_net_services_version␣
↪419e923cf5414e8b5655c5906a71bdcf938c43de
```

Author: Chris Johns 2024-10-24T22:03:56.081Z

It looks like the submodule is not right when getting the tar from gitlab. The URL is from:

```
https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/archive/%{rtems_
↪net_services_version}/rtems-net-services-%{rtems_net_services_version}
↪.tar.%{rtems_net_services_ext}
```

Author: Chris Johns 2024-10-24T22:06:17.319Z

The bug is RSB net-service config needs to have the updated RTEMS Waf commit:

```
+ /usr/bin/bzip2 -dc /opt/work/chris/rtems/deploy/rtems-deployment.git/
↪sources/rtems_waf-68654b4f995382765605dc16917baad4bdbf7f7c.tar.bz2
```

Author: Chris Johns 2024-10-28T21:01:46.904Z

Fixed with the update to the RSB.

3.4.1.5 2 - Test binaries are installed in target directory

Id	2
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Chris Johns
Created	2024-09-30T22:03:06.726Z
Closed	2024-10-25T03:26:24.573Z
Updated	2024-10-25T03:26:24.643Z
Milestone	6.1
Labels	network
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/work_items/2
Merges	1

Summary

The test executables created as part of the build are not meant to be installed. These should be adjusted so that they are no longer installed in the bin directory under the prefix/install directory.

Steps to reproduce

Author: Kinsey Moore	2024-09-30T22:03:06.921Z

assigned to @opticron

Author: Kinsey Moore	2024-10-25T02:53:14.642Z

Looks like I need to fix rtems-lwip as well.

Author: Kinsey Moore	2024-10-25T03:13:45.321Z

mentioned in merge request !7

Author: Kinsey Moore	2024-10-25T03:15:13.506Z

mentioned in merge request rtems-lwip!7

3.4.1.6 1 - Update the rtems_waf submodule to Gitlab

Id	1
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Chris Johns
Created	2024-06-11T09:54:34.621Z
Closed	2024-06-13T02:22:48.359Z
Updated	2024-06-13T02:22:48.404Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/work_items/1
Merges	1

Update the `rtems_waf` submodule to `gitlab.rtems.org`

Author: Kinsey Moore	2024-06-12T15:43:55.285Z

mentioned in merge request !1

3.4.2 Merge Requests

3.4.2.1 14 - rtems_waf: Update to fix loading VERSION

Id	14
State	merged
Merged by	Kinsey Moore
Merged at	2025-01-08T13:29:21.626Z
Assignee(s)	Chris Johns
Created	2025-01-08T04:46:35.213Z
Updated	2025-01-08T13:29:24.067Z
Milestone	6.1
Labels	pkg::network-services
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/14
Commit	d3768be8834e2633e7856c7b60aa4dd4461aa842

Update to fix loading VERSION

Closes #9

Author: Chris Johns 2025-01-08T04:46:35.495Z

assigned to @chris

Author: Kinsey Moore 2025-01-08T13:29:02.690Z

approved this merge request

3.4.2.2 10 - waf: Update waf to waf-2.1.4

Id	10
State	merged
Merged by	Amar Takhar
Merged at	2024-12-22T02:18:26.393Z
Assignee(s)	Chris Johns
Reviewer(s)	Joel Sherrill, Kinsey Moore, Amar Takhar
Created	2024-12-21T23:47:42.178Z
Updated	2024-12-22T02:18:31.248Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/10
Commit	f1d5608379758486b0e9aaa2530e5b88cb2734b0

Summary

Update waf to waf-2.1.4

Closes #7

Author: Chris Johns 2024-12-21T23:47:42.342Z

requested review from @amar, @joel, and @opticron

Author: Chris Johns 2024-12-21T23:47:42.356Z

assigned to @chris

Author: Amar Takhar 2024-12-22T02:17:50.264Z

approved this merge request

3.4.2.3 8 - ntp: Ensure socketpair sockets are closed on exit

Id	8
State	merged
Merged by	Chris Johns
Merged at	2024-11-16T05:24:45.435Z
Assignee(s)	Kinsey Moore
Created	2024-11-15T15:52:22.834Z
Updated	2024-11-16T05:24:47.341Z
Milestone	6.1
Labels	pkg::ntp
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/8
Commit	b8feed99f5f9bd519af6fcd53bb416a120c16adc

Summary

ntp: Ensure socketpair sockets are closed on exit

The close() wrapper was interfering with blocking_child cleanup causing the sockets allocated during socketpair creation to remain unclosed after application shutdown. This was especially evident when the NTP daemon was started and stopped repeatedly.

Closes #5

Author: Kinsey Moore 2024-11-15T15:52:23.027Z

assigned to @opticron

Author: Chris Johns 2024-11-16T05:24:41.136Z

approved this merge request

3.4.2.4 7 - netservices.py: Prevent installation of test binaries

Id	7
State	merged
Merged by	Chris Johns
Merged at	2024-10-25T03:26:24.226Z
Assignee(s)	Kinsey Moore
Created	2024-10-25T03:13:30.993Z
Updated	2024-10-25T03:26:26.557Z
Milestone	6.1
Labels	network
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/7
Commit	0ac22a07c49d658de481bee7988cfbcfd8fe9f89

Summary

Closes #2

Author: Kinsey Moore 2024-10-25T03:13:31.695Z

assigned to @opticron

Author: Chris Johns 2024-10-25T03:26:16.946Z

approved this merge request

3.4.2.5 5 - bsd/ntp: Handle exit() calls throughout the NTP codebase

Id	5
State	merged
Merged by	Chris Johns
Merged at	2024-10-24T23:39:15.342Z
Assignee(s)	Kinsey Moore
Created	2024-08-28T01:35:56.379Z
Updated	2024-10-24T23:39:17.076Z
Milestone	6.1
Labels	pkg::ntp
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/5
Commit	1d8b0832a1d4cc74474ab75dc9077950ebc782d0

Summary

bsd/ntp: Handle exit() calls throughout the NTP codebase

Calls to exit() need to be intercepted to prevent unexpected thread exits.

Author: Kinsey Moore 2024-08-28T01:35:56.543Z

assigned to @opticron

Author: Kinsey Moore 2024-08-28T14:37:34.579Z

marked this merge request as **draft**

Author: Kinsey Moore 2024-08-28T14:52:40.269Z

marked this merge request as **ready**

Author: Kinsey Moore 2024-08-29T02:14:14.190Z

marked this merge request as **draft**

Author: Kinsey Moore 2024-08-29T14:12:00.597Z

added 1 commit

- 28507040 - bsd/ntp: Handle exit() calls throughout the NTP codebase

Compare with previous version

Author: Kinsey Moore 2024-09-26T19:28:21.590Z

added 1 commit

- cfbbae66 - bsd/ntp: Handle exit() calls throughout the NTP codebase

Compare with previous version

Author: Amar Takhar 2024-09-28T18:31:31.347Z

enabled an automatic merge when all merge checks for cfb-bae660fef3da39024b77ceead23a3418ca9bb pass

Author: Kinsey Moore 2024-10-04T18:11:16.035Z

aborted the automatic merge because target branch was updated

Author: Amar Takhar 2024-10-16T15:38:31.752Z

@opticron is this meant to be draft?

Author: Kinsey Moore 2024-10-16T15:38:31.752Z

Yes, I'm trying to get verification from someone else that what is in this patch fixes their problem and that they didn't need to make any additional changes.

Author: Kinsey Moore 2024-10-16T15:38:25.490Z

marked this merge request as **ready**

Author: Kinsey Moore 2024-10-16T15:38:31.768Z

resolved all threads

Author: Kinsey Moore 2024-10-16T15:38:47.201Z

added 4 commits

- cfbbae66...419e923c - 3 commits from branch `rtems/pkg:main`
- 1d8b0832 - bsd/ntp: Handle exit() calls throughout the NTP codebase

Compare with previous version

Author: Chris Johns 2024-10-24T23:39:04.505Z

approved this merge request

3.4.2.6 4 - bsd/ntp: Correct spelling in ntpsim.c

Id	4
State	merged
Merged by	Chris Johns
Merged at	2024-08-26T21:04:39.648Z
Assignee(s)	Kinsey Moore
Created	2024-08-26T20:07:49.107Z
Updated	2024-08-26T21:04:41.097Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/4
Commit	9b08a578ceece64ffda5ae0271e2d66ddc112524

Summary

Author: Kinsey Moore 2024-08-26T20:07:49.679Z

assigned to @opticron

Author: Chris Johns 2024-08-26T21:04:18.463Z

approved this merge request

Author: Chris Johns 2024-08-26T21:04:24.978Z

added 4 commits

- 9cccdeb3...c65d7c29 - 3 commits from branch `rtems/pkg:main`
- 9b08a578 - bsd/ntp: Correct spelling in ntpsim.c

Compare with previous version

3.4.2.7 2 - Convert README to MarkDown

Id	2
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-25T22:25:02.954Z
Assignee(s)	Amar Takhar
Created	2024-07-09T17:34:16.332Z
Updated	2024-07-25T22:25:15.852Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/2
Commit	c65d7c29e6997b8ed6f201bf8f6218cdb1330f72

Summary

Convert README to MarkDown

Also copies ORIGIN into README.md

Author: Amar Takhar 2024-07-09T17:34:16.481Z

assigned to @amar

Author: Gedare Bloom 2024-07-10T06:22:22.566Z

Should this section text be merged into File Origins?

Author: Amar Takhar 2024-07-10T06:22:12.452Z

changed this line in version 2 of the diff

Author: Amar Takhar 2024-07-10T06:22:22.566Z

Oh, I completely missed that section it's old and crusty. I fixed it and moved the URL up thank you.

Author: Amar Takhar 2024-07-10T06:22:12.648Z

added 1 commit

- e66c8a94 - Convert README to MarkDown

Compare with previous version

Author: Amar Takhar 2024-07-10T06:22:22.596Z

resolved all threads

Author: Gedare Bloom 2024-07-10T06:42:55.230Z

approved this merge request

Author: Amar Takhar 2024-07-20T21:10:20.958Z

added 3 commits

- e66c8a94...c77dbea3 - 2 commits from branch `rtems/pkg:main`
- c65d7c29 - Convert README to MarkDown

Compare with previous version

Author: Kinsey Moore 2024-07-25T22:24:58.739Z

approved this merge request

3.4.2.8 3 - Rename COPYING.bsd -> LICENSE.md

Id	3
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-20T03:10:19.181Z
Assignee(s)	Amar Takhar
Created	2024-07-09T17:34:27.385Z
Updated	2024-07-20T03:10:20.980Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/3
Commit	c77dbea3e4ae0ae3d69ea771be9758468513b8fb

Summary

Rename COPYING.bsd -> LICENSE.md

COPYING is a GNU project layout format. Rename to LICENSE.md to be consistent with everything else.

Author: Amar Takhar 2024-07-09T17:34:27.528Z

assigned to @amar

Author: Gedare Bloom 2024-07-10T06:05:16.155Z

approved this merge request

Author: Kinsey Moore 2024-07-20T03:10:03.781Z

added 2 commits

- fee89f0b - 1 commit from branch `rtems/pkg:main`
- c77dbea3 - Rename COPYING.bsd -> LICENSE.md

Compare with previous version

Author: Kinsey Moore 2024-07-20T03:10:09.965Z

approved this merge request

3.4.2.9 1 - Update rtems_waf location

Id	1
State	merged
Merged by	Chris Johns
Merged at	2024-06-13T02:22:48.165Z
Assignee(s)	Kinsey Moore
Created	2024-06-12T15:43:51.999Z
Updated	2024-06-13T02:22:49.605Z
Milestone	6.1
Labels	tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-services/-/merge_requests/1
Commit	e2f081cd0e2091f438ff6c148ff2cc8d1e5f604f

Summary

Closes #1

Author: Kinsey Moore 2024-06-12T15:43:52.200Z

assigned to @opticron

Author: Chris Johns 2024-06-13T02:22:45.013Z

approved this merge request

3.5 RTEMS / Packages / lwIP

Go to *Issues* (page 834) or *Merge Requests* (page 841)

Issues Summary

4 - Update waf to 2.1.4 : rtems/pkg/rtems-lwip (page 835)
2 - Follow-up from "Merge COPYING. into LICENSE.md"* (page 834)
1 - Update the rtems_waf submodule to Gitlab (page 824)

Merge Requests Summary

10 - embeddedsw: Fix build with IGMP enabled (page 843)
9 - Add support for the ZynqMP RPU (page 844)
8 - zynqmp: Adapt to the rtems removal of Xilinx headers (page 845)
7 - lwip.py: Prevent installation of test binaries (page 842)
6 - defs/aarch64: Account for BSP renaming in RTEMS (page 846)
5 - Passing the protocol parameter of a socket function to lwip_socket (page 841)
4 - Reword section about file origins / licenses. (page 847)
3 - Convert README and ORIGIN. to MarkDown.* (page 850)
2 - Merge COPYING. into LICENSE.md* (page 848)
1 - Update rtems_waf location (page 3307)

3.5.1 Issues

3.5.1.1 2 - Follow-up from "Merge COPYING.* into LICENSE.md"

Id	2
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Amar Takhar
Closed by	Kinsey Moore
Created	2024-07-20T03:14:53.380Z
Closed	2024-07-25T22:29:51.686Z
Updated	2025-09-19T01:02:11.263Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/work_items/2
Merges	1

!1 has already been merge and the update Gedare suggested needs to be applied.

The following discussion from !2 should be addressed:

- [] @gedare started a discussion: (+1 comment)

  Please update the README file accordingly at "The sources presented here originate in one of several locations described by the ORIGIN.* files and whose license is described by the COPYING.* files."

Author: Amar Takhar 2024-07-20T03:14:53.520Z

assigned to @amar

Author: Amar Takhar 2024-07-20T03:21:34.924Z

mentioned in merge request !4

3.5.1.2 4 - Update waf to 2.1.4 : rtems/pkg/rtems-lwip

Id	4
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-12-04T22:18:59.326Z
Closed	2024-12-21T23:57:45.953Z
Updated	2024-12-21T23:57:45.966Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/work_items/4
Merges	0

Summary

The latest verison of waf fixes several issues on Windows. We also have a huge inconsistency in the version we're running which we should probably fix:

```
./rtems-deployment/waf       waf 2.0.24 (1af97c71f5a6756abf36d0f78ed8fd551596d7cb)
./rtems-docs/waf             waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
./rtems-examples/waf         waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-libbsd/waf           waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-littlevgl/waf        waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-lwip/waf             waf 2.0.18 (314689b8994259a84f0de0aaef74d7ce91f541ad)
./rtems-net-legacy/waf       waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems-net-services/waf     waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-tools/waf            waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems/waf                  waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
```

Steps to reproduce

3.5.1.2.2.1 Pre-set options

Author: Amar Takhar 2024-11-16T20:21:25.689Z

marked this issue as blocking rtems/docs/rtems-docs#54

Author: Amar Takhar 2024-11-16T20:21:31.439Z

changed the description

Author: Gedare Bloom 2024-11-17T00:11:44.128Z

Should we automate an approach to keep all our repos in sync with waf version?

Author: Amar Takhar 2024-11-17T00:19:39.724Z

Yeah I already have that written down but it's not that easy. We need to think about the workflow of how this should happen. There needs to be a process to test the new version against all the repositories to make sure it works and then update so we need to be more deliberate about it.

I have some ideas about it but the procedural part needs to be discussed: what's important enough to upgrade for and do we want to support one repo getting ahead of others to avoid increasing the size of our repositories or whether we care or not. Clearly the above is not great having `2.0` vs `2.1` Having said that `2.1.4` has fixes we really want for Windows.

Author: Amar Takhar 2024-11-17T01:08:46.506Z

See also: https://gitlab.com/ita1024/waf/-/issues/2452

Author: Amar Takhar 2024-11-17T03:50:21.836Z

assigned to @amar

Author: Amar Takhar 2024-11-17T04:22:19.639Z

After this update is done I'll create another issue for the next update. As we require an update we should collect reasons, issues and MRs until we trigger the next update. Of course a critical issue should be an immediate update but smaller things for instance if it's specific to one repo we can let that one repo get out of sync until we have more of are reason to update project-wide. otherwise we may end up update too often.

Author: Amar Takhar 2024-11-18T20:19:26.807Z

mentioned in merge request rtems/rtos/rtems!318

Author: Amar Takhar 2024-11-20T23:35:55.569Z

mentioned in commit amar/rtems-deployment@c8fd177b03fb5130697a7411d716f1542c6175b1

Author: Amar Takhar 2024-11-20T23:36:01.722Z

mentioned in commit amar/rtems-docs@ff70333104a0aaa05877df336d1bb1672b205b73

Author: Amar Takhar 2024-11-20T23:36:04.790Z

mentioned in commit amar/rtems-examples@8056cf5ccaaff51477096bdd3ae3850cecee957d

Author: Amar Takhar 2024-11-20T23:36:05.900Z

mentioned in commit amar/rtems-libbsd@2cac334d6a21b6006dfee4613d3da78eec26b1c8

Author: Amar Takhar 2024-11-20T23:36:08.424Z

mentioned in commit amar/rtems-littlevgl@7831e7125a6efe283e3c65efec1e24a96fdfc2ac

Author: Amar Takhar 2024-11-20T23:36:10.195Z

mentioned in commit amar/rtems-lwip@24f46d35dedf08807d6088443ab5c82e95c36ed8

Author: Amar Takhar 2024-11-20T23:36:12.174Z

mentioned in commit amar/rtems-net-legacy@8845824db452168140610db037ea0359e363cf1d

Author: Amar Takhar 2024-11-20T23:36:14.636Z

mentioned in commit amar/rtems-net-services@7bcc152d49267e5b5ca3c00c1707cc40b2ef95b6

Author: Amar Takhar 2024-11-20T23:36:17.086Z

mentioned in commit amar/rtems-tools@12a94b63506ad84ec1c4feed56d3ce2e85475d85

Author: Amar Takhar 2024-11-20T23:36:21.347Z

mentioned in commit amar/rtems@62baa874b823fea35b7cdea78734d277ada7b455

Author: Amar Takhar 2024-11-20T23:39:31.029Z

mentioned in merge request rtems/rtos/rtems!323

Author: Amar Takhar 2024-11-20T23:39:48.843Z

mentioned in merge request rtems/tools/rtems-tools!44

Author: Amar Takhar 2024-11-20T23:40:09.031Z

mentioned in merge request rtems/pkg/rtems-net-services!9

Author: Amar Takhar 2024-11-20T23:40:25.975Z

mentioned in merge request rtems/pkg/rtems-net-legacy!6

Author: Amar Takhar 2024-11-20T23:40:33.280Z

mentioned in merge request rtems/pkg/rtems-lwip!11

Author: Amar Takhar 2024-11-20T23:40:41.082Z

mentioned in merge request rtems/pkg/rtems-littlevgl!4

Author: Amar Takhar 2024-11-20T23:40:53.742Z

mentioned in merge request rtems/pkg/rtems-libbsd!25

Author: Amar Takhar 2024-11-20T23:41:01.964Z

mentioned in merge request rtems/rtos/rtems-examples!5

Author: Amar Takhar 2024-11-20T23:41:10.912Z

mentioned in merge request rtems/docs/rtems-docs!89

Author: Amar Takhar 2024-11-20T23:41:24.453Z

mentioned in merge request rtems/tools/rtems-deployment!13

Author: Gedare Bloom 2024-11-21T00:03:44.787Z

mentioned in commit gedare/rtems-docs@2f1694269539dc59177b203df1b8481ee52f989a

Author: Gedare Bloom 2024-11-21T00:04:29.322Z

mentioned in merge request rtems/docs/rtems-docs!85

Author: Gedare Bloom 2024-11-21T00:06:48.926Z

mentioned in commit gedare/rtems-docs@816d14787b8bb89e7830c9885946fa8dc6dadf79

Author: Amar Takhar 2024-11-22T10:02:29.944Z

mentioned in commit amar/rtems-docs@24cf46b966d77bada338422de2ead632f79beb89

Author: Amar Takhar 2024-11-24T23:02:01.254Z

mentioned in commit amar/rtems-docs@7582461dbcff0287bb8bc1a615734696a416b266

Author: Amar Takhar 2024-11-24T23:03:10.673Z

mentioned in commit amar/rtems-examples@ac68170083fc3b2e5ce9a63a6c64b4b2e5d7915f

Author: Amar Takhar 2024-11-24T23:03:49.371Z

mentioned in commit amar/rtems-libbsd@a2d65d78fbe832a50ca6c986936c9b0c16647739

Author: Amar Takhar 2024-11-24T23:06:27.181Z

mentioned in commit amar/rtems@03c5b7e88f165ea56487e78822cf0b8595c79cfa

Author: Amar Takhar 2024-11-25T01:33:09.501Z

mentioned in commit amar/rtems-docs@b9af7d8fad94c310f7d973c10b5a7c2da8d4e7e8

Author: Amar Takhar 2024-12-04T21:56:00.650Z

mentioned in commit amar/rtems@8d71cc5dc4a0e11fd7b8d7b5b94bb2e54d3a6f9e

Author: Gedare Bloom 2024-12-04T22:16:38.325Z

cloned to rtems/docs/rtems-docs#62

Author: Gedare Bloom 2024-12-04T22:17:50.530Z

cloned to rtems/tools/rtems-deployment#3

Author: Gedare Bloom 2024-12-04T22:18:09.565Z

cloned to rtems/rtos/rtems-examples#5

Author: Gedare Bloom 2024-12-04T22:18:26.985Z

cloned to rtems/pkg/rtems-libbsd#22

Author: Gedare Bloom 2024-12-04T22:18:50.350Z

cloned to rtems/pkg/rtems-littlevgl#3

Author: Gedare Bloom 2024-12-04T22:19:03.820Z

cloned from rtems/rtos/rtems#5153

Author: Gedare Bloom 2024-12-04T22:18:59.488Z

assigned to @amar

Author: Gedare Bloom 2024-12-04T22:21:49.048Z

Author: Gedare Bloom 2024-12-04T22:46:42.692Z

Author: Chris Johns 2024-12-21T23:33:46.864Z

changed title from **Update waf to 2.1.4** to **Update waf to 2.1.4{+ : rtems/pkg/rtems-lwip+}**

Author: Chris Johns 2024-12-21T23:57:45.559Z

`rtmes-lwip` is already on `waf-2.1.4`.

3.5.1.3 1 - Update the rtems_waf submodule to Gitlab

Id	1
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Chris Johns
Created	2024-06-11T09:59:37.179Z
Closed	2024-06-13T02:23:12.005Z
Updated	2024-06-13T02:23:12.042Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/work_items/1
Merges	1

Update the `rtems_waf` submodule to `gitlab.rtems.org`

Author: Kinsey Moore	2024-06-12T15:38:43.628Z

mentioned in merge request !1

3.5.2 Merge Requests

3.5.2.1 5 - Passing the protocol parameter of a socket function to lwip_socket

Id	5
State	merged
Merged by	Kinsey Moore
Merged at	2024-09-19T02:29:54.524Z
Created	2024-09-03T02:37:24.718Z
Updated	2025-09-19T02:36:27.818Z
Milestone	6.1
Labels	network::lwip
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/5
Commit	97b7d0f27a6204db302a0c6c2f38fc4f88507684

Summary

Passing the protocol parameter of a socket function to lwip_socket, eg. supporting the ping command requires IP_PROTO_ICMP

Author: Kinsey Moore	2024-09-15T04:16:42.121Z

Thanks! The change itself looks fine, but I need to do some testing to verify functionality.

Author: Kinsey Moore	2024-09-19T02:29:47.383Z

approved this merge request

3.5.2.2 7 - lwip.py: Prevent installation of test binaries

Id	7
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-15T00:45:06.008Z
Assignee(s)	Kinsey Moore
Created	2024-10-25T03:08:48.831Z
Updated	2024-11-15T00:45:21.564Z
Milestone	6.1
Labels	network::lwip
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/7
Commit	f6af6544e81829fbb77549bada4021ad09bc591b

Summary

Updates rtems/pkg/rtems-net-services#2

Author: Kinsey Moore 2024-10-25T03:08:49.116Z

assigned to @opticron

Author: Kinsey Moore 2024-10-25T03:14:11.080Z

changed the description

Author: Kinsey Moore 2024-10-25T03:14:30.425Z

changed the description

Author: Kinsey Moore 2024-10-25T03:15:13.410Z

changed the description

Author: Kinsey Moore 2024-11-06T03:39:47.259Z

added 2 commits

- bff4546e - 1 commit from branch `rtems/pkg:main`
- 00281eca - lwip.py: Prevent installation of test binaries

Compare with previous version

Author: Chris Johns 2024-11-15T00:44:42.186Z

approved this merge request

Author: Kinsey Moore 2024-11-15T00:44:48.161Z

added 3 commits

- 00281eca...cef63453 - 2 commits from branch `rtems/pkg:main`
- f6af6544 - lwip.py: Prevent installation of test binaries

Compare with previous version

3.5.2.3 10 - embeddedsw: Fix build with IGMP enabled

Id	10
State	merged
Merged by	Chris Johns
Merged at	2024-11-14T05:28:44.966Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Chris Johns
Created	2024-11-14T03:34:09.921Z
Updated	2024-11-14T05:28:46.841Z
Milestone	6.1
Labels	network::lwip
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/10
Commit	cef63453ab33d473ca0b22f499d7d5a6e8bd4c7c

Summary

Author: Kinsey Moore 2024-11-14T03:34:10.142Z

assigned to @opticron

Author: Amar Takhar 2024-11-14T04:15:14.884Z

@chris should be a reviewer since it's only you two on this repo.

Author: Amar Takhar 2024-11-14T04:15:19.489Z

requested review from @chris

Author: Chris Johns 2024-11-14T05:28:39.751Z

approved this merge request

3.5.2.4 9 - Add support for the ZynqMP RPU

Id	9
State	merged
Merged by	Chris Johns
Merged at	2024-11-08T00:21:54.543Z
Assignee(s)	Kinsey Moore
Created	2024-11-05T21:18:47.100Z
Updated	2024-11-08T00:21:57.127Z
Milestone	6.1
Labels	arch:arm, network::lwip
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/9
Commit	14f0f46705222b21e8774f8450b9912465dbe0e2

Summary

This adds support for the Cortex-R5 RPU on the ZynqMP platform.

Author: Kinsey Moore 2024-11-05T21:18:47.265Z

assigned to @opticron

Author: Kinsey Moore 2024-11-06T03:38:18.560Z

added 2 commits

- bff4546e - 1 commit from branch `rtems/pkg:main`
- 14f0f467 - defs/zynqmp: Restructure AArch64 definitions and add support for RPU

Compare with previous version

Author: Chris Johns 2024-11-08T00:21:48.890Z

approved this merge request

3.5.2.5 8 - zynqmp: Adapt to the rtems removal of Xilinx headers

Id	8
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-06T03:30:41.989Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Chris Johns
Created	2024-10-25T19:27:56.387Z
Updated	2024-11-06T03:30:44.188Z
Milestone	6.1
Labels	arch:aarch64, network::lwip
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/8
Commit	bff4546e90facb113cbbedfbe8d331b78ae5fa0e

Summary

Author: Kinsey Moore 2024-10-25T19:27:56.578Z

assigned to @opticron

Author: Kinsey Moore 2024-11-01T20:38:33.187Z

added 1 commit

- 1e9475bb - zynqmp: Adapt to the rtems removal of Xilinx headers

Compare with previous version

Author: Kinsey Moore 2024-11-01T21:06:58.554Z

requested review from @chris

Author: Chris Johns 2024-11-06T03:25:59.730Z

Should these ends be the same as LibbSD:

```
#endif /* __rtems__ */
```

Author: Kinsey Moore 2024-11-06T03:08:33.029Z

changed this line in version 3 of the diff

Author: Kinsey Moore 2024-11-06T03:25:59.730Z

Addressed in the latest push for all instances including existing ones.

Author: Chris Johns 2024-11-06T02:20:57.855Z

Lets use the same RTEMS guard pattern as LibBSD.

Author: Chris Johns 2024-11-06T02:20:58.053Z

requested changes

Author: Kinsey Moore 2024-11-06T03:08:33.247Z

added 1 commit

- bff4546e - zynqmp: Adapt to the rtems removal of Xilinx headers

Compare with previous version

Author: Chris Johns 2024-11-06T03:25:54.222Z

approved this merge request

Author: Chris Johns 2024-11-06T03:25:59.746Z

resolved all threads

3.5.2.6 6 - defs/aarch64: Account for BSP renaming in RTEMS

Id	6
State	merged
Merged by	Chris Johns
Merged at	2024-10-24T23:34:24.326Z
Assignee(s)	Kinsey Moore
Created	2024-10-18T17:01:22.958Z
Updated	2024-10-24T23:34:26.676Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/6
Commit	56cf9d3f4132996f8771243ad00efcac08c2c255

Summary

Author: Kinsey Moore 2024-10-18T17:01:23.215Z

assigned to @opticron

Author: Kinsey Moore 2024-10-19T03:26:10.571Z

This is a follow-on to address the consequences of rtems/rtos/rtems!262 as part of rtems/rtos/rtems#5119.

Author: Kinsey Moore 2024-10-19T03:44:39.436Z

added 1 commit

- 62606cf7 - defs/aarch64: Account for BSP renaming in RTEMS

Compare with previous version

Author: Kinsey Moore 2024-10-19T03:47:38.792Z

added 1 commit

- 56cf9d3f - defs/aarch64: Account for BSP renaming in RTEMS

Compare with previous version

Author: Chris Johns 2024-10-24T23:34:16.816Z

approved this merge request

3.5.2.7 4 - Reword section about file origins / licenses.

Id	4
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-25T22:29:50.992Z
Assignee(s)	Amar Takhar
Created	2024-07-20T03:21:30.762Z
Updated	2024-08-10T00:40:04.244Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/4
Commit	2c97bc22d4d187cc5a7dfb41bcd0c42a078a0b13

Summary

Reword section about file origins / licenses.

Also remove an errant blank line.

Closes #2

Author: Amar Takhar 2024-07-20T03:21:30.917Z

assigned to @amar

Author: Amar Takhar 2024-07-20T18:41:48.258Z

Closed and re-opened so @approvers/docs can approve this since it's a documentation-only change.

Author: Kinsey Moore 2024-07-25T22:29:11.070Z

Double space in the middle of a sentence.

Author: Amar Takhar 2024-07-25T22:29:04.886Z

changed this line in version 3 of the diff

Author: Amar Takhar 2024-07-25T22:29:11.070Z

Fixed thanks.

Author: Kinsey Moore 2024-07-25T22:27:07.710Z

approved this merge request

Author: Amar Takhar 2024-07-25T22:29:05.108Z

added 1 commit

- 2c97bc22 - Reword section about file origins / licenses.

Compare with previous version

Author: Amar Takhar 2024-07-25T22:29:11.095Z

resolved all threads

3.5.2.8 2 - Merge COPYING.* into LICENSE.md

Id	2
State	merged
Merged by	Amar Takhar
Merged at	2024-07-20T03:15:45.931Z
Assignee(s)	Amar Takhar
Created	2024-07-09T07:26:00.737Z
Updated	2024-07-20T03:15:48.917Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/2
Commit	28dbe42d7eaae6d3dc454baf1c5ea01cacab9440

Summary

Merge COPYING.* into LICENSE.md

COPYING is a GNU layout also there is no need to have them in different files we should be consistent in all our repositories.

Author: Amar Takhar 2024-07-09T07:26:00.917Z

assigned to @amar

Author: Gedare Bloom 2024-07-20T03:14:53.588Z

Please update the README file accordingly at “The sources presented here originate in one of several locations described by the ORIGIN.* files and whose license is described by the COPYING.* files.”

Author: Amar Takhar 2024-07-20T03:14:53.588Z

I’m confused but what you’re asking here. The sources you mean the source tree or the contents of the `README.md` also the contents of the old `COPYING` files went into `LICENSE.md` shouldn’t the notice go there instead?

Author: Amar Takhar 2024-07-20T03:14:53.864Z

created #2 to continue this discussion

Author: Kinsey Moore 2024-07-19T22:49:58.550Z

added 3 commits

- 323b98e4...db932362 - 2 commits from branch `rtems/pkg:main`
- 28dbe42d - Merge COPYING.* into LICENSE.md

Compare with previous version

Author: Kinsey Moore 2024-07-20T03:11:34.887Z

approved this merge request

Author: Amar Takhar 2024-07-20T03:14:53.607Z

resolved all threads

Author: Amar Takhar 2024-07-20T03:14:54.212Z

mentioned in issue #2

3.5.2.9 1 - Update rtems_waf location

Id	1
State	merged
Merged by	Chris Johns
Merged at	2024-06-13T02:23:11.854Z
Assignee(s)	Kinsey Moore
Created	2024-06-12T15:38:39.586Z
Updated	2024-07-20T03:14:53.981Z
Milestone	6.1
Labels	tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/1
Commit	05bd1c758bbdce121ebdc2ff9473da14c8a230db

Summary

Closes #1

Author: Kinsey Moore 2024-06-12T15:38:39.835Z

assigned to @opticron

Author: Chris Johns 2024-06-13T02:23:08.969Z

approved this merge request

Author: Amar Takhar 2024-07-20T03:14:53.830Z

mentioned in issue #2

3.5.2.10 3 - Convert README and ORIGIN.* to MarkDown.

Id	3
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-19T22:48:05.139Z
Assignee(s)	Amar Takhar
Created	2024-07-09T07:36:35.867Z
Updated	2024-07-19T22:48:06.586Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/pkg/rtems-lwip/-/merge_requests/3
Commit	db932362ab157ac9a51f3d93542eecae2a23b31b

Summary

Convert README and ORIGIN.* to MarkDown.

The ORIGIN files were inserted into a table in the README.md

Author: Amar Takhar 2024-07-09T07:36:36.007Z

assigned to @amar

Author: Gedare Bloom 2024-07-10T05:41:38.255Z

approved this merge request

Author: Kinsey Moore 2024-07-19T22:47:53.588Z

added 2 commits

- 75ab578a - 1 commit from branch `rtems/pkg:main`
- db932362 - Convert README and ORIGIN.* to MarkDown.

Compare with previous version

Author: Kinsey Moore 2024-07-19T22:47:59.900Z

approved this merge request

3.6 RTEMS / Packages / Legacy Networking

Go to *Issues* (page 852) or *Merge Requests* (page 862)

Issues Summary

10 - rtems/rtemsdialer.h fails to install (page 853)
8 - RTEMS Waf return the revision as an int and the build system expects a string (page 854)
6 - Update rtems_waf to fix VERSION load bug (page 852)
4 - Backport wscript: fix text for help (page 3336)
3 - Update waf to 2.1.4 : rtems/pkg/rtems-net-legacy (page 855)
1 - Update the rtems_waf submodule to Gitlab (page 824)

Merge Requests Summary

17 - waf: Check if the revision is an int or string and quote the string (page 863)
14 - rtems_waf: Update to fix loading VERSION (page 825)
10 - netsources.py: fix rtemsdialer.h path (page 862)
9 - waf: Update waf to waf-2.1.4 (page 865)
8 - wscript: fix text for help (page 865)
5 - Import <rtems/rtemsdialer.h> from RTEMS (page 866)
3 - Name network tasks all the same for libdebugger (page 867)
2 - Convert README and README.waf to MarkDown (page 867)
1 - Update rtems_waf location (page 3307)

3.6.1 Issues

3.6.1.1 6 - Update rtems_waf to fix VERSION load bug

Id	6
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2025-01-08T03:46:35.138Z
Closed	2025-01-14T03:06:06.971Z
Updated	2025-08-21T17:08:59.877Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/work_items/6
Merges	0

Update the `rtems_waf` submodule to fix a bug loading `VERSION` in releases.

Author: Chris Johns 2025-01-08T03:46:35.657Z

cloned from #5

Author: Chris Johns 2025-01-08T03:46:35.356Z

assigned to @chris

Author: Chris Johns 2025-01-08T03:46:51.595Z

Author: Chris Johns 2025-01-08T03:47:19.827Z

See https://gitlab.rtems.org/rtems/tools/rtems_waf/-/issues/5

Author: Chris Johns 2025-01-08T04:38:07.902Z

mentioned in merge request !14

Author: Kinsey Moore 2025-01-14T03:06:06.551Z

The associated MR has been merged.

Author: Chris Johns 2025-08-21T17:08:59.490Z

mentioned in commit 78062dadfdcb6992e45331b56bd7b98fa8f04177

3.6.1.2 10 - rtems/rtemsdialer.h fails to install

Id	10
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2025-01-10T00:13:37.334Z
Closed	2025-01-14T02:59:14.849Z
Updated	2025-08-21T17:08:59.795Z
Milestone	6.1
Labels	network::legacy
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/work_items/10
Merges	0

The change https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/commit/1f835ae5e7fb07d1f07358b0f99ce1965838474a results in a build error when install is run:

```
source not found: 'rtems/rtemsdialer.h' in bld(source=[], target='', meths=[
↪'process_install_task', 'process_rule', 'process_source'], features=['install_
↪task'], ....
```

Author: Chris Johns 2025-01-10T00:13:37.930Z

cloned from #9

Author: Chris Johns 2025-01-10T00:13:37.659Z

assigned to @chris

Author: Chris Johns 2025-01-10T00:13:57.429Z

Author: Kinsey Moore 2025-01-10T00:19:19.844Z

mentioned in merge request !10

Author: Kinsey Moore 2025-01-14T02:59:14.529Z

The associated MR has been merged (#10)

Author: Ranulfo Raphael 2025-08-21T17:08:59.517Z

mentioned in commit 13c7cec146389b5d592b1b243f27507f8f6091f3

3.6.1.3 8 - RTEMS Waf return the revision as an int and the build system expects a string

Id	8
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2025-01-09T03:09:43.621Z
Closed	2025-01-14T03:05:31.242Z
Updated	2025-08-21T17:08:59.789Z
Milestone	6.1
Labels	network::legacy
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/work_items/8
Merges	0

RTEMS Waf returns the revision field as an `int` if released. The net legacy build system assumes it is a string it needs to quote.

Author: Chris Johns 2025-01-09T03:09:44.366Z

cloned from #7

Author: Chris Johns 2025-01-09T03:09:43.797Z

assigned to @chris

Author: Chris Johns 2025-01-09T03:09:56.781Z

Author: Chris Johns 2025-01-09T03:42:38.641Z

mentioned in merge request !17

Author: Kinsey Moore 2025-01-14T03:05:30.918Z

The associated MR has been merged.

Author: Chris Johns 2025-08-21T17:08:59.430Z

mentioned in commit 0eeff7b9a27da6f59d6fefab09ddb077acc3788a

3.6.1.4 3 - Update waf to 2.1.4 : rtems/pkg/rtems-net-legacy

Id	3
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-12-04T22:19:15.244Z
Closed	2024-12-22T03:36:14.354Z
Updated	2025-08-21T17:08:59.777Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/work_items/3
Merges	0

Summary

The latest verison of waf fixes several issues on Windows. We also have a huge inconsistency in the version we're running which we should probably fix:

```
./rtems-deployment/waf       waf 2.0.24 (1af97c71f5a6756abf36d0f78ed8fd551596d7cb)
./rtems-docs/waf             waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
./rtems-examples/waf         waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-libbsd/waf           waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-littlevgl/waf        waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-lwip/waf             waf 2.0.18 (314689b8994259a84f0de0aaef74d7ce91f541ad)
```

(continues on next page)

(continued from previous page)

```
./rtems-net-legacy/waf       waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems-net-services/waf     waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-tools/waf            waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems/waf                  waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
```

Steps to reproduce

3.6.1.4.2.1 Pre-set options

Author: Amar Takhar 2024-11-16T20:21:25.689Z

marked this issue as blocking rtems/docs/rtems-docs#54

Author: Amar Takhar 2024-11-16T20:21:31.439Z

changed the description

Author: Gedare Bloom 2024-11-17T00:11:44.128Z

Should we automate an approach to keep all our repos in sync with waf version?

Author: Amar Takhar 2024-11-17T00:19:39.724Z

Yeah I already have that written down but it's not that easy. We need to think about the workflow of how this should happen. There needs to be a process to test the new version against all the repositories to make sure it works and then update so we need to be more deliberate about it.

I have some ideas about it but the procedural part needs to be discussed: what's important enough to upgrade for and do we want to support one repo getting ahead of others to avoid increasing the size of our repositories or whether we care or not. Clearly the above is not great having `2.0` vs `2.1` Having said that `2.1.4` has fixes we really want for Windows.

Author: Amar Takhar 2024-11-17T01:08:46.506Z

See also: https://gitlab.com/ita1024/waf/-/issues/2452

Author: Amar Takhar 2024-11-17T03:50:21.836Z

assigned to @amar

Author: Amar Takhar 2024-11-17T04:22:19.639Z

After this update is done I'll create another issue for the next update. As we require an update we should collect reasons, issues and MRs until we trigger the next update. Of course a critical issue should be an immediate update but smaller things for instance if it's specific to one repo we can let that one repo get out of sync until we have more of are reason to update project-wide. otherwise we may end up update too often.

Author: Amar Takhar 2024-11-18T20:19:26.807Z

mentioned in merge request rtems/rtos/rtems!318

Author: Amar Takhar 2024-11-20T23:35:55.569Z

mentioned in commit amar/rtems-deployment@c8fd177b03fb5130697a7411d716f1542c6175b1

Author: Amar Takhar 2024-11-20T23:36:01.722Z

mentioned in commit amar/rtems-docs@ff70333104a0aaa05877df336d1bb1672b205b73

Author: Amar Takhar 2024-11-20T23:36:04.790Z

mentioned in commit amar/rtems-examples@8056cf5ccaaff51477096bdd3ae3850cecee957d

Author: Amar Takhar 2024-11-20T23:36:05.900Z

mentioned in commit amar/rtems-libbsd@2cac334d6a21b6006dfee4613d3da78eec26b1c8

Author: Amar Takhar 2024-11-20T23:36:08.424Z

mentioned in commit amar/rtems-littlevgl@7831e7125a6efe283e3c65efec1e24a96fdfc2ac

Author: Amar Takhar 2024-11-20T23:36:10.195Z

mentioned in commit amar/rtems-lwip@24f46d35dedf08807d6088443ab5c82e95c36ed8

Author: Amar Takhar 2024-11-20T23:36:12.174Z

mentioned in commit amar/rtems-net-legacy@8845824db452168140610db037ea0359e363cf1d

Author: Amar Takhar 2024-11-20T23:36:14.636Z

mentioned in commit amar/rtems-net-services@7bcc152d49267e5b5ca3c00c1707cc40b2ef95b6

Author: Amar Takhar 2024-11-20T23:36:17.086Z

mentioned in commit amar/rtems-tools@12a94b63506ad84ec1c4feed56d3ce2e85475d85

Author: Amar Takhar 2024-11-20T23:36:21.347Z

mentioned in commit amar/rtems@62baa874b823fea35b7cdea78734d277ada7b455

Author: Amar Takhar 2024-11-20T23:39:31.029Z

mentioned in merge request rtems/rtos/rtems!323

Author: Amar Takhar 2024-11-20T23:39:48.843Z

mentioned in merge request rtems/tools/rtems-tools!44

Author: Amar Takhar 2024-11-20T23:40:09.031Z

mentioned in merge request rtems/pkg/rtems-net-services!9

Author: Amar Takhar 2024-11-20T23:40:25.975Z

mentioned in merge request rtems/pkg/rtems-net-legacy!6

Author: Amar Takhar 2024-11-20T23:40:33.280Z

mentioned in merge request rtems/pkg/rtems-lwip!11

Author: Amar Takhar 2024-11-20T23:40:41.082Z

mentioned in merge request rtems/pkg/rtems-littlevgl!4

Author: Amar Takhar 2024-11-20T23:40:53.742Z

mentioned in merge request rtems/pkg/rtems-libbsd!25

Author: Amar Takhar 2024-11-20T23:41:01.964Z

mentioned in merge request rtems/rtos/rtems-examples!5

Author: Amar Takhar 2024-11-20T23:41:10.912Z

mentioned in merge request rtems/docs/rtems-docs!89

Author: Amar Takhar 2024-11-20T23:41:24.453Z

mentioned in merge request rtems/tools/rtems-deployment!13

Author: Gedare Bloom 2024-11-21T00:03:44.787Z

mentioned in commit gedare/rtems-docs@2f1694269539dc59177b203df1b8481ee52f989a

Author: Gedare Bloom 2024-11-21T00:04:29.322Z

mentioned in merge request rtems/docs/rtems-docs!85

Author: Gedare Bloom 2024-11-21T00:06:48.926Z

mentioned in commit gedare/rtems-docs@816d14787b8bb89e7830c9885946fa8dc6dadf79

Author: Amar Takhar 2024-11-22T10:02:29.944Z

mentioned in commit amar/rtems-docs@24cf46b966d77bada338422de2ead632f79beb89

Author: Amar Takhar 2024-11-24T23:02:01.254Z

mentioned in commit amar/rtems-docs@7582461dbcff0287bb8bc1a615734696a416b266

Author: Amar Takhar 2024-11-24T23:03:10.673Z

mentioned in commit amar/rtems-examples@ac68170083fc3b2e5ce9a63a6c64b4b2e5d7915f

Author: Amar Takhar 2024-11-24T23:03:49.371Z

mentioned in commit amar/rtems-libbsd@a2d65d78fbe832a50ca6c986936c9b0c16647739

Author: Amar Takhar 2024-11-24T23:06:27.181Z

mentioned in commit amar/rtems@03c5b7e88f165ea56487e78822cf0b8595c79cfa

Author: Amar Takhar 2024-11-25T01:33:09.501Z

mentioned in commit amar/rtems-docs@b9af7d8fad94c310f7d973c10b5a7c2da8d4e7e8

Author: Amar Takhar 2024-12-04T21:56:00.650Z

mentioned in commit amar/rtems@8d71cc5dc4a0e11fd7b8d7b5b94bb2e54d3a6f9e

Author: Gedare Bloom 2024-12-04T22:16:38.325Z

cloned to rtems/docs/rtems-docs#62

Author: Gedare Bloom 2024-12-04T22:17:50.530Z

cloned to rtems/tools/rtems-deployment#3

Author: Gedare Bloom 2024-12-04T22:18:09.565Z

cloned to rtems/rtos/rtems-examples#5

Author: Gedare Bloom 2024-12-04T22:18:26.985Z

cloned to rtems/pkg/rtems-libbsd#22

Author: Gedare Bloom 2024-12-04T22:18:50.350Z

cloned to rtems/pkg/rtems-littlevgl#3

Author: Gedare Bloom 2024-12-04T22:19:03.866Z

cloned to rtems/pkg/rtems-lwip#4

Author: Gedare Bloom 2024-12-04T22:19:19.786Z

cloned from rtems/rtos/rtems#5153

Author: Gedare Bloom 2024-12-04T22:19:15.362Z

assigned to @amar

Author: Gedare Bloom 2024-12-04T22:21:49.439Z

Author: Gedare Bloom 2024-12-04T22:46:42.721Z

Author: Chris Johns 2024-12-21T23:33:07.098Z

changed title from **Update waf to 2.1.4** to **Update waf to 2.1.4{+ : rtems/pkg/rtems-net-services+}**

Author: Chris Johns 2024-12-21T23:50:48.662Z

changed title from **Update waf to 2.1.4 : rtems/pkg/rtems-net-{-services-}** to **Update waf to 2.1.4 : rtems/pkg/rtems-net-{+legacy+}**

Author: Chris Johns 2024-12-21T23:53:22.562Z

mentioned in merge request !9

Author: Chris Johns 2025-08-21T17:08:59.393Z

mentioned in commit 3b465fde067da04b9f3ac4a3add3749d612222ce

3.6.1.5 4 - Backport wscript: fix text for help

Id	4
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Gedare Bloom
Created	2024-12-05T06:35:17.950Z
Closed	2024-12-05T21:46:57.256Z
Updated	2025-08-21T17:08:59.775Z
Milestone	6.1
Labels	backport
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/work_items/4
Merges	0

Summary

In order to update to waf-2.1.4, we need to backport the fix from !7

Steps to reproduce

3.6.1.5.2.1 Pre-set options

Author: Gedare Bloom 2024-12-05T06:35:23.115Z

assigned to @gedare

Author: Gedare Bloom	2024-12-05T06:35:23.499Z

Author: Gedare Bloom	2024-12-05T06:37:35.779Z

mentioned in merge request !8

Author: Gedare Bloom	2025-08-21T17:08:59.345Z

mentioned in commit 40fcc7f466480432a06090aa5366a60f5112a8c6

3.6.1.6 1 - Update the rtems_waf submodule to Gitlab

Id	1
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Chris Johns
Created	2024-06-11T10:04:12.290Z
Closed	2024-06-13T02:16:58.794Z
Updated	2024-06-13T02:16:58.857Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/work_items/1
Merges	1

Update the `rtems_waf` submodule to `gitlab.rtems.org`

Author: Kinsey Moore	2024-06-12T15:29:22.048Z

mentioned in merge request !1

3.6.2 Merge Requests

3.6.2.1 10 - netsources.py: fix rtemsdialer.h path

Id	10
State	merged
Merged by	Chris Johns
Merged at	2025-01-10T00:27:12.376Z
Created	2025-01-06T16:45:34.294Z
Updated	2025-01-10T00:33:39.201Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/merge_requests/10
Commit	13c7cec146389b5d592b1b243f27507f8f6091f3

Summary

netsources.py: fix rtemsdialer.h path

The rtemsdialer.h is under include/rtems/ directory.

Closes #10

Author: Kinsey Moore 2025-01-10T00:19:19.184Z

Author: Kinsey Moore 2025-01-10T00:19:39.778Z

added 3 commits

- bb7c4d81...0eeff7b9 - 2 commits from branch `rtems/pkg:6`
- 77a4da0f - netsources.py: fix rtemsdialer.h path

Compare with previous version

Author: Kinsey Moore 2025-01-10T00:22:47.434Z

added 1 commit

- 13c7cec1 - netsources.py: fix rtemsdialer.h path

Compare with previous version

Author: Kinsey Moore 2025-01-10T00:23:19.242Z

changed the description

Author: Chris Johns 2025-01-10T00:26:59.660Z

approved this merge request

3.6.2.2 17 - waf: Check if the revision is an int or string and quote the string

Id	17
State	merged
Merged by	Amar Takhar
Merged at	2025-01-09T04:25:36.246Z
Assignee(s)	Chris Johns
Created	2025-01-09T03:42:22.588Z
Updated	2025-01-09T04:25:38.688Z
Milestone	6.1
Labels	network::legacy
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/merge_requests/17
Commit	0eeff7b9a27da6f59d6fefab09ddb077acc3788a

Check if the revision is an int or string and quote the string

Released packages return the revision as an int while git builds return the git hash. Quoting the hash as a string.

Closes #8

Author: Chris Johns 2025-01-09T03:42:23.834Z

assigned to @chris

Author: Kinsey Moore 2025-01-09T03:45:46.570Z

approved this merge request

Author: Amar Takhar 2025-01-09T04:25:05.689Z

approved this merge request

3.6.2.3 14 - rtems_waf: Update to fix loading VERSION

Id	14
State	merged
Merged by	Kinsey Moore
Merged at	2025-01-08T13:28:53.266Z
Assignee(s)	Chris Johns
Created	2025-01-08T04:37:57.403Z
Updated	2025-01-08T13:28:54.975Z
Milestone	6.1
Labels	network::legacy
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/merge_requests/14
Commit	78062dadfdcb6992e45331b56bd7b98fa8f04177

Update to fix loading VERSION

Closes #6

Author: Chris Johns 2025-01-08T04:37:57.638Z

assigned to @chris

Author: Kinsey Moore 2025-01-08T13:28:22.702Z

approved this merge request

3.6.2.4 9 - waf: Update waf to waf-2.1.4

Id	9
State	merged
Merged by	Amar Takhar
Merged at	2024-12-22T02:18:25.497Z
Assignee(s)	Chris Johns
Reviewer(s)	Joel Sherrill, Kinsey Moore, Amar Takhar
Created	2024-12-21T23:53:16.536Z
Updated	2024-12-22T02:18:29.056Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/merge_requests/9
Commit	3b465fde067da04b9f3ac4a3add3749d612222ce

Summary

Update waf to waf-2.1.4

Closes #3

Author: Chris Johns 2024-12-21T23:53:16.702Z

requested review from @amar, @joel, and @opticron

Author: Chris Johns 2024-12-21T23:53:16.716Z

assigned to @chris

Author: Amar Takhar 2024-12-22T02:17:49.831Z

approved this merge request

3.6.2.5 8 - wscript: fix text for help

Id	8
State	merged
Merged by	Kinsey Moore
Merged at	2024-12-05T19:51:42.505Z
Assignee(s)	Gedare Bloom
Created	2024-12-05T06:37:31.255Z
Updated	2024-12-05T19:51:43.331Z
Milestone	6.1
Labels	backport
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/merge_requests/8
Commit	40fcc7f466480432a06090aa5366a60f5112a8c6

Summary

wscript: fix text for help

fixes #4

Closes #4

Author: Gedare Bloom 2024-12-05T06:37:31.439Z

assigned to @gedare

Author: Kinsey Moore 2024-12-05T19:51:38.545Z

approved this merge request

3.6.2.6 5 - Import <rtems/rtemsdialer.h> from RTEMS

Id	5
State	merged
Merged by	Chris Johns
Merged at	2024-11-17T22:50:34.015Z
Assignee(s)	Sebastian Huber
Created	2024-11-13T23:18:37.499Z
Updated	2024-11-17T22:50:35.857Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/merge_requests/5
Commit	1f835ae5e7fb07d1f07358b0f99ce1965838474a

Summary

Import <rtems/rtemsdialer.h> from RTEMS

File is already present in libbsd and will be removed from RTEMS.

Author: Sebastian Huber 2024-11-13T23:18:37.581Z

assigned to @sebhub

Author: Sebastian Huber 2024-11-13T23:20:36.771Z

mentioned in merge request rtems/rtos/rtems!299

Author: Chris Johns 2024-11-17T22:50:29.783Z

approved this merge request

3.6.2.7 3 - Name network tasks all the same for libdebugger

Id	3
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-23T21:04:46.674Z
Assignee(s)	Chris Johns
Created	2024-07-20T02:12:45.065Z
Updated	2024-07-23T21:04:47.845Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/merge_requests/3
Commit	d9aa500d6838ddf1f784275cbb8b944174601a9c

This change makes the legacy network stack tasks all the same name. The name is the same as libbsd and is `_BSD`. Libdebugger needs to know the name of the networking tasks so it does not suspend them disconnecting itself from `gdb` .

Author: Chris Johns 2024-07-20T02:12:45.215Z

assigned to @chris

Author: Joel Sherrill 2024-07-23T21:04:43.140Z

approved this merge request

3.6.2.8 2 - Convert README and README.waf to MarkDown

Id	2
State	merged
Merged by	Gedare Bloom
Merged at	2024-07-10T05:43:19.473Z
Assignee(s)	Amar Takhar
Created	2024-07-09T07:51:10.737Z
Updated	2024-07-10T05:43:20.507Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/merge_requests/2
Commit	4e705fa535a03390d58581cb93c328b93576a08d

Summary

Convert README and README.waf to MarkDown

This merges both documents. README was there for historical reasons I kept it mostly intact. One paragraph moved to the top and there was some minor reformatting.

Author: Amar Takhar 2024-07-09T07:51:11.072Z

assigned to @amar

Author: Gedare Bloom 2024-07-10T05:43:16.188Z

approved this merge request

3.6.2.9 1 - Update rtems_waf location

Id	1
State	merged
Merged by	Chris Johns
Merged at	2024-06-13T02:16:58.593Z
Assignee(s)	Kinsey Moore
Created	2024-06-12T15:28:35.083Z
Updated	2024-06-13T02:16:59.806Z
Milestone	6.1
Labels	tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/merge_requests/1
Commit	74a7abc2d41209c9f667fb6cbffbd05cedf88977

Summary

Closes #1

Author: Kinsey Moore 2024-06-12T15:28:35.249Z

assigned to @opticron

Author: Kinsey Moore 2024-06-12T15:29:21.958Z

changed the description

Author: Chris Johns 2024-06-13T02:16:54.786Z

approved this merge request

3.7 RTEMS / Packages / LibBSD

Go to *Issues* (page 870) or *Merge Requests* (page 888)

Issues Summary

22 - Update waf to 2.1.4 : rtems/pkg/rtems-libbsd:6-freebsd-12 (page 875)
14 - dhcp issue when zynqmp BSP is not configured for SMP (page 882)
13 - bus_teardown_intr does not work on nexus bus (page 880)
9 - Kernel RPC header installed (page 886)
8 - dhcpcd has broken memory handling (page 887)
6 - Add FreeBSD 14 support (page 871)
3 - Spelling of network configuration wrong (page 3648)

Merge Requests Summary

39 - waf: Update waf to waf-2.1.4 (page 890)
35 - rtemsbsd: Handle bus teardown correctly (page 890)
29 - rtems_waf: Fix URL of submodule (page 888)
27 - Misc 6-freebsd-12 fixes (page 891)
20 - Convert reST files to MarkDown. (page 894)
19 - Merge FreeBSD 12 to main (page 894)
18 - freebsd/sys/rpc: Install rpc/types.h (page 892)
14 - rtemsbsd/rc.conf: Show only auto interfaces in interface list (page 896)
13 - freebsd/sys/rpm: Do not install kernel RPC headers (page 895)
12 - dhcpcd: Work around dangling memory references to options (page 897)
11 - rtemsbsd/ttcp: Update to a current nuttcp version (page 889)
10 - Install memstat.h (page 898)
9 - Update links to GitLab (page 898)
8 - waf: Fix spelling of configuration (page 899)
7 - waf: Fix spelling of configuration (page 900)
6 - rtemsbsd/kernel-init: Ignore EEXIST for /etc (page 902)
5 - rtemsbsd/kernel-init: Ignore EEXIST for /etc (page 901)
2 - rtems_waf: Update submodule URL (page 900)
1 - rtems_waf: Update submodule URL (page 901)

4 - Updated rtems_waf submodule URL to Gitlab (closed) (page 903)
3 - Updated rtems_waf submodule URL to Gitlab (closed) (page 903)

3.7.1 Issues

3.7.1.1 3 - Spelling of network configuration wrong

Id	3
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Chris Johns
Created	2024-08-15T22:50:09.897Z
Closed	2024-11-08T04:30:56.851Z
Updated	2025-09-19T01:02:12.613Z
Milestone	6.1
Labels	spellcheck
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/3
Merges	1

Configuration is spelt `configuraiton`

```
Cedrics-MBP:wks cedric$ cd rtems-libbsd/
Cedrics-MBP:rtems-libbsd cedric$ grep -R configuraiton .
Binary file ./__pycache__/waf_libbsd.cpython-312.pyc matches
./rtems_waf/rtems_bsd.py:            conf.fatal('network configuraiton \\'%s\\' not found' % (net_config))
./rtems_waf/rtems_bsd.py:            conf.fatal('network configuraiton \\'%s\\' read failed' % (net_config))
./rtems_waf/rtems_bsd.py:                    conf.fatal('network configuraiton \\'%s\\' ' + \\
./waf_libbsd.py:            bld.fatal('network configuraiton \\'%s\\' not found' %
./waf_libbsd.py:            bld.fatal('network configuraiton \\'%s\\' read failed ' %
./waf_libbsd.py:                    bld.fatal('network configuraiton \\'%s\\' ' + \\
```

Author: Chris Johns 2024-08-15T22:50:10.000Z

cloned from rtems/tools/rtems_waf#3

Author: Chris Johns 2024-08-15T22:51:12.408Z

Reopened the issue as the issue was closed before it was cloned to here.

Author: Chris Johns 2024-08-15T23:06:26.129Z

mentioned in merge request !7

Author: Chris Johns 2024-08-15T23:21:10.050Z

mentioned in merge request !8

3.7.1.2 6 - Add FreeBSD 14 support

Id	6
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns, Aaron Nyholm
Closed by	Amar Takhar
Created	2024-09-11T00:57:49.855Z
Closed	2024-11-08T04:59:35.885Z
Updated	2025-09-02T22:42:42.254Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/6
Merges	2

Add support to libbsd for FreeBSD 14. The work is to create a `6-freebsd-14` branch that can be released with 6.1. The 6.1 release may have more than one libbsd branch depending on the support coverage and testing between the branch bring available the level of testing.

A separate branch provides a way for users to test and migrate.

The branch is a staging point to get the `main` branch to tracking FreeBSD 15 or `CURRENT`.

The initial work is focused on the `6-freebsd-12` branch. Changes only on the `main` branch may need to be brought across to the `6-freebsd-14` branch.

Author: Chris Johns 2024-09-11T01:00:15.195Z

assigned to @chris

Author: Chris Johns 2024-09-11T01:23:59.208Z

The work will be posted in @eagleirony personal repo.

Author: Amar Takhar 2024-09-11T01:45:25.970Z

assigned to @alex

Author: Chris Johns 2024-09-11T02:19:45.099Z

unassigned @alex

Author: Chris Johns 2024-09-11T02:23:14.709Z

assigned to @eagleirony

Author: Sebastian Huber 2024-09-11T02:49:47.237Z

From my past experience synchronizing with FreeBSD, I would not use the 6-freebsd-12 branch to do the update. I would first bring the main branch close to 6-freebsd-12, integrate everything present in 6-freebsd-12, and then move on at the main branch with rebases. I would straight go to FreeBSD 15.

The first step is to update the network header files in Newlib to FreeBSD 14 and make sure they are compatible with the 6-freebsd-12 or vice versa.

Author: Chris Johns 2024-09-11T02:49:47.204Z

As documented we will be supporting `6-freebsd-14` and we move to `CURRENT` on `main` after.

We will consider the points you raise.

Author: Chris Johns 2024-11-07T23:53:19.681Z

Yes it would be good to have the `6-freebsd-12` history on `main`. A way to do this is an equivalent of:

1. Branch `main` to `6-freebsd-13` . Note, we have a tag for `6-freebsd-13` and @amar says a tag will maintain the commits in the repo to a tag so we can use this and branch the tag if we need to
2. Delete the commits on `main` on base to the origin of `6-freebsd-12`
3. Merge `6-freebsd-12` on to `main`
4. Update this MR to keep the `6-freebsd-12` changes and add the FreeBSD 14 changes as a single commit

Author: Christian Mauderer 2024-09-11T22:45:42.975Z

Great that someone finds time for that update. Just a side-note from me: I noted that on some earlier update, the `default.ini` buildset has been used in some steps. Due to that, some files have been missed and for example WLAN made problems. For updates, the `everyting.ini` buildset would be the right one. I'm not sure whether that's documented anywhere.

Author: Chris Johns 2024-09-11T22:45:42.943Z

Thanks for the suggestion.

Author: Chris Johns 2024-09-26T05:38:39.864Z

The directory `ipsec-tools` will not be brought into the `6-freebsd-14` branch. The project shutdown in 2014.

Author: Aaron Nyholm 2024-11-04T01:04:00.966Z

mentioned in merge request !17

Author: Sebastian Huber 2024-11-04T22:35:47.292Z

The !17 adds a couple of files which are also in RTEMS, for example:

```
./cpukit/include/machine/_kernel_mman.h
./cpukit/include/machine/_kernel_types.h
./cpukit/include/machine/_kernel_in6.h
./cpukit/include/machine/_kernel_uio.h
./cpukit/include/machine/_kernel_param.h
./cpukit/include/machine/_kernel_in.h
./cpukit/include/machine/_kernel_time.h
./cpukit/include/machine/_kernel_cpuset.h
```

These files should move from RTEMS to the current libbsd main and 6-freebsd-12 branches.

Author: Chris Johns 2024-11-04T22:35:47.255Z

https://lists.rtems.org/pipermail/devel/2024-July/077842.html

Would making this change now effect the `6-freebsd-12` branch?

Author: Sebastian Huber 2024-11-04T23:03:08.598Z

Ok, I forgot that RTEMS sources use also kernel-space headers. These files cannot be moved and they should not be present in libbsd.

Author: Amar Takhar 2024-11-07T23:55:56.268Z

mentioned in issue administration/gitlab#85

Author: Amar Takhar 2024-11-07T23:58:13.531Z

marked this issue as blocked by administration/gitlab#85

Author: Aaron Nyholm 2024-11-19T04:05:42.752Z

mentioned in merge request !23

Author: Ning Yang 2024-11-21T05:29:13.243Z

mentioned in merge request !26

Author: Kinsey Moore 2024-11-22T16:14:50.155Z

mentioned in merge request !30

Author: Kinsey Moore 2024-11-22T16:19:07.633Z

mentioned in merge request !31

Author: Kinsey Moore 2024-12-20T01:40:34.315Z

mentioned in merge request !35

Author: Kinsey Moore 2024-12-20T03:24:35.743Z

mentioned in merge request !37

Author: Kinsey Moore 2024-12-20T03:26:48.619Z

mentioned in merge request !38

Author: Aaron Nyholm 2025-01-31T06:18:16.932Z

mentioned in merge request !49

Author: Aaron Nyholm 2025-09-02T22:42:42.192Z

mentioned in merge request !89

Author: Aaron Nyholm 2025-09-21T23:23:29.468Z

mentioned in merge request !103

3.7.1.3 22 - Update waf to 2.1.4 : rtems/pkg/rtems-libbsd:6-freebsd-12

Id	22
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-12-04T22:18:22.728Z
Closed	2024-12-22T03:35:13.984Z
Updated	2025-01-31T03:59:30.741Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/22
Merges	0

Summary

The latest verison of waf fixes several issues on Windows. We also have a huge inconsistency in the version we're running which we should probably fix:

```
./rtems-deployment/waf       waf 2.0.24 (1af97c71f5a6756abf36d0f78ed8fd551596d7cb)
./rtems-docs/waf             waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
./rtems-examples/waf         waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-libbsd/waf           waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-littlevgl/waf        waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-lwip/waf             waf 2.0.18 (314689b8994259a84f0de0aaef74d7ce91f541ad)
./rtems-net-legacy/waf       waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems-net-services/waf     waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-tools/waf            waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems/waf                  waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
```

Steps to reproduce

3.7.1.3.2.1 Pre-set options

Author: Amar Takhar 2024-11-16T20:21:25.689Z

marked this issue as blocking rtems/docs/rtems-docs#54

Author: Amar Takhar 2024-11-16T20:21:31.439Z

changed the description

Author: Gedare Bloom 2024-11-17T00:11:44.128Z

Should we automate an approach to keep all our repos in sync with waf version?

Author: Amar Takhar 2024-11-17T00:19:39.724Z

Yeah I already have that written down but it's not that easy. We need to think about the workflow of how this should happen. There needs to be a process to test the new version against all the repositories to make sure it works and then update so we need to be more deliberate about it.

I have some ideas about it but the procedural part needs to be discussed: what's important enough to upgrade for and do we want to support one repo getting ahead of others to avoid increasing the size of our repositories or whether we care or not. Clearly the above is not great having `2.0` vs `2.1` Having said that `2.1.4` has fixes we really want for Windows.

Author: Amar Takhar 2024-11-17T01:08:46.506Z

See also: https://gitlab.com/ita1024/waf/-/issues/2452

Author: Amar Takhar 2024-11-17T03:50:21.836Z

assigned to @amar

Author: Amar Takhar 2024-11-17T04:22:19.639Z

After this update is done I'll create another issue for the next update. As we require an update we should collect reasons, issues and MRs until we trigger the next update. Of course a critical issue should be an immediate update but smaller things for instance if it's specific to one repo we can let that one repo get out of sync until we have more of are reason to update project-wide. otherwise we may end up update too often.

Author: Amar Takhar 2024-11-18T20:19:26.807Z

mentioned in merge request rtems/rtos/rtems!318

Author: Amar Takhar 2024-11-20T23:35:55.569Z

mentioned in commit amar/rtems-deployment@c8fd177b03fb5130697a7411d716f1542c6175b1

Author: Amar Takhar 2024-11-20T23:36:01.722Z

mentioned in commit amar/rtems-docs@ff70333104a0aaa05877df336d1bb1672b205b73

Author: Amar Takhar 2024-11-20T23:36:04.790Z

mentioned in commit amar/rtems-examples@8056cf5ccaaff51477096bdd3ae3850cecee957d

Author: Amar Takhar 2024-11-20T23:36:05.900Z

mentioned in commit amar/rtems-libbsd@2cac334d6a21b6006dfee4613d3da78eec26b1c8

Author: Amar Takhar 2024-11-20T23:36:08.424Z

mentioned in commit amar/rtems-littlevgl@7831e7125a6efe283e3c65efec1e24a96fdfc2ac

Author: Amar Takhar 2024-11-20T23:36:10.195Z

mentioned in commit amar/rtems-lwip@24f46d35dedf08807d6088443ab5c82e95c36ed8

Author: Amar Takhar 2024-11-20T23:36:12.174Z

mentioned in commit amar/rtems-net-legacy@8845824db452168140610db037ea0359e363cf1d

Author: Amar Takhar 2024-11-20T23:36:14.636Z

mentioned in commit amar/rtems-net-services@7bcc152d49267e5b5ca3c00c1707cc40b2ef95b6

Author: Amar Takhar 2024-11-20T23:36:17.086Z

mentioned in commit amar/rtems-tools@12a94b63506ad84ec1c4feed56d3ce2e85475d85

Author: Amar Takhar 2024-11-20T23:36:21.347Z

mentioned in commit amar/rtems@62baa874b823fea35b7cdea78734d277ada7b455

Author: Amar Takhar 2024-11-20T23:39:31.029Z

mentioned in merge request rtems/rtos/rtems!323

Author: Amar Takhar 2024-11-20T23:39:48.843Z

mentioned in merge request rtems/tools/rtems-tools!44

Author: Amar Takhar 2024-11-20T23:40:09.031Z

mentioned in merge request rtems/pkg/rtems-net-services!9

Author: Amar Takhar 2024-11-20T23:40:25.975Z

mentioned in merge request rtems/pkg/rtems-net-legacy!6

Author: Amar Takhar 2024-11-20T23:40:33.280Z

mentioned in merge request rtems/pkg/rtems-lwip!11

Author: Amar Takhar 2024-11-20T23:40:41.082Z

mentioned in merge request rtems/pkg/rtems-littlevgl!4

Author: Amar Takhar 2024-11-20T23:40:53.742Z

mentioned in merge request rtems/pkg/rtems-libbsd!25

Author: Amar Takhar 2024-11-20T23:41:01.964Z

mentioned in merge request rtems/rtos/rtems-examples!5

Author: Amar Takhar 2024-11-20T23:41:10.912Z

mentioned in merge request rtems/docs/rtems-docs!89

Author: Amar Takhar 2024-11-20T23:41:24.453Z

mentioned in merge request rtems/tools/rtems-deployment!13

Author: Gedare Bloom 2024-11-21T00:03:44.787Z

mentioned in commit gedare/rtems-docs@2f1694269539dc59177b203df1b8481ee52f989a

Author: Gedare Bloom 2024-11-21T00:04:29.322Z

mentioned in merge request rtems/docs/rtems-docs!85

Author: Gedare Bloom 2024-11-21T00:06:48.926Z

mentioned in commit gedare/rtems-docs@816d14787b8bb89e7830c9885946fa8dc6dadf79

Author: Amar Takhar 2024-11-22T10:02:29.944Z

mentioned in commit amar/rtems-docs@24cf46b966d77bada338422de2ead632f79beb89

Author: Amar Takhar 2024-11-24T23:02:01.254Z

mentioned in commit amar/rtems-docs@7582461dbcff0287bb8bc1a615734696a416b266

Author: Amar Takhar 2024-11-24T23:03:10.673Z

mentioned in commit amar/rtems-examples@ac68170083fc3b2e5ce9a63a6c64b4b2e5d7915f

Author: Amar Takhar 2024-11-24T23:03:49.371Z

mentioned in commit amar/rtems-libbsd@a2d65d78fbe832a50ca6c986936c9b0c16647739

Author: Amar Takhar 2024-11-24T23:06:27.181Z

mentioned in commit amar/rtems@03c5b7e88f165ea56487e78822cf0b8595c79cfa

Author: Amar Takhar 2024-11-25T01:33:09.501Z

mentioned in commit amar/rtems-docs@b9af7d8fad94c310f7d973c10b5a7c2da8d4e7e8

Author: Amar Takhar 2024-12-04T21:56:00.650Z

mentioned in commit amar/rtems@8d71cc5dc4a0e11fd7b8d7b5b94bb2e54d3a6f9e

Author: Gedare Bloom 2024-12-04T22:16:38.325Z

cloned to rtems/docs/rtems-docs#62

Author: Gedare Bloom 2024-12-04T22:17:50.530Z

cloned to rtems/tools/rtems-deployment#3

Author: Gedare Bloom 2024-12-04T22:18:09.565Z

cloned to rtems/rtos/rtems-examples#5

Author: Gedare Bloom 2024-12-04T22:18:26.937Z

cloned from rtems/rtos/rtems#5153

Author: Gedare Bloom 2024-12-04T22:18:22.873Z

assigned to @amar

Author: Gedare Bloom 2024-12-04T22:21:47.999Z

Author: Gedare Bloom 2024-12-04T22:46:42.373Z

Author: Chris Johns 2024-12-21T23:35:10.799Z

changed title from **Update waf to 2.1.4** to **Update waf to 2.1.4{+ : rtems/pkg/rtems-libbsd:6-freebsd-12+}**

Author: Chris Johns 2024-12-22T00:38:02.822Z

mentioned in merge request !39

Author: Chris Johns 2025-01-31T03:59:30.190Z

mentioned in commit 41743b9a89bb341989286ab0a887abd82c2e1efb

3.7.1.4 13 - bus_teardown_intr does not work on nexus bus

Id	13
State	closed
Type	ISSUE
Author	Loris Nardo
Assignee(s)	Kinsey Moore, Aaron Nyholm
Closed by	Chris Johns
Created	2024-11-06T17:29:50.276Z
Closed	2024-12-21T23:27:59.354Z
Updated	2024-12-21T23:27:59.366Z
Milestone	6.1
Labels	libbsd::freebsd-12
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/13
Merges	0

Summary

To remove a registered interrupt handler from `bus_setup_intr`, I called the `bus_teardown_intr` function however the implementation of the teardown function for the nexus bus does install again the interrupt handler instead of removing it. This can be seen in the function `nexus_teardown_intr` at rtemsbsd/rtems/rtems-kernel-nexus.c.

The function probably should also free the cookie that `nexus_setup_intr` has allocated.

Author: Loris Nardo 2024-11-06T17:30:44.091Z

changed the description

Author: Loris Nardo 2024-11-06T17:30:52.014Z

changed the description

Author: Chris Johns 2024-11-07T23:26:00.353Z

assigned to @opticron

Author: Kinsey Moore 2024-11-14T23:30:25.664Z

@eagleirony You should also take a look at this as per Chris.

Author: Kinsey Moore 2024-11-14T23:30:49.439Z

assigned to @eagleirony

Author: Gedare Bloom 2024-12-04T21:39:40.603Z

Author: Kinsey Moore 2024-12-20T01:40:34.264Z

mentioned in merge request !35

Author: Kinsey Moore 2024-12-20T01:41:46.538Z

@loris.nardo Would you mind give the patch in !35 a try to see if it solves your issues? I was able to test that everything compiled and that my existing test cases work, but I don't think I have a code path that runs through bus_teardown_intr.

Author: Loris Nardo 2024-12-20T04:27:05.867Z

@opticron I'll check it in the next hours, at first glance it seems ok

Author: Loris Nardo 2024-12-20T13:56:39.070Z

@opticron I've checked it and it works

Author: Kinsey Moore 2024-12-20T13:56:39.037Z

Great, thanks for checking!

Author: Chris Johns 2024-12-21T23:27:16.838Z

mentioned in commit f67897b60959bd4e65eacc0050299cb4b1808a4e

3.7.1.5 14 - dhcp issue when zynqmp BSP is not configured for SMP

Id	14
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Kinsey Moore
Closed by	Chris Johns
Created	2024-11-19T00:11:07.328Z
Closed	2024-11-21T23:36:31.215Z
Updated	2024-11-21T23:37:44.067Z
Milestone	6.1
Labels	libbsd, libbsd::freebsd-12
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/14
Merges	0

Summary

When showing people how to configure, build, and use RTEMS, I tend to start with simple configurations. Below is the configuration I used this time

```
[aarch64/zynqmp_qemu]
RTEMS_POSIX_API = True
BUILD_SAMPLES = True
```

I used the uniprocessor configuration and build libbsd. The goal was to show telnetd01.exe working with a shell you could telnet to. The application configuration was slightly modified to turn on DHCPCD (client). The application failed to get an address. This was the same for multiple other people in the class who tried.

Today, I asked @opticron for help debugging this. We confirmed my tools, qemu, rtems, and libbsd matched his. We even tried my telnetd01.exe on his system. It behaved the same. His telnetd01.exe worked for me.

At this point, @opticron quickly deduced that SMP was the difference although we had to verify his insight. It is important to note that for the zynqmp BSP on real hardware, they will enable SMP. This was the configuration for RTEMS which resulted in a working libbsd telnetd01.exe

```
[aarch64/zynqmp_qemu]
RTEMS_POSIX_API = True
RTEMS_SMP = True
BUILD_SAMPLES = True
```

In summary, libbsd works with the zynqmp_qemu BSP in SMP mode but not in uniprocessor mode.

Feel free to put on a puzzled expression.

Steps to reproduce

Author: Joel Sherrill 2024-11-19T00:11:07.466Z

assigned to @opticron

Author: Chris Johns 2024-11-20T22:38:58.534Z

I have been running `freebsd-12` on a ZynqMP with SMP and without SMP (the XIlinx JTAG box only supports a single core) without issue. I will test again today.

This is on a K26 with 4 cores and local mods for the weird KR260 MII bus layout.

Author: Kinsey Moore 2024-11-20T22:39:19.334Z

From my testing (all QEMU is user-mode networking, DHCP is used as a proxy for functional network communication): * 6-freebsd-12 QEMU SMP works * 6-freebsd-12 QEMU non-SMP doesn't work * 6-freebsd-12 ZCU102 SMP works * 6-freebsd-12 ZCU102 non-SMP works

- 6-freebsd-13 QEMU SMP works
- 6-freebsd-13 QEMU non-SMP works
- 6-freebsd-13 ZCU102 SMP doesn't work (produces a large number of PHY read timeouts)
- 6-freebsd-13 ZCU102 non-SMP doesn't work (produces a large number of PHY read timeouts)

```
poll: Bad file number
```

6-freebsd-14 and main seem to fail during DHCP start with: These don't perform DHCP correctly at all.

Author: Kinsey Moore 2024-11-20T22:47:57.638Z

With 6-freebsd-12 working everywhere except QEMU non-SMP, I ok to note that and move forward with the release as-is.

Author: Kinsey Moore 2024-11-20T22:48:26.464Z

@gedare do you have any thoughts on the matter?

Author: Chris Johns 2024-11-20T23:06:28.704Z

@opticron DHCP has debug options to log what it is doing. Have you enabled this and then compared the SMP to non-SMP runs?

Author: Gedare Bloom 2024-11-21T03:38:45.081Z

It doesn't seem to be worth holding the release up.

Author: Kinsey Moore 2024-11-21T15:22:06.950Z

@chris for 6-freebsd-12, it's obviously trying to send DISCOVER messages, but I haven't looked into it beyond that. I'll try to pull packet captures for both.

Author: Kinsey Moore 2024-11-21T19:29:56.913Z

Upon further investigation, this message is produced on the non-SMP QEMU instance:

```
mbuf_cluster] kern.ipc.nmbclusters limit reached
```

`netstat -m` for non-SMP QEMU yields:

```
1151/134/1285 mbufs in use (current/cache/total)
1024/0/1024/1024 mbuf clusters in use (current/cache/total/max)
1024/0 mbuf+clusters out of packet secondary zone in use (current/cache)
0/0/0/512 4k (page size) jumbo clusters in use (current/cache/total/max)
0/0/0/151 9k jumbo clusters in use (current/cache/total/max)
0/0/0/85 16k jumbo clusters in use (current/cache/total/max)
2335K/33K/2369K bytes allocated to network (current/cache/total)
0/2/0 requests for mbufs denied (mbufs/clusters/mbuf+clusters)
0/1/0 requests for mbufs delayed (mbufs/clusters/mbuf+clusters)
0/0/0 requests for jumbo clusters delayed (4k/9k/16k)
0/0/0 requests for jumbo clusters denied (4k/9k/16k)
```

`netstat -m` for SMP QEMU yields:

```
1109/271/1380 mbufs in use (current/cache/total)
1031/95/1126/1274 mbuf clusters in use (current/cache/total/max)
1031/94 mbuf+clusters out of packet secondary zone in use (current/
↪cache)
0/0/0/762 4k (page size) jumbo clusters in use (current/cache/total/max)
```

(continues on next page)

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```
0/0/0/401 9k jumbo clusters in use (current/cache/total/max)
0/0/0/335 16k jumbo clusters in use (current/cache/total/max)
2339K/257K/2597K bytes allocated to network (current/cache/total)
0/0/0 requests for mbufs denied (mbufs/clusters/mbuf+clusters)
0/0/0 requests for mbufs delayed (mbufs/clusters/mbuf+clusters)
0/0/0 requests for jumbo clusters delayed (4k/9k/16k)
0/0/0 requests for jumbo clusters denied (4k/9k/16k)
```

`netstat -m` for non-SMP ZCU102 yields:

```
280/230/510 mbufs in use (current/cache/total)
263/113/376/1024 mbuf clusters in use (current/cache/total/max)
263/112 mbuf+clusters out of packet secondary zone in use (current/
↪cache)
0/0/0/512 4k (page size) jumbo clusters in use (current/cache/total/max)
0/0/0/151 9k jumbo clusters in use (current/cache/total/max)
0/0/0/85 16k jumbo clusters in use (current/cache/total/max)
596K/283K/879K bytes allocated to network (current/cache/total)
0/0/0 requests for mbufs denied (mbufs/clusters/mbuf+clusters)
0/0/0 requests for mbufs delayed (mbufs/clusters/mbuf+clusters)
0/0/0 requests for jumbo clusters delayed (4k/9k/16k)
0/0/0 requests for jumbo clusters denied (4k/9k/16k)
```

This appears to be partially caused by QEMU indicating the MII busses on all interfaces are active and so LibBSD brings up all interfaces. On hardware, interfaces with non-terminated MII busses are not brought up. It also appears that there are slightly more mbuf clusters available on SMP builds since this particular test is not configured to bring up additional cores.

Given the above, this is technically a configuration issue.

Author: Kinsey Moore 2024-11-21T19:29:56.785Z

6-freebsd-12 commit b9880143628ad4d1b2c7423d28d852988f7a469e is what allows this to work in SMP mode.

Author: Kinsey Moore 2024-11-21T21:28:21.780Z

mentioned in merge request !27

Author: Kinsey Moore 2024-11-21T23:37:25.004Z

This needs to be ported to the other branches.

Author: Kinsey Moore 2024-11-21T23:37:44.051Z

thread now?

3.7.1.6 9 - Kernel RPC header installed

Id	9
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-09-19T00:37:08.200Z
Closed	2024-09-25T00:58:04.776Z
Updated	2024-09-25T00:58:04.821Z
Milestone	6.1
Labels	libbsd, libbsd::freebsd-12
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/9
Merges	1

The build support is installing the kernel RPC header file `rpc/auth.h`. This clashes with the user land version of the same header file. Only install the user land version of the header file. The build output is:

```
....
rtems-libbsd-c88476d8c0def10bd3fcc0983c19f6d2536f65e1-x86_64-..../lib/include/rpc/
↪auth.h (from freebsd/sys/rpc/auth.h)
....
rtems-libbsd-c88476d8c0def10bd3fcc0983c19f6d2536f65e1-x86_64-..../lib/include/rpc/
↪auth.h (from freebsd/include/rpc/auth.h)
...
```

Noitice the same destination for the different files. This has been present for a long time and effects `waf` install if you have a lot of cores (edited output):

```
Build failed
Traceback (most recent call last):
File "/opt/.../waflib/Build.py", line 598, in do_install
self.copy_fun(src,tgt)
File "/opt/.../waflib/Build.py", line 541, in copy_fun
shutil.copy2(src,tgt)
File "/usr/local/lib/python3.9/shutil.py", line 445, in copy2
copystat(src, dst, follow_symlinks=follow_symlinks)
File "/usr/local/lib/python3.9/shutil.py", line 384, in copystat
lookup("utime")(dst, ns=(st.st_atime_ns, st.st_mtime_ns),
FileNotFoundError: [Errno 2] No such file or directory
....
waflib.Errors.WafError: Could not install the file '/opt/.../6/arm-rtems6/xilinx_
↪zynq_microzed/lib/include/rpc/auth.h'
```

Author: Chris Johns 2024-09-19T00:37:08.617Z

assigned to @chris

Author: Chris Johns 2024-09-19T00:51:23.767Z

mentioned in merge request !13

3.7.1.7 8 - dhcpcd has broken memory handling

Id	8
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-09-18T01:04:45.237Z
Closed	2024-09-19T00:29:20.168Z
Updated	2024-09-19T00:29:20.179Z
Milestone	6.1
Labels	libbsd, libbsd::freebsd-12
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/work_items/8
Merges	1

Summary

Code sometimes crashes after `dhcpcd` starts but not always. It depends on the gap between the interface being assigned an address, something else requesting heap memory, how that memory is used and the configuration of the DHCP server.

I have a hard crash on an KR260 board with two interfaces mounting an NFSv4 export soon after `dhcpcd` as started and an interface being assigned an IP4 address. Debugging the crash I discovered the location being changed was the upper 32bits of a XDR buffer pointer and the update correlated to index 324 of the `requiremask6` fields of the `struct if_options` that is allocated then `dhcpcd` first reads its configuration.

```
(gdb) p 0xa5010c - (int) &ifo->requiremask6
$26 = 324
```

I have seen random failures and crashes on Zynq systems I could not track it down. I now believe those are related. `dhcpcd` frees the read options before it enters the event loop and there must be a reference some where.

Steps to reproduce

1. Use an AARCH64 BSP and build `6-freebsd-12`
2. Configure 2 interfaces
3. Use the default `dhcpcd` configuration with the options of `--debug --nobackground --timeout 30`
4. Mount and NSFv4 export soon after the interfaces are assigned IP4 addresses

Analysis

1. The `if_options` structure is allocated memory when the options are read.
2. Options are assigned to interfaces.
3. The global `if_options` variable is freed and set to `NULL` before the event loop runs.

My guess is the options pointer is being held in an interface (or somewhere else) and something related to the IP6 DHCP protocol handling updates an option setting in the `requiremask6` field. It could be related to the configuration of the DHCP server and an option given sets and option in `requiremask6` to `1`.

Author: Chris Johns 2024-09-18T01:04:45.379Z

assigned to @chris

Author: Chris Johns 2024-09-18T01:05:29.306Z

changed the description

Author: Chris Johns 2024-09-18T01:22:19.560Z

mentioned in merge request !12

3.7.2 Merge Requests

3.7.2.1 29 - rtems_waf: Fix URL of submodule

Id	29
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-22T16:27:18.128Z
Created	2024-11-22T07:47:21.250Z
Updated	2025-09-19T02:42:56.975Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/29
Commit	2ae16dc6dadd766437091e4f1440e369a82c7596

Summary

Fix the old submodule URL for rtems_waf for the 5 branch.

Author: Kinsey Moore 2024-11-22T16:27:13.115Z

approved this merge request

3.7.2.2 11 - rtemsbsd/ttcp: Update to a current nuttcp version

Id	11
State	merged
Merged by	Amar Takhar
Merged at	2024-09-18T20:23:09.367Z
Assignee(s)	Chris Johns
Created	2024-09-08T01:57:36.544Z
Updated	2025-09-19T02:42:05.513Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/11
Commit	c9e8c28ed1f50618de48a4eb0f34aa9bf02ee36b

The change changes TTCP to NUTTCP. The command changes from `ttcp` to `nuttcp`. The command struct is the same name so avoid breaking existing builds.

Author: Chris Johns 2024-09-08T01:57:36.711Z

assigned to @chris

Author: Joel Sherrill 2024-09-08T21:26:03.410Z

Do not worry about preserving the old ttcp command line as a hint to the user.

Author: Chris Johns 2024-09-08T21:26:03.410Z

I agree, the overhead is too high. It would be easier to add if the shell allowed setting of the `alias` field when adding a command `struct` but that is currently not supported.

Author: Chris Johns 2024-09-08T21:26:03.430Z

resolved all threads

Author: Chris Johns 2024-09-12T00:11:31.252Z

changed title from **rtemsbs{-p-}/ttcp: Update to a current nuttcp version** to **rtemsbs{+d+}/ttcp: Update to a current nuttcp version**

Author: Amar Takhar 2024-09-18T20:22:43.294Z

approved this merge request

3.7.2.3 39 - waf: Update waf to waf-2.1.4

Id	39
State	merged
Merged by	Amar Takhar
Merged at	2024-12-22T02:18:13.952Z
Assignee(s)	Chris Johns
Reviewer(s)	Joel Sherrill, Kinsey Moore, Amar Takhar
Created	2024-12-22T00:37:55.024Z
Updated	2024-12-22T02:18:20.015Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/39
Commit	41743b9a89bb341989286ab0a887abd82c2e1efb

Summary

Update waf to waf-2.1.4

Closes #22

Author: Chris Johns 2024-12-22T00:37:55.221Z

requested review from @amar, @joel, and @opticron

Author: Chris Johns 2024-12-22T00:37:55.235Z

assigned to @chris

Author: Amar Takhar 2024-12-22T02:17:46.677Z

approved this merge request

3.7.2.4 35 - rtemsbsd: Handle bus teardown correctly

Id	35
State	merged
Merged by	Chris Johns
Merged at	2024-12-21T23:27:16.365Z
Assignee(s)	Kinsey Moore
Created	2024-12-20T01:40:29.216Z
Updated	2024-12-21T23:27:17.397Z
Milestone	6.1
Labels	libbsd::freebsd-12
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/35
Commit	f67897b60959bd4e65eacc0050299cb4b1808a4e

Summary

rtemsbsd: Handle bus teardown correctly

When tearing down the bus, the interrupt handler must be removed and any allocated memory freed.

Closes #13

Closes #6

Author: Kinsey Moore 2024-12-20T01:40:29.417Z

assigned to @opticron

Author: Kinsey Moore 2024-12-20T01:41:47.576Z

mentioned in issue #13

Author: Chris Johns 2024-12-21T23:27:12.449Z

approved this merge request

3.7.2.5 27 - Misc 6-freebsd-12 fixes

Id	27
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-21T23:33:48.447Z
Created	2024-11-21T21:28:14.816Z
Updated	2024-11-21T23:39:54.645Z
Milestone	6.1
Labels	libbsd, libbsd::freebsd-12
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/27
Commit	3b14ed85b8ce8d616d1967b1da9477f140683293

Summary

The first patch fixes an issue with a bad patch backport.

The second patch in the set bumps up the available memory for ZynqMP systems to allow all 4 interfaces to function simultaneously by default.

Closes #14

Author: Chris Johns 2024-11-21T23:33:41.681Z

approved this merge request

Author: Chris Johns 2024-11-21T23:40:51.421Z

We need to check this on 14 and current

Author: Amar Takhar 2024-11-21T23:40:51.421Z

Let's create an issue

Author: Chris Johns 2024-11-21T23:40:51.632Z

created #17 to continue this discussion

Author: Chris Johns 2024-11-21T23:40:51.439Z

resolved all threads

Author: Chris Johns 2024-11-21T23:40:51.647Z

mentioned in issue #17

3.7.2.6 18 - freebsd/sys/rpc: Install rpc/types.h

Id	18
State	merged
Merged by	Chris Johns
Merged at	2024-11-17T23:18:54.972Z
Assignee(s)	Chris Johns
Created	2024-11-04T19:26:46.019Z
Updated	2024-11-17T23:18:59.716Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/18
Commit	4524dd5247dc4628d0816a8ce1fd771a09616c47

Summary

Regression from 7a86bf1467a53ab28f4fd66bbdfa2b09d9c8e222

<rpc/rpc.h> includes <rpc/types.h>. FreeBSD seems to install sys/rpc/types.h, so that's what I've done here.

This was causing a build error in the EPICS asyn module.

Author: Amar Takhar 2024-11-04T19:59:32.350Z

assigned to @chris

Author: Amar Takhar 2024-11-04T19:59:43.759Z

This related to !13

Author: Chris Johns 2024-11-08T04:31:05.763Z

deleted the `6-freebsd-12` branch. This merge request now targets the `main` branch

Author: Kinsey Moore 2024-11-10T21:57:14.113Z

added 2 commits

- 1759a5d9 - 1 commit from branch `rtems/pkg:main`
- 4524dd52 - freebsd/sys/rpc: Install rpc/types.h

Compare with previous version

Author: Aaron Nyholm 2024-11-17T23:14:06.573Z

This MR still applies to `6-freebsd-12`. The referenced commit `7a86bf14` is in both `main` and `6-freebsd-12`.

Author: Chris Johns 2024-11-17T23:18:48.042Z

@gedare are you ok if this MR is moved to %"6.1" and reassigned to the `6-freesd-12` branch?

Author: Gedare Bloom 2024-11-17T23:18:48.042Z

Yes, do it

Author: Chris Johns 2024-11-17T23:18:28.384Z

changed target branch from `main` to `6-freebsd-12`

Author: Chris Johns 2024-11-17T23:18:39.528Z

approved this merge request

Author: Chris Johns 2024-11-17T23:18:48.058Z

resolved all threads

3.7.2.7 20 - Convert reST files to MarkDown.

Id	20
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-11T21:09:35.703Z
Assignee(s)	Amar Takhar
Created	2024-11-10T09:02:21.583Z
Updated	2024-11-11T21:09:37.623Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/20
Commit	992a6217aca2fc960a9f6f5aa19be8ed6601ae55

Summary

Author: Amar Takhar 2024-11-10T09:02:21.754Z

assigned to @amar

Author: Kinsey Moore 2024-11-11T21:09:31.499Z

approved this merge request

3.7.2.8 19 - Merge FreeBSD 12 to main

Id	19
State	merged
Merged by	Amar Takhar
Merged at	2024-11-08T04:30:52.619Z
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Created	2024-11-08T04:28:29.525Z
Updated	2024-11-08T04:31:00.121Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/19
Commit	98f35f9934d16516a68fdbe478fff5cd509898df

This MR brings `main` to the `6-freebsd-12` branch after `main` was taken back to the merge-base.

Author: Chris Johns 2024-11-08T04:28:29.703Z

requested review from @amar

Author: Chris Johns 2024-11-08T04:28:29.720Z

assigned to @chris

Author: Amar Takhar 2024-11-08T04:30:45.351Z

approved this merge request

3.7.2.9 13 - freebsd/sys/rpm: Do not install kernel RPC headers

Id	13
State	merged
Merged by	Kinsey Moore
Merged at	2024-09-19T02:25:24.527Z
Assignee(s)	Chris Johns
Created	2024-09-19T00:51:11.345Z
Updated	2024-11-04T19:59:44.284Z
Milestone	6.1
Labels	libbsd, libbsd::freebsd-12
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/13
Commit	7a86bf1467a53ab28f4fd66bbdfa2b09d9c8e222

Summary

Do not install kernel RPC headers. This avoids a problem with waf parallel installing difference files to same location.

Close #9

Close rtems/rtos/rtems#4907

Author: Chris Johns 2024-09-19T00:51:11.583Z

assigned to @chris

Author: Kinsey Moore 2024-09-19T02:22:00.159Z

This should also reference/close rtems/rtos/rtems#4907

Author: Chris Johns 2024-09-19T02:22:00.159Z

Yes and thanks.

Author: Chris Johns 2024-09-19T02:20:19.357Z

changed the description

Author: Chris Johns 2024-09-19T02:22:00.177Z

resolved all threads

Author: Chris Johns 2024-09-19T02:23:32.084Z

added 1 commit

- 7a86bf14 - freebsd/sys/rpc: Do not install kernel RPC headers

Compare with previous version

Author: Kinsey Moore 2024-09-19T02:25:18.923Z

approved this merge request

Author: Amar Takhar 2024-11-04T19:59:44.241Z

mentioned in merge request !18

3.7.2.10 14 - rtemsbsd/rc.conf: Show only auto interfaces in interface list

Id	14
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-07T14:31:53.352Z
Assignee(s)	Chris Johns
Created	2024-09-21T00:59:49.780Z
Updated	2024-10-07T14:31:54.273Z
Milestone	6.1
Labels	libbsd, libbsd::freebsd-12
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/14
Commit	98f35f9934d16516a68fdbe478fff5cd509898df

Show only auto interfaces in interface list. Print only the interfaces that are `AUTO` in the interface list as they are configured.

Author: Chris Johns 2024-09-21T00:59:50.049Z

assigned to @chris

Author: Kinsey Moore 2024-10-07T14:31:47.250Z

approved this merge request

3.7.2.11 12 - dhcpcd: Work around dangling memory references to options

Id	12
State	merged
Merged by	Amar Takhar
Merged at	2024-09-18T21:53:52.802Z
Assignee(s)	Chris Johns
Created	2024-09-18T01:22:11.323Z
Updated	2024-09-18T21:53:54.873Z
Milestone	6.1
Labels	libbsd, libbsd::freebsd-12
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/12
Commit	c88476d8c0def10bd3fcc0983c19f6d2536f65e1

Avoid invalid writes to freed heap memory

Closes #8

Author: Chris Johns 2024-09-18T01:22:11.655Z

assigned to @chris

Author: Chris Johns 2024-09-18T20:59:39.530Z

added 2 commits

- c9e8c28e - 1 commit from branch `rtems/pkg:6-freebsd-12`
- c88476d8 - dhcpcd: Work around dangling memory references to options

Compare with previous version

Author: Amar Takhar 2024-09-18T21:34:30.160Z

changed the description

Author: Amar Takhar 2024-09-18T21:35:11.673Z

changed the description

Author: Amar Takhar 2024-09-18T21:53:45.479Z

approved this merge request

3.7.2.12 10 - Install memstat.h

Id	10
State	merged
Merged by	Amar Takhar
Merged at	2024-08-21T06:17:38.242Z
Assignee(s)	Chris Johns
Created	2024-08-21T06:10:08.078Z
Updated	2024-08-21T06:17:39.134Z
Milestone	6.1
Labels	libbsd
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/10
Commit	6df4b41d46d3b7402fe74719237882c45ed3410a

Install `memstat.h` to provide the interface to the FreeBSD Kernel Memory Allocator Statistics Library.

Author: Chris Johns 2024-08-21T06:10:11.849Z

assigned to @chris

Author: Chris Johns 2024-08-21T06:10:36.208Z

added 2 commits

- a4e5779f - 1 commit from branch `rtems/pkg:6-freebsd-12`
- 6df4b41d - freebsd: Install memstat.h

Compare with previous version

Author: Amar Takhar 2024-08-21T06:17:33.980Z

approved this merge request

3.7.2.13 9 - Update links to GitLab

Id	9
State	merged
Merged by	Chris Johns
Merged at	2024-08-21T06:13:01.238Z
Assignee(s)	Amar Takhar
Created	2024-08-19T19:47:09.096Z
Updated	2024-08-21T06:13:02.381Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/9
Commit	8c872c853b44ae988fb537ef9146a65a82c2e790

Summary

Update links to GitLab

I have not looked at any of the content this is just a change to GitLab URLs.

Author: Amar Takhar 2024-08-19T19:47:09.248Z

assigned to @amar

Author: Chris Johns 2024-08-21T06:12:56.328Z

approved this merge request

3.7.2.14 8 - waf: Fix spelling of configuration

Id	8
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-16T15:24:09.323Z
Assignee(s)	Chris Johns
Created	2024-08-15T23:21:05.331Z
Updated	2024-08-16T15:24:11.202Z
Milestone	6.1
Labels	libbsd, spellcheck
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/8
Commit	ac1021c88adcb2da2bd39e2d625c57dc59e0ab66

Fix spelling of configuration

Update #3

Author: Chris Johns 2024-08-15T23:21:05.559Z

assigned to @chris

Author: Joel Sherrill 2024-08-16T15:24:05.972Z

approved this merge request

3.7.2.15 7 - waf: Fix spelling of configuration

Id	7
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-16T15:23:19.356Z
Assignee(s)	Chris Johns
Created	2024-08-15T23:06:22.498Z
Updated	2024-08-16T15:23:20.585Z
Milestone	6.1
Labels	spellcheck
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/7
Commit	a4e5779f7f68616b67f5d270fa7101ef02b16f87

Fix spelling of configuration

Close #3

Author: Chris Johns 2024-08-15T23:06:22.655Z

assigned to @chris

Author: Joel Sherrill 2024-08-16T15:23:15.288Z

approved this merge request

3.7.2.16 2 - rtems_waf: Update submodule URL

Id	2
State	merged
Merged by	Chris Johns
Merged at	2024-06-11T09:36:26.029Z
Created	2024-06-05T05:52:45.786Z
Updated	2024-08-10T00:40:42.316Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/2
Commit	1a6dfb689ab6f85c731cc26bd763502d27de7af8

Summary

rtems_waf: Update submodule URL

RTEMS switched to gitlab. That changed the URL for the rtems_waf submodule.

Author: Aaron Nyholm 2024-06-07T06:07:28.115Z

mentioned in merge request !4

Author: Chris Johns 2024-06-11T09:36:23.055Z

approved this merge request

3.7.2.17 1 - rtems_waf: Update submodule URL

Id	1
State	merged
Merged by	Chris Johns
Merged at	2024-06-11T09:34:49.471Z
Created	2024-06-05T05:50:39.054Z
Updated	2024-08-10T00:40:42.130Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/1
Commit	c9d8ae9dc618fd97b1f4bc3e26f7b38408369303

Summary

rtems_waf: Update submodule URL

RTEMS switched to gitlab. That changed the URL for the rtems_waf submodule.

Author: Aaron Nyholm 2024-06-07T06:07:04.155Z

mentioned in merge request !3

Author: Chris Johns 2024-06-11T09:34:45.813Z

approved this merge request

3.7.2.18 5 - rtemsbsd/kernel-init: Ignore EEXIST for /etc

Id	5
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-03T22:13:23.905Z
Assignee(s)	Kinsey Moore
Created	2024-07-03T20:28:44.908Z
Updated	2024-07-03T22:13:25.342Z
Milestone	6.1
Labels	libbsd
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/5
Commit	ddccd332f63c82184de35d777a418b3ebd3e47a5

Summary

rtemsbsd/kernel-init: Ignore EEXIST for /etc

This restores previous behavior of allowing processing to continue in the case that /etc already exists while still checking for other directory creation errors.

Author: Kinsey Moore 2024-07-03T20:28:45.065Z

assigned to @opticron

Author: Kinsey Moore 2024-07-03T20:32:13.338Z

changed target branch from `main` to `6-freebsd-12`

Author: Joel Sherrill 2024-07-03T22:13:19.759Z

approved this merge request

3.7.2.19 6 - rtemsbsd/kernel-init: Ignore EEXIST for /etc

Id	6
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-03T21:32:57.009Z
Assignee(s)	Kinsey Moore
Created	2024-07-03T20:29:46.174Z
Updated	2024-07-03T21:32:58.273Z
Milestone	6.1
Labels	libbsd
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/6
Commit	d1b6e952a7fbc7426764885c926dde51a4e919a6

Summary

rtemsbsd/kernel-init: Ignore EEXIST for /etc

This restores previous behavior of allowing processing to continue in the case that /etc already exists while still checking for other directory creation errors.

Author: Kinsey Moore 2024-07-03T20:29:46.313Z

assigned to @opticron

Author: Joel Sherrill 2024-07-03T21:32:52.044Z

approved this merge request

3.7.2.20 4 - Updated rtems_waf submodule URL to Gitlab (closed)

Id	4
State	closed
Closed by	Aaron Nyholm
Created	2024-06-07T06:05:15.643Z
Closed	2024-06-07T06:07:28.078Z
Updated	2025-09-19T02:42:05.366Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/4
Commit	8a57090a7db3ddde5c64f2fe28172ac30c9bce3f

Updated rtems_waf git submodule URL for 6-freebsd-12.

Author: Aaron Nyholm		2024-06-07T06:07:27.589Z

Closing as duplicates !2

3.7.2.21 3 - Updated rtems_waf submodule URL to Gitlab (closed)

Id	3
State	closed
Closed by	Aaron Nyholm
Created	2024-06-07T05:56:40.916Z
Closed	2024-06-07T06:07:04.235Z
Updated	2025-09-19T02:39:14.531Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/pkg/rtems-libbsd/-/merge_requests/3
Commit	9f2933b33b3bb02e2b7698226e12f3902c9f3eb1

Updates the submodule URL for rtems_waf.

Author: Aaron Nyholm		2024-06-07T06:07:03.731Z

Closing as duplicate of !1

3.8 RTEMS / Programs / Google Summer of Code

Go to *Issues* (page 68) or rtems/programs/gsoc-merges

Issues Summary

79 - GDB script entries in EXE (page 945)
76 - dtc build failure on msys2 - all rtems6 target tools fail to build on Windows 10 (page 957)
73 - Make Stack Checker Error Handler Configurable (page 956)
72 - Use thread-local storage for Newlib reentrancy objects (page 961)
67 - Port Rust to RTEMS (page 917)
66 - Replace Mongoose with Civetweb (page 914)
61 - Improve Exception Output (page 916)
59 - Add BSP for Polarfire based Beagle (page 951)
57 - Add Python initializer for gdb RTEMS specific support (page 954)
51 - Basic Support for Trace Compass (page 938)
47 - TLS support for libdl (page 923)
40 - Add RSB Support for CivetWeb (page 949)
37 - RTEMS Testing TFTP Proxy Project (page 940)
35 - RTEMS Release Notes Generator (page 904)
31 - Add Benchmarking statistics for block device drivers (page 943)
26 - Add SDIO driver support to rtems-libbsd (page 944)
23 - Port RTEMS to Microblaze (page 968)
21 - Improve Coverity Scan Integration (page 931)
9 - Add Classic API Barrier "get number waiting" Service (page 919)

Merge Requests Summary

3.8.1 Issues

3.8.1.1 35 - RTEMS Release Notes Generator

Id	35
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2018-03-01T01:06:45.000Z
Updated	2025-09-19T01:08:36.169Z
Milestone	6.1
Labels	gsoc, gsoc::large, priority::normal, resolution::fixed, tickettype::project
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/35
Merges	0

RTEMS Release Notes Generator

[Contents, inline)]

3.8.1.1.1.1 Mentors

Chris Johns

3.8.1.1.1.2 Students

Past, Present, and Potential Students

3.8.1.1.1.3 Status

This is an existing project. The history is:

GSoC/2018

3.8.1.1.1.4 Introduction

The RTEMS release process generate the release notes from Trac. All changes on a release branch must have a ticket and the ticket is assigned the Version and Milestone. During the release process a Trac TicketQuery is run on release milestone and the resulting pages are converted to a PDF as the release notes. The Trac ticket pages are downloaded in a format suitable for parsing such as XML.

The RTEMS 4.11.3 release notes are:

https://ftp.rtems.org/pub/rtems/releases/4.11/4.11.3/rtems-4.11.3-release-notes.pdf

and all the tickets and so all the changes have been captured however the release notes have some issues.

1. The tickets only have the descriptions and no comments. This means any discussion on the resolution of the ticket is missing.
2. The date is relative so **4 days ago** is relative to the date of the release.
3. There are some formatting issue. See page 3/8 of the 4.11.3 notes on the link above.

Comments cannot be easily added. Trac's TicketQuery does not support adding the Comments. There has been many requests for this over the years and it has not been added.

The date is a local setting which means logging in to get a setting and the release process is anonymous and gets the default.

The formatting could be the current release process's CSS file used to generate the PDF.

3.8.1.1.1.5 Goal

- Automatically create the release notes for a release from the Trac data.
- Include all of the ticket's data in the release notes.
- Use the full date.
- Provide better formatting of the ticket such as each ticket starting on a new page.
- Be able to provide HTML and PDF version of the output.

3.8.1.1.1.6 Prerequisite ==

- Knowledge of Python
- Knowledge of HTML and CSS
- Knowledge of XML
- Knowledge of ReST (Sphinx)

3.8.1.1.1.7 Tasks

1. Develop a Python class to read an RSS page from Trac. An RSS page is basically HTML in XML.
2. Develop a Python class to get a list of tickets for a milestone from Trac using the RSS format.
3. Develop a Python class to get all the ticket data for a milestone.
4. Generate ReST output that can be wrapped in coverpages to create a document.
5. Have Sphnix generate create HTML and PDF output.
7. Package the tool in the `rtems-tools` repo.
8. Update the RTEMS release process to create the new format release notes.

Author: Amar Takhar 2024-04-26T01:34:36.327Z

assigned to @chris

Author: Chris Johns 2018-03-01T01:07:22.000Z

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Chris Johns 2018-03-01T01:14:58.000Z

- **Description** changed

```
- = RTEMS Release Note Generator =
+ = RTEMS Release Notes Generator =
?                      +


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== Mentors ==

Chris Johns

== Students ==
```

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(continued from previous page)

```
13
14 Past, Present, and Potential Students
15
16 == Status ==
17
18 This is a new project
19
20 == Introduction ==
21
22 The RTEMS release process generate the release notes from Trac. All␣
   ↪changes on a release branch must have a ticket and the ticket is␣
   ↪assigned the Version and Milestone. During the release process a Trac␣
   ↪TicketQuery is run on release milestone and the resulting web pages␣
   ↪are converted to a PDF as the release notes.
23
24 The RTEMS 4.11.3 release notes are:
25
26 https://ftp.rtems.org/pub/rtems/releases/4.11/4.11.3/rtems-4.11.3-
   ↪release-notes.pdf
27
28 and all the tickets and so all the changes have been captured however␣
   ↪the release notes have some issues.
29
30 1. The tickets only have the descriptions and no comments. This means␣
   ↪any discussion on the resolution of the ticket is missing.
31
32 2. The date is relative so **4 days ago** is relative to the date of␣
   ↪the release.
33
34 3. There are some formatting issue. See page 3/8 of the 4.11.3 notes on␣
   ↪the link above.
35
36 Comments cannot be easily added. Trac's TicketQuery does not support␣
   ↪adding the Comments. There has been many requests for this over the␣
   ↪years and it has not been added.
37
38 The date is a local setting which means logging in to get a setting and␣
   ↪the release process is anonymous and gets the default.
39
40 The formatting could be the current release process's CSS file used to␣
   ↪generate the PDF.
41
42 == Goal ==
43
44 * Automatically create the release notes for a release from the Trac␣
   ↪data.
45
46 * Include all of the ticket's data in the release notes.
47
```

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```
* Use the full date.

* Provide better formatting of the ticket such as each ticket starting on a new page.

* Be able to provide HTML and PDF version of the output.

== Prerequisite ==

* Knowledge of Python
* Knowledge of HTML and CSS
* Knowledge of XML
* Optional knowledge of ReST (Sphinx)

== Tasks ==

1. Develop a Python class to read an RSS page from Trac. An RSS page is basically HTML in XML.

2. Develop a Python class to get a list of tickets for a milestone from Trac using the RSS format.

3. Develop a Python class to get all the ticket data for a milestone.

4. Investigate output formats. See if the data can be used in a ReST (Restructured Text) document so Sphnix can be used to create HTML and PDF output.

5. Generate the output format. Add the RTEMS icon, a coverpage, copyright and another data we need in the release notes.

6. Convert the output to HTML and PDF.

7. Package the tool in the `rtems-tools` repo.

8. Update the RTEMS release process to create the new format release notes.
```

- **Summary** changed from *RTEMS Releases Note Generator* to *RTEMS Release Notes Generator*

Author: Chris Johns 2020-03-04T02:20:04.000Z

- **Description** changed

```
= RTEMS Release Notes Generator =

[[Contents, inline)](../wikis/PageOutline(1-5,)]

```

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```
== Mentors ==

Chris Johns

== Students ==

Past, Present, and Potential Students

== Status ==

- This is a new project
+ This is an existing project. The history is:
+
+  [GSoC/2018](GSoC/2018)

== Introduction ==

The RTEMS release process generate the release notes from Trac. All changes on a release branch must have a ticket and the ticket is assigned the Version and Milestone. During the release process a Trac TicketQuery is run on release milestone and the resulting web pages are converted to a PDF as the release notes.

The RTEMS 4.11.3 release notes are:

https://ftp.rtems.org/pub/rtems/releases/4.11/4.11.3/rtems-4.11.3-release-notes.pdf

and all the tickets and so all the changes have been captured however the release notes have some issues.

1. The tickets only have the descriptions and no comments. This means any discussion on the resolution of the ticket is missing.

2. The date is relative so **4 days ago** is relative to the date of the release.

3. There are some formatting issue. See page 3/8 of the 4.11.3 notes on the link above.

Comments cannot be easily added. Trac's TicketQuery does not support adding the Comments. There has been many requests for this over the years and it has not been added.

The date is a local setting which means logging in to get a setting and the release process is anonymous and gets the default.

The formatting could be the current release process's CSS file used to generate the PDF.
```

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```
41
42 == Goal ==
43
44 * Automatically create the release notes for a release from the Trac␣
   ↪data.
45
46 * Include all of the ticket's data in the release notes.
47
48 * Use the full date.
49
50 * Provide better formatting of the ticket such as each ticket starting␣
   ↪on a new page.
51
52 * Be able to provide HTML and PDF version of the output.
53
54 == Prerequisite ==
55
56 * Knowledge of Python
57 * Knowledge of HTML and CSS
58 * Knowledge of XML
59 - * Optional knowledge of ReST (Sphinx)
60 ?   ^^^^^^^^^^
61
62 + * Knowledge of ReST (Sphinx)
63 ?   ^
64
65
66 == Tasks ==
67
68 1. Develop a Python class to read an RSS page from Trac. An RSS page is␣
   ↪basically HTML in XML.
69
70 2. Develop a Python class to get a list of tickets for a milestone from␣
   ↪Trac using the RSS format.
71
72 3. Develop a Python class to get all the ticket data for a milestone.
73
74 - 4. Investigate output formats. See if the data can be used in a ReST␣
   ↪(Restructured Text) document so Sphnix can be used to create HTML and␣
   ↪PDF output.
75 + 4. Generate ReST output that can be wrapped in coverpages to create a␣
   ↪document.
76
77 + 5. Have Sphnix generate create HTML and PDF output.
78 - 5. Generate the output format. Add the RTEMS icon, a coverpage,␣
   ↪copyright and another data we need in the release notes.
79 -
80 - 6. Convert the output to HTML and PDF.
81
```

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```
82 7. Package the tool in the `rtems-tools` repo.
83
84 8. Update the RTEMS release process to create the new format release␣
   ↪notes.
```

Author: Chris Johns 2020-03-04T20:55:04.000Z

- **Description** changed

```
1  = RTEMS Release Notes Generator =
2
3  [[Contents, inline)](../wikis/PageOutline(1-5,)]
4
5  == Mentors ==
6
7  Chris Johns
8
9  == Students ==
10
11 Past, Present, and Potential Students
12
13 == Status ==
14
15 This is an existing project. The history is:
16
17 [GSoC/2018](GSoC/2018)
18
19 == Introduction ==
20
21 - The RTEMS release process generate the release notes from Trac. All␣
   ↪changes on a release branch must have a ticket and the ticket is␣
   ↪assigned the Version and Milestone. During the release process a Trac␣
   ↪TicketQuery is run on release milestone and the resulting web pages␣
   ↪are converted to a PDF as the release notes.
22 ?                                                                    ␣
   ↪                                                                   ␣
   ↪                                                                   ␣
   ↪                                                ^^^^^^^^^^^^^      ␣
23
24 + The RTEMS release process generate the release notes from Trac. All␣
   ↪changes on a release branch must have a ticket and the ticket is␣
   ↪assigned the Version and Milestone. During the release process a Trac␣
   ↪TicketQuery is run on release milestone and the resulting pages are␣
   ↪converted to a PDF as the release notes. The Trac ticket pages are␣
   ↪downloaded in a format suitable for parsing such as XML.
25 ?                                                                    ␣
   ↪                                                                   ␣
   ↪                                                                   ␣
```

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```
↪                                                          ^^^^^^^^^
↪                                  ␣
↪++++++
```

(continued from previous page)

```
* Knowledge of HTML and CSS
* Knowledge of XML
* Knowledge of ReST (Sphinx)

== Tasks ==

1. Develop a Python class to read an RSS page from Trac. An RSS page is basically HTML in XML.

2. Develop a Python class to get a list of tickets for a milestone from Trac using the RSS format.

3. Develop a Python class to get all the ticket data for a milestone.

4. Generate ReST output that can be wrapped in coverpages to create a document.

5. Have Sphnix generate create HTML and PDF output.

7. Package the tool in the `rtems-tools` repo.

8. Update the RTEMS release process to create the new format release notes.
```

Author: Chris Johns 2023-03-24T23:20:30.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

This task has been completed.

Author: Amar Takhar 2024-04-25T20:46:02.240Z

changed the description

3.8.1.2 66 - Replace Mongoose with Civetweb

Id	66
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Closed by	Chris Johns
Created	2021-03-10T22:48:28.000Z
Closed	2024-11-22T00:53:06.534Z
Updated	2025-09-19T01:06:40.473Z
Milestone	6.1
Labels	gsoc, gsoc::large, library, priority::normal, project::large, ticket-type::enhancement
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/66
Merges	0

RTEMS has an old version of Mongoose using a permissive license before it was relicensed to GPL. There was a fork at the point of it being relicensed and it is now called Civetweb (https://github.com/civetweb/civetweb).

This project would remove mongoose from RTEMS and ideally replace it with an RSB built version of Civetweb. This would enable it to be used on top of any TCP/IP stack RTEMS supports.

One challenge will be figuring out how to deal with all the options Civetweb has, making these accessible to the user building Civetweb via RSB, and documenting them.

Author: Amar Takhar 2024-04-26T01:34:49.459Z

assigned to @tracmigrate

Author: Gedare Bloom 2021-03-18T16:16:25.000Z

- **Description** changed

```
- RTEMS has an old version of Mongoose using a permissive license␣
↪before it was relicensed to GPL. There was a fork at the point of it␣
↪being relicensed and it is now called Civitweb (https://github.com/
↪civetweb/civetweb).
?
↪                                                                  ␣
↪                                   ^^^^^
+ RTEMS has an old version of Mongoose using a permissive license␣
↪before it was relicensed to GPL. There was a fork at the point of it␣
↪being relicensed and it is now called Civetweb (https://github.com/
↪civetweb/civetweb).
?
↪                                                                  ␣
```

(continues on next page)

(continued from previous page)

```
↪                                    ^^^^^
6
7
8  - This project would remove mongoose from RTEMS and ideally replace it␣
   ↪with an RSB built version of Civitweb. This would enable it to be␣
   ↪used on top of any TCP/IP stack RTEMS supports.
9  ?                                                                    ␣
   ↪                                  ^
10
11 + This project would remove mongoose from RTEMS and ideally replace it␣
   ↪with an RSB built version of Civetweb. This would enable it to be␣
   ↪used on top of any TCP/IP stack RTEMS supports.
12 ?                                                                    ␣
   ↪                                  ^
13
14
15 - One challenge will be figuring out how to deal with all the options␣
   ↪Civitweb has, making these accessible to the user building Civitweb␣
   ↪via RSB, and documenting them.
16 ?                                                                    ␣
   ↪ ^                                                  ^
17
18 + One challenge will be figuring out how to deal with all the options␣
   ↪Civetweb has, making these accessible to the user building Civetweb␣
   ↪via RSB, and documenting them.
19 ?                                                                    ␣
   ↪ ^                                                  ^
```

- **Summary** changed from *Replace Mongoose with Civitweb* to *Replace Mongoose with Civetweb*

Author: Chris Johns 2024-02-18T23:41:27.000Z

Should Civetweb be added to net-services or an RSB package?

Author: Amar Takhar 2024-04-25T20:48:42.733Z

changed the description

3.8.1.3 61 - Improve Exception Output

Id	61
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-12-09T23:52:21.000Z
Updated	2025-09-19T01:06:40.377Z
Milestone	6.1
Labels	bsp, gsoc, gsoc::small, old-indefinite, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/61
Merges	0

When debugging a divide by zero error on the x86, an exception was printed which was marginally useful. However, it printed the task id in decimal and did not print the exception type as a string. This task is to review the exception handler for each architecture and attempt to make it more user friendly.

- Print values in the most appropriate numeric base
- Print exceptions as strings and with any accompanying details

This can be done an architecture at a time as a small task or as a set for a Summer of Code style project.

Author: Amar Takhar 2024-04-26T01:34:47.498Z

assigned to @tracmigrate

Author: Joel Sherrill 2021-12-16T15:38:01.000Z

- **Milestone** changed from rtems%”6.1” to rtems%”Indefinite”

Author: Joel Sherrill 2021-12-16T15:41:34.000Z

- **Resolution** set to ~”fixed”
- **Status** changed from *new* to *closed*

Implemented by Chris Johns.

Author: Amar Takhar 2024-04-25T20:48:31.572Z

changed the description

3.8.1.4 67 - Port Rust to RTEMS

Id	67
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Closed by	Gedare Bloom
Created	2020-11-20T16:19:43.000Z
Closed	2025-01-20T15:27:21.314Z
Updated	2025-09-19T01:06:40.275Z
Milestone	6.1
Labels	gsoc, gsoc::large, lang::rust, old-indefinite, project::large
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/67
Merges	0

With at least two architectures (SPARC and RISC-V) buildable with LLVM/clang, it is now time to consider porting Rust to RTEMS.

This project will be to target the Rust compiler to RTEMS, port the Rust run-time to RTEMS, and run the test suite for Rust.

All LLVM modifications should be submitted to LLVM which means a contributors agreement to them will have to be executed.

Note: RISC-V RTEMS support for LLVM may still be a work in progress.

rtems/rtos/rtems#4623 may be a prerequisite for this. Being able to build LLVM with RTEMS support for any architecture and test it with normal C support is critical.

Potential mentors: Joel Sherrill, Sebastian Huber, Chris Johns, Gedare Bloom Skills: C, some Rust Difficulty: Hard

Author: Amar Takhar 2024-04-26T01:34:49.849Z

assigned to @tracmigrate

Author: Trac Migrate 2022-02-08T00:46:55.000Z

- **Cc** added @karel@functional.vision

Not sure if this project is not going against the wind here. If nobody steps in, then RTEMS project may get Rust language support for “free” by just waiting and seeing how https://rust-gcc.github.io/ completes. And then by enabling it in RSB I would guess. And well, porting its runtime to newlib. But hopefully effort will be lower than porting whole LLVM framework “just” to bring Rust in.

Author: Joel Sherrill 2022-02-25T21:09:57.000Z

- **Description** changed

```
With at least two architectures (SPARC and RISC-V) buildable with LLVM/
↪clang, it is now time to consider porting Rust to RTEMS.

This project will be to target the Rust compiler to RTEMS, port the␣
↪Rust run-time to RTEMS, and run the test suite for Rust.

All LLVM modifications should be submitted to LLVM which means a␣
↪contributors agreement to them will have to be executed.

+ Note: RISC-V RTEMS support for LLVM may still be a work in progress.
+
+ #4623 may be a prerequisite for this. Being able to build LLVM with␣
↪RTEMS support for any architecture and test it with normal C support␣
↪is critical.
+
Potential mentors: Joel Sherrill, Sebastian Huber, Chris Johns, Gedare␣
↪Bloom
+ Skills: C, some Rust
+ Difficulty: Hard


+
```

Author: Trac Migrate 2022-03-31T10:42:56.000Z

For porting LLVM-based rust toolchain, e.g. the one commonly known as 'rust', this page should be related: https://github.com/rust-embedded/wg

Author: Trac Migrate 2022-04-04T08:16:27.000Z

And to complete a picture, here is another project marring rust and gcc. This time rust as it is is used and the backend is changed from llvm to gcc's own gccjit library. https://github.com/rust-lang/rustc_codegen_gcc

Author: Amar Takhar 2024-04-25T20:48:28.454Z

changed the description

Author: Gedare Bloom 2025-01-20T15:28:08.908Z

cloned to #80

3.8.1.5 9 - Add Classic API Barrier "get number waiting" Service

Id	9
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Gedare Bloom
Created	2019-05-20T22:22:33.000Z
Closed	2025-05-12T17:03:03.102Z
Updated	2025-09-19T01:06:40.153Z
Milestone	6.1
Labels	gsoc, gsoc::small, lang::c, old-indefinite, project::small, rtems::kernel
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/9
Merges	3

Background

Given that a barrier can be set to manually release, it would be useful to know how many threads are waiting at it. An extension to the barrier API could be useful.

Approach

Talk to the mentors. Tests and documentation are required.

Knowledge/Skills

- C
- Synchronization primitives

Possible Mentors

@joel @gedare

Author: Amar Takhar 2024-04-26T01:25:48.444Z

assigned to @joel

Author: Joel Sherrill 2022-02-25T21:25:44.000Z

- **Description** changed

```
- Given that a barrier can be set to manually release, it would be␣
↪useful to know how many threads are waiting at it. This is a low␣
↪priority request to consider adding that.
?
↪                                                  ^^ ^^   ^^ ^^^^  ^^^^ ␣
↪    ----------- --------------
```

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```
3
4 + Given that a barrier can be set to manually release, it would be␣
  ↪useful to know how many threads are waiting at it. Tests and␣
  ↪documentation required.
5 ?
  ↪                                                 ^ ^   ^^^^ ^^^^^^^^  ^␣
  ↪    ++
6
7 +
8 + Possible Mentors: Joel Sherrill
9 + Skills: C
10 + Difficulty: Medium
```

Author: Gedare Bloom 2024-02-17T05:09:21.000Z

- **Priority** changed from ~"lowest" to ~"normal"

Author: Gedare Bloom 2024-02-17T05:13:37.000Z

- **Owner** set to @joel
- **Status** changed from *new* to *assigned*

Author: Amar Takhar 2024-04-25T20:47:22.889Z

changed the description

Author: Gedare Bloom 2025-01-18T02:15:21.106Z

changed the description

Author: Gedare Bloom 2025-01-24T23:17:06.150Z

changed the description

Author: mazen Adel 2025-03-02T14:30:08.647Z

mentioned in merge request rtems/rtos/rtems!439

Author: mazen Adel 2025-03-02T14:49:45.677Z

mentioned in merge request rtems/rtos/rtems!440

Author: mazen Adel 2025-03-02T21:24:08.383Z

mentioned in merge request rtems/rtos/rtems!441

Author: mazen Adel 2025-03-02T21:38:54.300Z

mentioned in commit mez3n/rtems@27258c00758dde6dbbdd2585fce0c1036b275bb2

Author: mazen Adel 2025-03-02T21:39:31.801Z

mentioned in merge request rtems/rtos/rtems!442

Author: mazen Adel 2025-03-04T22:51:16.973Z

mentioned in commit mez3n/rtems@f05430b3797505d56e71fc558ac31d59afb22253

Author: mazen Adel 2025-03-04T22:58:26.206Z

mentioned in merge request rtems/rtos/rtems!443

Author: mazen Adel 2025-03-04T23:08:19.371Z

mentioned in commit mez3n/rtems@cedac6705c606466e1373d66ac3b301555040c70

Author: mazen Adel 2025-03-04T23:10:09.290Z

mentioned in commit mez3n/rtems@1804468edb99ec38950eaf9552061807c7047f74

Author: mazen Adel 2025-03-08T11:14:43.889Z

mentioned in commit mez3n/rtems@f7f9bc49d95c3303ddb264a48d61c6add54fc37f

Author: mazen Adel 2025-03-08T15:27:11.919Z

mentioned in commit mez3n/rtems@bd62cffa1459c203c7dba33102031ed1c3de717c

Author: mazen Adel 2025-03-08T15:44:12.862Z

mentioned in commit mez3n/rtems@29c7a0d2be845ceb1c585ffa9a4bd74d8eb8857c

Author: mazen Adel 2025-03-20T22:09:32.856Z

mentioned in commit mez3n/rtems@3ddb5c4813ff8e8960a9372d8ef1332275e65fd8

Author: mazen Adel 2025-03-27T19:52:41.005Z

mentioned in commit mez3n/rtems-docs@1a8110bb7ad623d7d051932dd110c3d2c08a6bc5

Author: mazen Adel 2025-03-27T19:54:35.945Z

mentioned in merge request rtems/docs/rtems-docs!167

Author: mazen Adel 2025-03-27T19:58:20.733Z

mentioned in commit mez3n/rtems-docs@4777a0dad822cbf535068e32782e65f651dd7865

Author: mazen Adel 2025-04-23T22:05:10.088Z

mentioned in commit mez3n/rtems-docs@ca5c113de0607f6eccf9c95d095315ebd6008456

Author: mazen Adel 2025-04-23T22:39:26.485Z

mentioned in commit mez3n/rtems-docs@d09d56093fc7e9d94347e34fb1e149b56b89c321

Author: mazen Adel 2025-04-23T22:45:36.651Z

mentioned in commit mez3n/rtems-docs@5db696844dd0448612dd34aeee93810bf8072581

Author: mazen Adel 2025-05-09T23:22:23.658Z

mentioned in commit mez3n/rtems@5fb2acfe9e191f4de742c507306d50a0e66074dc

Author: mazen Adel 2025-05-09T23:30:13.142Z

mentioned in commit mez3n/rtems@1ff8baaef6cf9525838536fe5ddef58889d89f87

Author: mazen Adel 2025-05-12T17:00:17.621Z

mentioned in commit mez3n/rtems@528095cd24afeef648ea0e70694aa3755a7c0edf

Author: mazen Adel 2025-05-12T17:25:01.785Z

mentioned in commit sunil-hegde/rtems@2cc39d9a707c889157af33872412c0756cf8660c

Author: mazen Adel 2025-08-29T13:15:18.599Z

mentioned in commit mez3n/rtems-docs@238db0f7fa0896e5cb79e64aa53f186bd0c94818

Author: mazen Adel 2025-08-31T12:46:44.225Z

mentioned in commit mez3n/rtems-docs@348fb0331720acee2e62cef1d6257c3cc4b65ecc

Author: mazen Adel 2025-08-31T12:47:42.039Z

mentioned in commit mez3n/rtems-docs@418dd3359e0e134504ddf6f8a32569592c17bc8b

Author: mazen Adel 2025-08-31T12:52:04.735Z

mentioned in commit mez3n/rtems-docs@9dec1de81c033e38184fa39000e212674ece0116

Author: mazen Adel 2025-08-31T12:53:50.575Z

mentioned in commit mez3n/rtems-docs@4d1429e284b2a67cd70ed89761566fa2e9c7362b

3.8.1.6 47 - TLS support for libdl

Id	47
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2019-03-04T03:54:41.000Z
Updated	2025-09-19T01:06:40.028Z
Milestone	6.1
Labels	cpukit::dl, gsoc, gsoc::large, old-indefinite, priority::normal, resolution::duplicate, rtems::kernel, tickettype::project
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/47
Merges	0

TLS support for libdl

[Contents, inline)]

3.8.1.6.1.1 Mentors

Chris Johns

3.8.1.6.1.2 Status ==

Introduction =

The goal of this project is to support TLS variables in code loaded using `libdl`.

RTEMS supports the run-time loading of the executable code using the `dlopen` family of calls. The implementation is in `libdl`. Thread Local Storage (TLS) is not support. Code containing TLS will not load and so cannot be run.

3.8.1.6.2.1 TLS Varables

TLS data is private to each thread. A thread is allocated a block of data when it is create to hold the system wide TLS variables. When code references a TLS variable it uses an offset from a system defined and reserved register to access the memory. With a statically linked executable all the TLS variables are known so the space allocated is known. Initialized TLS variables need to initialized when a thread is created.

TLS has an overhead. The thread specific storage adds to the allocation overhead when a thread is created, as well as thread create time as the memory needs to be initialized or cleared. It is useful to hold pointer to large object and use by RTEMS system level software should be avoided.

TLS needs compiler support to work and this means the ABI the compiler implements defines how TLS variables are defined and operate.

3.8.1.6.2.2 Run-time Loaded TLS Variables

Run-time loading TLS variables complicates the how TLS variables are implemented in RTEMS and how TLS variables are used. Space needs to be reserved in all threads to cater for variables that are loaded at run-time.

Space is allocated to TLS variables from the special memory attached to each thread as they are loaded until the reserved space is consumed. TLS variable symbols are treated differently to other variables loaded at run-time. Space allocated to a TLS cannot be used again until the TLS symbol that references it is removed from the system by the unloading of the executable object file that contains it.

Initialization of new variables in existing threads can happen without suspending a thread. A new TLS variable is only available to a running thread once the executable object has finished being loaded so the memory can be touched while the thread is running. The thread cannot be deleted while the initialisation is happening. Threads that start after TLS variables have been loaded need to have their TLS memory initialized.

RTEMS cannot afford to suspend threads to dynamically allocate more space to TLS variables.

Project

The project is to add support to the RTEMS `score` and `libdl` to support the loading of executable object files with TLS variables.

3.8.1.6.3.1 Goal

- Update the `score` to allow reserve extra TLS memory
- Provide an allocator to the memory.
- Add a TLS symbol table to `libdl`.
- Add TSL variable tests to the testsuite.

3.8.1.6.3.2 Prerequisite

This is an advanced project with a lot of detail. Parts of the code need to be in the `score` and deep in the TCB for threads. Code accuracy and clarity is important.

- Advanced knowledge of C.
- An understanding of ELF and TLS.
- Ability to read detail documents on file formats and operating characteristics such as ABI details for an architecture.
- Experience with a few RTEMS tier 1 architectures.

3.8.1.6.3.3 Difficulty

This is a large (350-hour) project of hard difficulty.

3.8.1.6.3.4 Resources

- Current RTEMS developers.

Tasks

The following are the tasks:

TDB

Acknowledgements

None.

Miscellaneous Sections

As the project progresses, you will need to add to the RTEMS Testing section of the User manual. This section does not currently exist but it should be present even in a skeleton form.

References

- None.

Author: Amar Takhar 2024-04-26T01:34:41.568Z

assigned to @chris

Author: Gedare Bloom 2020-01-14T21:05:53.000Z

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Gedare Bloom 2022-02-25T18:19:03.000Z

- **Description** changed

```
= TLS support for libdl =

[[Contents, inline)](../wikis/PageOutline(1-5,)]

== Mentors ==
Chris Johns

== Status ==

= Introduction =

The goal of this project is to support TLS variables in code loaded using `libdl`.

RTEMS supports the run-time loading of the executable code using the `dlopen` family of calls. The implementation is in `libdl`. Thread Local Storage (TLS) is not support. Code containing TLS will not load and so cannot be run.

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TLS data is private to each thread. A thread is allocated a block of data when it is create to hold the system wide TLS variables. When code references a TLS variable it uses an offset from a system defined and reserved register to access the memory. With a statically linked executable all the TLS variables are known so the space allocated is known. Initialized TLS variables need to initialized when a thread is created.

TLS has an overhead. The thread specific storage adds to the allocation overhead when a thread is created, as well as thread create time as the memory needs to be initialized or cleared. It is useful to hold pointer to large object and use by RTEMS system level software should be avoided.

TLS needs compiler support to work and this means the ABI the compiler implements defines how TLS variables are defined and operate.

== Run-time Loaded TLS Variables ==

```

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```
Run-time loading TLS variables complicates the how TLS variables are implemented in RTEMS and how TLS variables are used. Space needs to be reserved in all threads to cater for variables that are loaded at run-time.

Space is allocated to TLS variables from the special memory attached to each thread as they are loaded until the reserved space is consumed. TLS variable symbols are treated differently to other variables loaded at run-time. Space allocated to a TLS cannot be used again until the TLS symbol that references it is removed from the system by the unloading of the executable object file that contains it.

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RTEMS cannot afford to suspend threads to dynamically allocate more space to TLS variables.

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The project is to add support to the RTEMS `score` and `libdl` to support the loading of executable object files with TLS variables.

== Goal ==

* Update the `score` to allow reserve extra TLS memory
* Provide an allocator to the memory.
* Add a TLS symbol table to `libdl`.
* Add TSL variable tests to the testsuite.

== Prerequisite ==

This is an advanced project with a lot of detail. Parts of the code need to be in the `score` and deep in the TCB for threads. Code accuracy and clarity is important.

* Advanced knowledge of C.
* An understanding of ELF and TLS.
* Ability to read detail documents on file formats and operating characteristics such as ABI details for an architecture.
* Experience with a few RTEMS tier 1 architectures.

+ == Difficulty ==
+ This is a large (350-hour) project of hard difficulty.
```

(continues on next page)

(continued from previous page)

```
+
== Resources ==

* Current RTEMS developers.

= Tasks =

The following are the tasks:

TDB

= Acknowledgements =

None.

= Miscellaneous Sections =

As the project progresses, you will need to add to the RTEMS Testing section of the User manual. This section does not currently exist but it should be present even in a skeleton form.

= References =

* None
```

Author: Gedare Bloom 2024-02-17T17:35:27.000Z

- **Description** changed

```
= TLS support for libdl =

[[Contents, inline)](../wikis/PageOutline(1-5,)]

== Mentors ==
Chris Johns

== Status ==

= Introduction =

The goal of this project is to support TLS variables in code loaded using `libdl`.

RTEMS supports the run-time loading of the executable code using the `dlopen` family of calls. The implementation is in `libdl`. Thread Local Storage (TLS) is not support. Code containing TLS will not load and so cannot be run.

```

(continues on next page)

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```
== TLS Varables ==

TLS data is private to each thread. A thread is allocated a block of data when it is create to hold the system wide TLS variables. When code references a TLS variable it uses an offset from a system defined and reserved register to access the memory. With a statically linked executable all the TLS variables are known so the space allocated is known. Initialized TLS variables need to initialized when a thread is created.

TLS has an overhead. The thread specific storage adds to the allocation overhead when a thread is created, as well as thread create time as the memory needs to be initialized or cleared. It is useful to hold pointer to large object and use by RTEMS system level software should be avoided.

TLS needs compiler support to work and this means the ABI the compiler implements defines how TLS variables are defined and operate.

== Run-time Loaded TLS Variables ==

Run-time loading TLS variables complicates the how TLS variables are implemented in RTEMS and how TLS variables are used. Space needs to be reserved in all threads to cater for variables that are loaded at run-time.

Space is allocated to TLS variables from the special memory attached to each thread as they are loaded until the reserved space is consumed. TLS variable symbols are treated differently to other variables loaded at run-time. Space allocated to a TLS cannot be used again until the TLS symbol that references it is removed from the system by the unloading of the executable object file that contains it.

Initialization of new variables in existing threads can happen without suspending a thread. A new TLS variable is only available to a running thread once the executable object has finished being loaded so the memory can be touched while the thread is running. The thread cannot be deleted while the initialisation is happening. Threads that start after TLS variables have been loaded need to have their TLS memory initialized.

RTEMS cannot afford to suspend threads to dynamically allocate more space to TLS variables.

= Project =

The project is to add support to the RTEMS `score` and `libdl` to support the loading of executable object files with TLS variables.

```

(continues on next page)

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```
== Goal ==

* Update the `score` to allow reserve extra TLS memory
* Provide an allocator to the memory.
* Add a TLS symbol table to `libdl`.
* Add TSL variable tests to the testsuite.

== Prerequisite ==

This is an advanced project with a lot of detail. Parts of the code need to be in the `score` and deep in the TCB for threads. Code accuracy and clarity is important.

* Advanced knowledge of C.
* An understanding of ELF and TLS.
* Ability to read detail documents on file formats and operating characteristics such as ABI details for an architecture.
* Experience with a few RTEMS tier 1 architectures.

== Difficulty ==
This is a large (350-hour) project of hard difficulty.

== Resources ==

* Current RTEMS developers.

= Tasks =

The following are the tasks:

TDB

= Acknowledgements =

None.

= Miscellaneous Sections =

As the project progresses, you will need to add to the RTEMS Testing section of the User manual. This section does not currently exist but it should be present even in a skeleton form.

= References =

- * None
+ * None.
?       +
```

- **Resolution** set to ~"duplicate"

- **Status** changed from *assigned* to *closed*

This is now a tracked blocker defect rtems/rtos/rtems#4920.

Author: Amar Takhar 2024-04-25T20:47:14.152Z

changed the description

3.8.1.7 21 - Improve Coverity Scan Integration

Id	21
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Gedare Bloom
Created	2019-02-28T21:06:28.000Z
Closed	2025-01-31T17:30:52.096Z
Updated	2025-09-19T01:06:39.904Z
Milestone	6.1
Labels	gsoc, gsoc::retired, old-indefinite, priority::normal, rtems::testing, ticket-type::project
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/21
Merges	0

The goal of this project is to create better workflows to incorporate static analysis into the RTEMS development and release cycle. This project can be done with other static analyzers such as Codiga

Mentors

Gedare Bloom, Joel Sherrill

Skills

Python, Data manipulation

Difficulty

This is a small (175-hour) project of medium difficulty.

More Information

Coverity Scan is a static analyzer that can identify various types of potential software defects. Coverity offers free use of this analyzer for free software projects. Issues identified for RTEMS are at https://scan.coverity.com/projects/rtems.

Coverity Scan identifies POTENTIAL issues. Some may be real bugs. Others may indicate that Coverity Scan does not have full awareness of the program life. For example, memory allocated during RTEMS initialization may appear to be leaked because it is never freed, but this is deliberate and the issue marked as such in Coverity Scan.

You can get an account on Coverity Scan and request access to the [RTEMS Project](https://scan.coverity.com/projects/rtems) to contribute.

The current process for dealing with Coverity Scan is entirely manual. See, for example, Google Code-In task instructions for Coverity. This manual process has several drawbacks. The purpose of this GSoC Project would be to simplify the process of working with Coverity, and to automate it where possible. We have identified two starting directions, and encourage interested students to brainstorm on other ways to improve the Coverity Scan integration.

Reducing False Positives Static analysis suffers from a high number of false positives. Coverity Scan provides two methods for removing false positives. First is by creating an optional _modeling **file**_ to accommodate for special cases where the data flow analysis breaks, for example due to missing functions that are linked outside the analyzed source code. A modeling file usually is used to identify functions that terminate execution, allocate memory, or free memory. Second, source code annotations in specially formatted comments can also be used to suppress warnings. This project should determine which approach to take, and design/implement a path forward.

Testing Fixes Since security tools tend to be costly in terms of time or compute resources, they are normally run on nightly or even weekly builds rather than on every commit as done for typical continuous integration (CI). It can be tedious to merge commits to the development master and trigger a scan to determine if the issue has been fixed. Instead, we would like to develop fixes and trigger Coverity Scan as needed (subject to staying within the allowed scan rates). Coverity Scan integrates with Github and can be triggered to scan by merging new code to a specific git repository branch. As a first step, a special 'coverity' branch could be created for scanning commits that are pushed there, so that developers who are testing changes can work through the coverity branch before merging fixes into the master. Alternate solutions should be discussed with any mentors.

Coding Rule Scans Investigation on this direction is needed. Coverity supports for example a couple of MISRA rules: https://www.synopsys.com/content/dam/synopsys/sig-assets/datasheets/coverity-misra-standards-ds-ul.pdf

These rules are not enabled currently. Would it be possible to enable a subset of these rules in our current setup?

Author: Amar Takhar 2024-04-26T01:25:54.359Z

assigned to @gedare

Author: Gedare Bloom 2019-02-28T21:16:19.000Z

- **Description** changed

```
The goal of this project is to create better workflows to incorporate
↪static analysis using Coverity Scan into the RTEMS development and
↪release cycle.

Coverity Scan is a static analyzer that can identify various types of
↪potential software defects. Coverity offers free use of this analyzer
↪for free software projects. Issues identified for RTEMS are at https:/
↪/scan.coverity.com/projects/rtems.
```

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(continued from previous page)

```
4
5  Coverity Scan identifies POTENTIAL issues. Some may be real bugs. Others may indicate that Coverity Scan does not have full awareness of the program life. For example, memory allocated during RTEMS initialization may appear to be leaked because it is never freed, but this is deliberate and the issue marked as such in Coverity Scan.
6
7  You can get an account on [Coverity Scan](https://scan.coverity.com) and request access to the [RTEMS Project](https://scan.coverity.com/projects/rtems) to contribute.
8
9  The current process for dealing with Coverity Scan is entirely manual. See, for example, [Google Code-In task instructions for Coverity](../wikis/GCI/Coding/CoverityIssues). This manual process has several drawbacks. The purpose of this GSoC Project would be to simplify the process of working with Coverity, and to automate it where possible. We have identified two starting directions, and encourage interested students to brainstorm on other ways to improve the Coverity Scan integration.
10
11 **Reducing False Positives**
12 + Static analysis suffers from a high number of false positives. Coverity Scan provides two methods for removing false positives.  First is by creating an optional _modeling file_ to accommodate for special cases where the data flow analysis breaks, for example due to missing functions that are linked outside the analyzed source code. A modeling file usually is used to identify functions that terminate execution, allocate memory, or free memory. Second, source code annotations in specially formatted comments can also be used to suppress warnings. This project should determine which approach to take, and design/implement a path forward.
13 - Static analysis suffers from a high number of false positives. Coverity Scan provides two methods for removing false
14 - positives.  First is by creating an optional _modeling file_ to accommodate
15 - for special cases where the data flow analysis breaks, for example due to
16 - missing functions that are linked outside the analyzed source code. A modeling
17 - file usually is used to identify functions that terminate execution, allocate
18 - memory, or free memory. Second, source code annotations in specially formatted
19 - comments can also be used to suppress warnings. This project should determine which approach to take, and design/implement a path forward.
20
21 **Testing Fixes**
22 + Since security tools tend to be costly in terms of time or compute resources, they are normally run on nightly or even weekly builds
```

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```
↪rather than on every commit as done for typical continuous␣
↪integration (CI). It can be tedious to merge commits to the␣
↪development master and trigger a scan to determine if the issue has␣
↪been fixed. Instead, we would like to develop fixes and trigger␣
↪Coverity Scan as needed (subject to staying within the allowed scan␣
↪rates). Coverity Scan integrates with Github and can be triggered to␣
↪scan by merging new code to a specific git repository branch. As a␣
↪first step, a special 'coverity' branch could be created for scanning␣
↪commits that are pushed there, so that developers who are testing␣
↪changes can work through the coverity branch before merging fixes␣
↪into the master. Alternate solutions should be discussed with any␣
↪mentors.
- Since security tools tend to be costly in terms of time or compute␣
↪resources,
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- commit as done for typical continuous integration (CI). It can be␣
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↪to determine if the issue has been fixed. Instead, we would like to␣
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↪within the allowed scan rates).
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↪code to a
- specific git repository branch.
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↪scanning commits that are pushed there, so that developers who are␣
↪testing changes can work through the coverity branch before merging␣
↪fixes into the master. Alternate solutions should be discussed with␣
↪any mentors.
```

Author: Gedare Bloom 2019-06-27T21:30:46.000Z

- **Description** changed

```
The goal of this project is to create better workflows to incorporate␣
↪static analysis using Coverity Scan into the RTEMS development and␣
↪release cycle.

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↪potential software defects. Coverity offers free use of this analyzer␣
↪for free software projects. Issues identified for RTEMS are at https:/
↪/scan.coverity.com/projects/rtems.

Coverity Scan identifies POTENTIAL issues. Some may be real bugs.␣
↪Others may indicate that Coverity Scan does not have full awareness␣
↪of the program life. For example, memory allocated during RTEMS␣
↪initialization may appear to be leaked because it is never freed, but␣
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+ **Coding Rule Scans**
+ Investigation on this direction is needed. Coverity supports for example a couple of MISRA rules:
+ https://www.synopsys.com/content/dam/synopsys/sig-assets/datasheets/coverity-misra-standards-ds-ul.pdf
+
```

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```
+ These rules are not enabled currently. Would it be possible to enable a subset of these rules in our current setup?
```

Author: Gedare Bloom 2022-02-25T18:59:03.000Z

- **Description** changed

```
- The goal of this project is to create better workflows to incorporate static analysis using Coverity Scan into the RTEMS development and release cycle.
+ The goal of this project is to create better workflows to incorporate static analysis into the RTEMS development and release cycle. This project can be done with other static analyzers such as Codiga
+
+ == Mentors ==
+
+ Gedare Bloom, Joel Sherrill
+
+ == Skills ==
+
+ Python, Data manipulation
+
+ == Difficulty ==
+
+ This is a small (175-hour) project of medium difficulty.
+
+
+ == More Information ==

Coverity Scan is a static analyzer that can identify various types of potential software defects. Coverity offers free use of this analyzer for free software projects. Issues identified for RTEMS are at https://scan.coverity.com/projects/rtems.

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```

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```
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students to brainstorm on other ways to improve the Coverity Scan
integration.

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modeling file usually is used to identify functions that terminate
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rates). Coverity Scan integrates with Github and can be triggered to
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Investigation on this direction is needed. Coverity supports for
example a couple of MISRA rules:
https://www.synopsys.com/content/dam/synopsys/sig-assets/datasheets/
coverity-misra-standards-ds-ul.pdf

These rules are not enabled currently. Would it be possible to enable a
subset of these rules in our current setup?
```

Author: Amar Takhar 2024-04-25T20:47:12.079Z

changed the description

3.8.1.8 51 - Basic Support for Trace Compass

Id	51
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-02-20T12:02:45.000Z
Updated	2025-09-19T01:06:39.771Z
Milestone	6.1
Labels	gsoc, priority::normal, resolution::fixed, tickettype::project, tool, version::5
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/51
Merges	0

Original author: sebastian.huber

The Trace Compass is a tool to analyse and display trace data. Trace data can be gathered from RTEMS applications via various means, for example: * RTEMS Trace Linker * Event Recording * Capture Engine

The goal of this project is to enable the Trace Compass to analyse and display some basic information using the Event Recording infrastructure. Basic information is defined by the Linux kernel trace support (lttng) and includes (see Trace Compass project explorer Tracing -> Traces -> Something):

- kernel
- Views
- CPU usage
- CPU usage
- IRQ Analysis
- IRQ Statistics
- IRQ Table
- IRQ vs Count
- IRQ vs Time
- Linux Kernel
- Control Flow
- Resources

Example data can be obtained from the Trace Visualization Labs.

Advanced support for Trace Compass could include dynamic memory traces, stack usage, network packet flow, etc.

There are four main problems.

1. Generation of sufficient trace events, currently the interrupt entry/exit events are not available for example.

2. The trace data must be transferred from the target system running the RTEMS application to a host computer running the Trace Compass (transfer via TCP is available, for UDP based transfer see rtems/rtos/rtems#3695).
3. The Trace Compass must be able to analyse and display the information obtained from the Event Recording.
4. The RTEMS user must be able to use this infrastructure. This requires that it is easy to use, availability of tutorials and documentation.

To tackle problem 3. there are two approaches possible. You can extend the Trace Compass to work with the trace data provided by RTEMS as is. Alternatively, the RTEMS trace data could be converted to Linux kernel trace data (lttng) which Trace Compass already understands.

Related topics are Common Trace Format, [Babeltrace](https://diamon.org/babeltrace/), [barectf](https://github.com/efficios/barectf), rtems/rtos/rtems#2961 and rtems/rtos/rtems#3028.

Skills Needed

You need good C and C++ skills with a proven record. You need to show socket level and networking programming skills. In case Trace Compass needs to be extended this requires Java skills and familiarity with the Eclipse framework. Knowledge of YAML and XML is helpful. High end RTEMS targets can generate a huge number of events per second (10MiB/s trace data is 1310720 events per second; on a 4GHz host processor this is 3051 instructions per event under real-time processing conditions) which imposes a considerable work load to modern host computers, so the host programs must work efficiently.

Difficulty

We consider this an advanced project.

Author: Amar Takhar 2024-04-26T01:34:43.182Z

assigned to @tracmigrate

Author: Trac Migrate 2019-05-31T10:01:13.000Z

Original author: sebastian.huber

The current stable version 1.5.6 of babeltrace does not have feature to convert live trace stream into CTF. This feature is currently in development and will be released in babeltrace 2.0

Author: Trac Migrate 2020-02-10T20:30:04.000Z

Original author: sebastian.huber

This project has been at least partially done during GSoC 2019 and further developed since then. For everyone picking up this project: Check carefully what can be extended.

Author: Trac Migrate 2020-04-02T08:58:00.000Z

Original author: sebastian.huber

- **Milestone** set to rtems%"5.1"
- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*
- **Version** set to ~"5"

Author: Amar Takhar 2024-04-25T20:47:06.238Z

changed the description

3.8.1.9 37 - RTEMS Testing TFTP Proxy Project

Id	37
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2019-02-14T01:43:26.000Z
Updated	2025-09-19T01:06:39.663Z
Milestone	6.1
Labels	gsoc, gsoc::ecosystem, old-indefinite, priority::normal, resolution::fixed, rtems::testing, tickettype::project, version::5
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/37
Merges	0

RTEMS Testing TFTP Proxy Project

[Contents, inline)]

3.8.1.9.1.1 Mentors

Chris Johns

3.8.1.9.1.2 Status ==

Introduction =

This project involves working with the RTEMS Testing Tool that resides in the RTEMS Tools package and is part of the RTEMS Tools Project. The RTEMS Testing Tool provides a consistent way to test BSPs on different hardware. The tool aims to integrate with a wide range of testing tools and methods generating a consistent report for the RTEMS test suite.

An important part of test is testing on real hardware and this may use the TFTP protocol. The RTEMS Testing Tool contains a TFTP server so a single run of the tool results in a sequential run of the tests for the hardware. It also means there can only be a single test run on the host. These are both seen as limitation as the time to run all the tests on real hardware is long.

Project

The project is to develop a TFTP proxy in C++ that is built for a host when the RTEMS Tools project is build on a host. The TFTP is to take a configuration that maps the TFTP client IP address to a proxy port. The `rtems-test` tool can be configure to connect to the proxy port and so to a TFTP client which is the board running the tests.

The RTEMS Tool's `rtems-test` command can test on hardware using the TFTP protocol and U-boot however the `rtems-test` command needs to be run as `root` because the standard TFTP port can only be used when `root`. A proxy can be run as `root` while the RTEMS Testing tool can be run as a user.

The U-Boot has support in the code to set a server IP address however there was no configuration option and the support is not built in by default. Using the server IP would mean standard U-Boot loaders shipped with boards could not be used.

3.8.1.9.3.1 Goal

- Create a service or daemon that can run as `root` to proxy TFTP requests.
- Read an INI configuration file of TFTP Client IP address mapped to remote IP and port.
- Send a request from a client to the configured remote IP and port and so `rtems-test` for that board.
- Provide optional logging via `syslog`.
- Provide command line options to trace the proxy tool when integrating.

3.8.1.9.3.2 Prerequisite

- Knowledge of C, C++ and Python programming languages.
- Knowledge of Unix software and Unix networking protocols.
- Knowledge of the RTEMS Tool's Toolkit.
- Requires Unix (Linux or FreeBSD) host.
- Requires modern PC hardware. Building all tests and running takes.
- A Zedboard, MicroZed or BeagleBone Black.
- Optionally a Windows 10 machine to test and check.

3.8.1.9.3.3 Resources

- Current RTEMS developers.
- The existing RTEMS Testing Tool.

Tasks

The following are the tasks:

3.8.1.9.4.1 Proxy Tool ==

Build a program to:

1. Listen on the detault TFTP port for UDP requests 1. Extract the source IP address and locate the IP address and port. 1. Send the request to the remote IP address and port. 1. Determine if the TFTP protocol will continue between the client and the remote server or the proxy tool need to listen for the remote's response to send to the client.

3.8.1.9.4.2 Configuration Files

Develop a simple configuration for management of boards and testers.

Acknowledgements

None.

Miscellaneous Sections

As the project progresses, you will need to add to the RTEMS Testing section of the User manual. This section does not currently exist but it should be present even in a skeleton form.

References

- None

Author: Amar Takhar 2024-04-26T01:34:37.126Z

assigned to @chris

Author: Gedare Bloom 2020-01-14T20:58:57.000Z

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Chris Johns 2020-01-20T04:12:26.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

A Python command has been added to RTEMS Tools . . .

https://git.rtems.org/rtems-tools/tree/misc/rtems-tftp-proxy

Author: Amar Takhar 2024-04-25T20:47:03.929Z

changed the description

3.8.1.10 31 - Add Benchmarking statistics for block device drivers

Id	31
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-05-09T12:56:49.000Z
Updated	2025-09-19T01:06:39.533Z
Milestone	6.1
Labels	gsoc, gsoc::small, old-indefinite, priority::normal, resolution::wontfix, tickettype::task
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/31
Merges	0

Original author: madaari

Carry out benchmarking of different block device drivers(SDIO,SDHCI, UMS) and document the results

Author: Amar Takhar 2024-04-26T01:34:34.135Z

assigned to @tracmigrate

Author: Gedare Bloom 2022-02-25T18:16:59.000Z

Original author: madaari

- **Resolution** set to ~"wontfix"
- **Status** changed from *assigned* to *closed*

Author: Amar Takhar 2024-04-25T20:46:17.674Z

changed the description

3.8.1.11 26 - Add SDIO driver support to rtems-libbsd

Id	26
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-05-09T12:10:45.000Z
Updated	2025-09-19T01:06:39.386Z
Milestone	6.1
Labels	gsoc, gsoc::large, libbsd, old-indefinite, priority::normal, resolution::wontfix, tickettype::task
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/26
Merges	0

Original author: madaari

SDIO interface nowadays, is widely used for connecting WiFi/Bluetooth chips on ARM boards, like Wandboard, Raspberry Pi 3 or Banana Pi. Adding SDIO support to RTEMS will thus, allow us to exploit these features.

Author: Amar Takhar 2024-04-26T01:34:32.306Z

assigned to @tracmigrate

Author: Joel Sherrill 2022-02-04T18:48:52.000Z

Original author: madaari

I thought SDIO support was available in libbsd now with support for multiple BSPs.
Is there something to this project I am missing or is it done?

Author: Gedare Bloom 2022-02-25T18:15:14.000Z

Original author: madaari

- **Resolution** set to ~"wontfix"
- **Status** changed from *assigned* to *closed*

Author: Amar Takhar 2024-04-25T20:46:15.191Z

changed the description

3.8.1.12 79 - GDB script entries in EXE

Id	79
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Chris Johns
Created	2024-06-05T05:05:09.230Z
Closed	2025-02-01T21:48:36.687Z
Updated	2025-09-19T01:03:39.357Z
Milestone	6.1
Labels	tool::gdb
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/79
Merges	0

Summary

This issue tracks patches we use to test how auto-loading works in GDB.

We know from Tom static support is not well done. It could be something we could work on and improve. A response in GDB IRC:

!`image.png <https://gitlab.rtems.org/-/project/uploads/b0dd26748d6a2f778be55dca4d55a8e6/image.png>`_

The GDB documentation is https://sourceware.org/gdb/current/onlinedocs/gdb.html/dotdebug_005fgdb_005fscripts-section.html#dotdebug_005fgdb_005fscripts-section

Author: Chris Johns 2024-06-05T05:05:12.870Z

Author: Chris Johns 2024-06-05T05:07:43.328Z

changed the description

Author: Chris Johns 2024-06-05T05:08:49.086Z

changed the description

Author: Suraj Kumar 2024-06-05T13:47:33.275Z

cxx_vector_dbgscript.exe

`cxx_vector_dbgtext.exe <https://gitlab.rtems.org/-/project/uploads/aa66d5366b31223ce16b61e1f84ccb3f/cxx_vector_dbgtext.exe>`_[create_dbgscript_path.py](/uploads/768d2401a834188069bc18eda5cc3125/create_dbgscript_

create_dbgscript_text.py

cxx_vector_dbgscript.cc

cxx_vector_dbgtext.cc

register-pretty-printer.py

Author: Chris Johns 2024-06-11T06:06:20.853Z

I have review the coded. What I was after was:

```
diff --git a/testsuites/samples/hello/init.c b/testsuites/samples/hello/
↪init.c
index 83f6342ab3..56d1e2eed0 100644
--- a/testsuites/samples/hello/init.c
+++ b/testsuites/samples/hello/init.c
@@ -35,10 +35,20 @@

const char rtems_test_name[] = "HELLO WORLD";

+/* Note: The "MS" section flags are to remove duplicates.  */
+#define DEFINE_GDB_PY_SCRIPT(script_name) \\
+  asm("\\
+      .pushsection \\".debug_gdb_scripts\\", \\"MS\\",@progbits,1\\n\\
+      .byte 1 /* Python */\\n\\
+      .asciz \\"" script_name "\\"\\n\\
+      .popsection \\n\\
+      ");
+
static rtems_task Init(
rtems_task_argument ignored
)
{
+  DEFINE_GDB_PY_SCRIPT("rtems-gdb-init.py");
rtems_print_printer_fprintf_putc(&rtems_test_printer);
TEST_BEGIN();
printf( "Hello World\\n" );
```

Building the samples, which RTEMS does by default, generates this in the sections:

```
$ readelf -e build/arm/xilinx_zynq_a9_qemu/testsuites/samples/hello/
↪init.c.579.o | grep gdb
[ 7] .debug_gdb_script PROGBITS        00000000 000078 000013 00  MS  0␣
↪  0  1
```

however the section does not end up in the executable:

```
$ readelf -e build/arm/xilinx_zynq_a9_qemu/testsuites/samples/hello.exe␣
↪ | grep gdb
$
```

The `linkercmd` needs updating to place the `.debug_gdb_script` in the output.

This approach will let us test what works with GDB and how to make it work.

Author: Chris Johns 2024-06-11T06:06:20.853Z

Updating the `linkcmds.base` file for ARM places it into the exe:

```
diff --git a/bsps/arm/shared/start/linkcmds.base b/bsps/arm/shared/start/linkcmds.base
index aeca87005b..f7596bc6df 100644
--- a/bsps/arm/shared/start/linkcmds.base
+++ b/bsps/arm/shared/start/linkcmds.base
@@ -437,6 +437,8 @@ SECTIONS {
.ARM.attributes 0 : { KEEP (*(.ARM.attributes)) KEEP (*(.gnu.attributes)) }
.note.gnu.arm.ident 0 : { KEEP (*(.note.gnu.arm.ident)) }
/DISCARD/ : { *(.note.GNU-stack) *(.gnu_debuglink) *(.gnu.lto_*) }
+       /* GDB  */
+       .debug_gdb_scripts 0: { *(.debug_gdb_scripts) }

/*
* This is a RTEMS specific section to catch all unexpected input
```

Author: Chris Johns 2024-06-11T06:06:20.853Z

Running qemu and connecting with GDB shows this:

```
(gdb) info auto-load
gdb-scripts:  No auto-load scripts.
local-gdbinit:  Local .gdbinit file was not found.
python-scripts:
Loaded  Script
No      rtems-gdb-init.py
```

I am not sure what it means yet and where GDB searched. GDB reported:

```
Reading symbols from /opt/work/chris/rtems/kernel/rtems.git/build/arm/xilinx_zynq_a9_qemu/testsuites/samples/hello.exe...
warning: Missing auto-load script at offset 0 in section .debug_gdb_scripts
of file /opt/work/chris/rtems/kernel/rtems.git/build/arm/xilinx_zynq_a9_qemu/testsuites/samples/hello.exe.
Use `info auto-load python-scripts [REGEXP]' to list them.
```

Author: Chris Johns 2024-06-11T06:06:20.853Z

GDB does not search the `auto-load` paths with a script in `.debug_gdb_scripts`. Adding python text does execute then the executable is loaded. This is the path to follow.

Author: Suraj Kumar 2024-06-11T06:06:20.853Z

@chris GDB searches by default for scripts loaded in `.debug_gdb_scripts` in the `source` directory specified (which, by default is `cwd`). However, even for scripts loaded as text inside the section, a file name needs to be specified, and that filename needs to be in an auto-load safe path (as Christian noted, not doing so would be a security issue).

May I please know what name you specified for the script when loading Python as text?

Author: Chris Johns 2024-06-11T06:06:20.853Z

I am working through this and I have provided the detail in a new thread closing this one.

Author: Chris Johns 2024-06-11T06:05:25.345Z

I have pushed some code to my personal repo that runs. The branch is https://gitlab.rtems.org/chris/rtems/-/commits/79-gdb-script-entries-in-exe. It modifies the `iostream` sample to add

1. The special section GDB searches
2. The linker command file change for the object file section to be written into the executable
3. And a vector in C++ to test pretty printing with

The GDB support is:

```
#define DEFINE_GDB_PY() \\
asm( \\
".pushsection \\".debug_gdb_scripts\\", \\"MS\\",@progbits,1\\n" \\
".byte 4\\n" \\
".ascii \\"gdb.inlined-script\\\\n\\"\\n" \\
".ascii \\"import sys\\\\n\\"\\n" \\
".ascii \\"import os.path\\\\n\\"\\n" \\
".ascii \\"sys.path.append(os.path.join(gdb.PYTHONDIR, 'rtems'))\\\\n\\
↪"\\n" \\
".ascii \\"print(sys.path)\\\\n\\"\\n" \\
".ascii \\"print(gdb.PYTHONDIR)\\\\n\\"\\n" \\
".ascii \\"import rtems.stdcxx as stdcxx\\\\n\\"\\n" \\
".byte 0\\n" \\
".popsection\\n" \\
)
```

- This test code appends to Python's system search path the RTEMS Python support. The `gdb.PYTHONDIR` is the install prefix path as we assume GDB and `rtems-tools` are installed under the same `$prefix`.
- Loads an RTEMS python script called `stdcxx` from the RTEMS Python. This does not exist yet. This file will need to figure out the location of the GCC install `libstdcxx` python code and integrate it.

The C++ test code is:

```
auto v = std::vector<int>({1, 2, 3, 5, 7, 8});
for (auto i: v) {
std::cout << i << ' ';
}
```

The expected output is:

```
(gdb) p v
$1 = std::vector of length 6, capacity 6 = {1, 2, 3, 5, 7, 8}
```

3.8.1.13 40 - Add RSB Support for CivetWeb

Id	40
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Chris Johns
Closed by	Gedare Bloom
Created	2022-04-06T14:57:16.000Z
Closed	2025-01-28T05:54:22.740Z
Updated	2025-09-19T01:03:39.258Z
Milestone	6.1
Labels	gsoc, gsoc::large, lang::python, network, project::large, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/40
Merges	0

Background

`CivetWeb <CivetWeb>`_(https://github.com/civetweb/civetweb) is a permissive licensed fork of the last permissively licensed Mongoose version. We would like to support CivetWeb on RTEMS as a third-party package.

Approach

There needs to be instructions to configure and building CivetWeb by hand and an RSB recipe for this. It needs to build against libbsd as a minimum and lwip is desirable.

Knowledge/Skills

C/C++, Python

Possible Mentors

@joel @chris @gedare @c-mauderer @opticron @vijay

Author: Amar Takhar 2024-04-26T01:34:38.134Z

assigned to @chris

Author: Gedare Bloom 2024-02-17T05:13:08.000Z

- **Description** changed

```
[CivetWeb](CivetWeb)(https://github.com/civetweb/civetweb) is a permissive licensed fork of the last permissively licensed Mongoose version. There needs to be instructions for configure and building this by hand and an RSB recipe for this. It needs to build against libbsd as minimum and lwip is desirable.
+
+ See also #4334

Possible Mentors: Joel Sherrill, Gedare Bloom, Chris Johns, etc
Skills: C/C++
Difficulty: Easy
```

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Amar Takhar 2024-04-25T20:49:52.064Z

changed the description

Author: Gedare Bloom 2025-01-18T00:20:01.654Z

changed title from **Add RSB Support for Civ{-i-}tWeb** to **Add RSB Support for Civ{+e+}tWeb**

Author: Gedare Bloom 2025-01-18T00:20:01.680Z

changed the description

Author: Kinsey Moore 2025-01-28T05:52:29.041Z

This may be complete as of RSB commit d2f00ca6.

Author: Gedare Bloom 2025-01-28T05:52:28.795Z

https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/commit/d2f00ca6c06f0f5c78eab1128121e9c58fba0443

3.8.1.14 59 - Add BSP for Polarfire based Beagle

Id	59
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2022-03-02T14:01:52.000Z
Closed	2024-11-04T17:49:00.359Z
Updated	2025-09-19T01:03:39.126Z
Milestone	6.1
Labels	bsp, gsoc, gsoc::large, priority::normal, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/59
Merges	0

There is a new RISC-V based Beagle based on the Polarfire SOC. This project is to create a BSP for that.

The following is a list of peripherals that have been identified based on information from https://www.microchip.com/en-us/products/fpgas-and-plds/system-on-chip-fpgas/polarfire-soc-fpgas

Another dev kit could be https://www.microchip.com/en-us/development-tool/mpfs-disco-kit

This ticket is related to the BeagleBoard 2022 GSoC effort: https://elinux.org/BeagleBoard/GSoC/Ideas-2022#RTEMS_on_RISC-V

As of 2022/3/1, at least these BSP components are supported:

- CPU Cores (both E51 and U54)
- Interrupt controller (PLIC)
- Timer (CLINT)
- UART (mmuart, 16550-compatible or close enough)

Unsupported:

- Ethernet (mss-gem, not in libbsd or upstream FreeBSD, lwIP support unknown)
- U54 MMU (bare and Sv39 modes)

There is Linux support under development for this. We need to pursue asking for dual-licensing at least the network driver as NXP did for qoriq.

All other peripherals have not been checked for existing support.

Mentors: Hesham, Kinsey, Joel, Chris, someone from Beagle community Skills: C

Author: Amar Takhar 2024-04-26T01:34:46.862Z

assigned to @opticron

Author: Kinsey Moore 2022-03-04T13:52:28.000Z

This ticket is related to the BeagleBoard 2022 GSoC effort: https://elinux.org/BeagleBoard/GSoC/Ideas-2022#RTEMS_on_RISC-V

Author: Joel Sherrill 2022-03-04T16:59:18.000Z

- **Description** changed

```
+
+ There is a new RISC-V based Beagle based on the Polarfire SOC. This project is to create a BSP for that.
+
The following is a list of peripherals that have been identified based on information from https://www.microchip.com/en-us/products/fpgas-and-plds/system-on-chip-fpgas/polarfire-soc-fpgas

+ This ticket is related to the BeagleBoard 2022 GSoC effort: https://elinux.org/BeagleBoard/GSoC/Ideas-2022#RTEMS_on_RISC-V
+
As of 2022/3/1, at least these BSP components are supported:
+
- CPU Cores (both E51 and U54)
+ * CPU Cores (both E51 and U54)
? ++

- Interrupt controller (PLIC)
+ * Interrupt controller (PLIC)
? ++

- Timer (CLINT)
+ * Timer (CLINT)
? ++

- UART (mmuart, 16550-compatible or close enough)
+ * UART (mmuart, 16550-compatible or close enough)
? ++


+

Unsupported:
+
- Ethernet (mss-gem, not in libbsd or upstream FreeBSD, lwIP support unknown)
+ * Ethernet (mss-gem, not in libbsd or upstream FreeBSD, lwIP support unknown)
? ++

- U54 MMU (bare and Sv39 modes)
+ * U54 MMU (bare and Sv39 modes)
? ++

```

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```
+
+ There is Linux support under development for this. We need to pursue asking for dual-licensing at least the network driver as NXP did for qoriq.

All other peripherals have not been checked for existing support.
+
+ Mentors: Hesham, Kinsey, Joel, Chris, someone from Beagle community
+ Skills: C
```

- **Summary** changed from *Add BSP for Polarfire* to *Add BSP for Polarfire based Beagle*

Author: Gedare Bloom 2024-02-16T15:22:51.000Z

- **Description** changed

```
There is a new RISC-V based Beagle based on the Polarfire SOC. This project is to create a BSP for that.

The following is a list of peripherals that have been identified based on information from https://www.microchip.com/en-us/products/fpgas-and-plds/system-on-chip-fpgas/polarfire-soc-fpgas
+
+ Another dev kit could be https://www.microchip.com/en-us/development-tool/mpfs-disco-kit

This ticket is related to the BeagleBoard 2022 GSoC effort: https://elinux.org/BeagleBoard/GSoC/Ideas-2022#RTEMS_on_RISC-V

As of 2022/3/1, at least these BSP components are supported:

* CPU Cores (both E51 and U54)
* Interrupt controller (PLIC)
* Timer (CLINT)
* UART (mmuart, 16550-compatible or close enough)


Unsupported:

* Ethernet (mss-gem, not in libbsd or upstream FreeBSD, lwIP support unknown)
* U54 MMU (bare and Sv39 modes)

There is Linux support under development for this. We need to pursue asking for dual-licensing at least the network driver as NXP did for qoriq.

All other peripherals have not been checked for existing support.
```

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```
25
26 Mentors: Hesham, Kinsey, Joel, Chris, someone from Beagle community
27 Skills: C
```

Author: Gedare Bloom 2024-02-17T05:20:14.000Z

- **Owner** set to @kinsey
- **Status** changed from *new* to *assigned*

Author: Amar Takhar 2024-04-25T20:49:45.844Z

changed the description

Author: Gedare Bloom 2024-10-26T19:14:13.865Z

Author: Kinsey Moore 2024-11-04T17:49:00.023Z

A bsp has been added to RTEMS for the BeagleV-Fire in rtems/rtos/rtems!194.

3.8.1.15 57 - Add Python initializer for gdb RTEMS specific support

Id	57
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Chris Johns
Closed by	Gedare Bloom
Created	2022-02-25T17:03:13.000Z
Closed	2025-01-22T22:23:46.173Z
Updated	2025-09-19T01:03:38.992Z
Milestone	6.1
Labels	gsoc, gsoc::small, old-indefinite, project::small, tool, tool::gdb
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/57
Merges	0

GDB needs an initialization hook in Python like the ones installed into ${prefix}/share/gdb for RTEMS installations.

Please see Chris Johns for further details.

Possible Mentors: Chris Johns Skills: Python, C Difficulty: Medium

Author: Amar Takhar 2024-04-26T01:34:46.040Z

assigned to @chris

Author: Joel Sherrill 2022-02-25T21:22:24.000Z

- **Description** changed

```
GDB needs an initialization hook in Python like the ones installed into
↪${prefix}/share/gdb for RTEMS installations.

Please see Chris Johns for further details.
+
+
+ Possible Mentors: Chris Johns
+ Skills: Python, C
+ Difficulty: Medium
```

Author: Chris Johns 2023-03-13T03:55:49.000Z

These links may be useful:

https://gcc.gnu.org/legacy-ml/libstdc++/2009-02/msg00056.html https://sourceware.org/gdb/onlinedocs/gdb/Python-Auto_002dloading.html

Author: Gedare Bloom 2024-02-17T05:16:10.000Z

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Amar Takhar 2024-04-25T20:49:40.726Z

changed the description

Author: Gedare Bloom 2025-01-22T22:23:12.085Z

Author: Gedare Bloom 2025-01-22T22:23:45.898Z

Substantial progress was made in last year's GSoC.

3.8.1.16 73 - Make Stack Checker Error Handler Configurable

Id	73
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Gedare Bloom
Created	2022-02-04T19:14:53.000Z
Closed	2025-01-18T01:33:30.786Z
Updated	2025-09-19T01:03:38.820Z
Milestone	6.1
Labels	gsoc, gsoc::small, library, old-indefinite, priority::normal, project::small, rtems::kernel, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/73
Merges	0

Currently, the stack checker has a built in error reporting method that is invoked when it determines that a stack overflow has occurred. This should turned into a configuration point. The user should be able to provide their own handler for this.

As a check, when this is done, it should be possible for the stack checker to be enabled and printk() not pulled into an application.

Possible Mentors: Joel Sherrill, Gedare Bloom, Chris Johns Skills: C Difficulty: Easy

Author: Amar Takhar 2024-04-26T01:34:52.659Z

assigned to @joel

Author: Gedare Bloom 2022-02-07T14:50:50.000Z

- **Owner** set to @joel
- **Status** changed from *new* to *assigned*

Author: Joel Sherrill 2022-02-25T21:17:29.000Z

- **Description** changed

```
Currently, the stack checker has a built in error reporting method that␣
↪is invoked when it determines that a stack overflow has occurred.␣
↪This should turned into a configuration point. The user should be␣
↪able to provide their own handler for this.

As a check, when this is done, it should be possible for the stack␣
↪checker to be enabled and printk() not pulled into an application.
+
+ Possible Mentors: Joel Sherrill, Gedare Bloom, Chris Johns
```

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```
+ Skills: C
+ Difficulty: Easy
```

Author: Amar Takhar 2024-04-25T20:49:28.992Z

changed the description

Author: Gedare Bloom 2024-06-12T15:23:38.075Z

Author: Gedare Bloom 2024-06-22T22:31:31.889Z

mentioned in issue rtems/rtos/rtems#5047

Author: Gedare Bloom 2025-01-18T01:33:30.524Z

This has been mostly completed by a GSoC 2024 effort.

3.8.1.17 76 - dtc build failure on msys2 - all rtems6 target tools fail to build on Windows 10

Id	76
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Amar Takhar
Created	2021-11-11T21:08:30.000Z
Closed	2024-10-03T02:38:53.002Z
Updated	2024-10-03T02:38:53.175Z
Milestone	6.1
Labels	gsoc, gsoc::small, priority::normal, tickettype::defect, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/76
Merges	0

Original author: kgardas

I'm testing RSB git source updated 2021-11-10 and it fails on freshly installed msys2/windows 10 platform with:

```
karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems
$ ../source-builder/sb-check
RTEMS Source Builder - Check, 6 (efa44e47a7d2 modified)
Environment is ok

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems
```

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```
$ ../source-builder/sb-set-builder --prefix=/c/r/rr 6/rtems-sparc
RTEMS Source Builder - Set Builder, 6 (efa44e47a7d2 modified)
Build Set: 6/rtems-sparc
config: devel/dtc-1.6.0-1.cfg
package: dtc-1.6.0-x86_64-w64-mingw32-1
building: dtc-1.6.0-x86_64-w64-mingw32-1
error: building d1xwm1
Build FAILED
See error report: rsb-report-dtc-1.6.0-x86_64-w64-mingw32-1.txt
error: building d1xwm1
Build Set: Time 0:00:28.232196
Build FAILED

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems
$
```

the problem report is attached.

Joel adds: dtc does not build on msys2. It requires fnmatch.h which is not present. Alternative fixes include finding an alternative for fnmatch on msys2, providing an implementation to be used on msys2, or adding gnulib which is a portability package to our RSB packages on msys2.

Also there may be other tickets for the same issue.

Possible Mentors: Karel Gardas Skills: C Difficulty: Medium

- rsb-report-dtc-1.6.0-x86_64-w64-mingw32-1.txt

Author: Amar Takhar 2024-04-26T01:34:53.550Z

assigned to @tracmigrate

Author: Trac Migrate 2021-11-11T21:09:20.000Z

Original author: kgardas

- **Attachment** rsb-report-dtc-1.6.0-x86_64-w64-mingw32-1.txt added

dtc compilation failure problem report.

Author: Joel Sherrill 2022-02-02T14:23:22.000Z

Original author: kgardas

- **Milestone** set to rtems%"6.1"

Adding SoC as a ticket because I think this is a possible small SoC project. Possible solutions include adding gnulib to the RSB bset for msys2 or modifying dtc to use other APIs for this functionality.

Author: Joel Sherrill 2022-02-04T20:05:29.000Z

Original author: kgardas

- **Description** changed

```
I'm testing RSB git source updated 2021-11-10 and it fails on freshly␣
↪installed msys2/windows 10 platform with:
```

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems $ ../source-builder/sb-check RTEMS Source Builder - Check, 6 (efa44e47a7d2 modified) Environment is ok

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems $ ../source-builder/sb-set-builder –prefix=/c/r/rr 6/rtems-sparc RTEMS Source Builder - Set Builder, 6 (efa44e47a7d2 modified) Build Set: 6/rtems-sparc config: devel/dtc-1.6.0-1.cfg package: dtc-1.6.0-x86_64-w64-mingw32-1 building: dtc-1.6.0-x86_64-w64-mingw32-1 error: building d1xwm1 Build FAILED See error report: rsb-report-dtc-1.6.0-x86_64-w64-mingw32-1.txt error: building d1xwm1 Build Set: Time 0:00:28.232196 Build FAILED

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems $

```
the problem report is attached.
+
+ Joel adds: dtc does not build on msys2. It requires fnmatch.h which␣
↪is not present. Alternative fixes include finding an alternative for␣
↪fnmatch on msys2, providing an implementation to be used on msys2, or␣
↪adding gnulib which is a portability package to our RSB packages on␣
↪msys2.
+
+ Also there may be other tickets for the same issue.
```

- **Summary** changed from *RSB can't build rtems-sparc target tools on Windows 10.* to *dtc build failure on msys2 - all rtems6 target tools fail to build on Windows 10*

Author: Joel Sherrill 2022-02-25T21:15:50.000Z

Original author: kgardas

- **Description** changed

```
I'm testing RSB git source updated 2021-11-10 and it fails on freshly␣
↪installed msys2/windows 10 platform with:
```

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems $ ../source-builder/sb-check RTEMS Source Builder - Check, 6 (efa44e47a7d2 modified) Environment is ok

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems $ ../source-builder/sb-set-builder –prefix=/c/r/rr 6/rtems-sparc RTEMS Source Builder - Set Builder, 6 (efa44e47a7d2 modified) Build Set: 6/rtems-sparc config: devel/dtc-1.6.0-1.cfg package: dtc-1.6.0-x86_64-w64-mingw32-1 building: dtc-1.6.0-x86_64-w64-mingw32-1 error: building d1xwm1 Build FAILED See error report: rsb-report-

dtc-1.6.0-x86_64-w64-mingw32-1.txt error: building d1xwm1 Build Set: Time 0:00:28.232196 Build FAILED

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems $

```
the problem report is attached.

Joel adds: dtc does not build on msys2. It requires fnmatch.h which is␣
↪not present. Alternative fixes include finding an alternative for␣
↪fnmatch on msys2, providing an implementation to be used on msys2, or␣
↪adding gnulib which is a portability package to our RSB packages on␣
↪msys2.

Also there may be other tickets for the same issue.
+
+ Possible Mentors: Karel Gardas
+ Skills: C
+ Difficulty: Medium
```

Author: Chris Johns 2022-11-29T23:48:28.000Z

Original author: kgardas

status update?

Author: Gedare Bloom 2024-02-17T05:15:05.000Z

Original author: kgardas

- **Owner** set to kgardas
- **Status** changed from *new* to *assigned*

Author: Amar Takhar 2024-04-25T20:49:19.387Z

changed the description

Author: Amar Takhar 2024-10-03T02:38:53.241Z

moved to rtems/tools/rtems-source-builder#36

3.8.1.18 72 - Use thread-local storage for Newlib reentrancy objects

Id	72
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-12-03T09:04:00.000Z
Updated	2024-04-26T01:34:51.859Z
Milestone	6.1
Labels	gsoc, gsoc::large, priority::normal, qualification, resolution::fixed, ticket-type::project, tool::newlib, version::7
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/72
Merges	0

Original author: sebastian.huber

Problem

The state of the art architectures supported by RTEMS have all efficient support for thread-local storage (MIPS has issues with thread-local storage, however, is MIPS state of the art?).

Newlib currently uses a huge object of type `struct _reent` to store thread-specific data. This object is returned by `__getreent()`. It is related to the `__DYNAMIC_REENT__` Newlib configuration option which is always defined for RTEMS.

The reentrancy structure contains `errno` and also the standard input, output, and error file streams. This means that if an application only uses `errno` it has a dependency on the file stream support event if it does not use it. This is an issue for lower end targets and the pre-qualification of RTEMS.

Solution

One approach to disentangle the dependencies introduced by `struct _reent` is to get rid of this structure and replace the individual members of the structure with thread-local objects. For example, instead of

```
struct _reent {
int _errno;
__FILE *_stdin;
__FILE *_stdout;
__FILE *_stderr;
};
```

use

```
_Thread_local int _errno;
_Thread_local __FILE *_stdin;
_Thread_local __FILE *_stdout;
_Thread_local __FILE *_stderr;
```

Newlib already has access macros for the `struct _reent` members, for example:

```
#define _REENT_SIGNGAM(ptr) ((ptr)->_new._reent._gamma_signgam)
#define _REENT_RAND_NEXT(ptr)       ((ptr)->_new._reent._rand_next)
#define _REENT_RAND48_SEED(ptr)     ((ptr)->_new._reent._r48._seed)
#define _REENT_RAND48_MULT(ptr)     ((ptr)->_new._reent._r48._mult)
#define _REENT_RAND48_ADD(ptr)      ((ptr)->_new._reent._r48._add)
```

How-to Implement

The member access macros are incomplete. The first step is to use the Newlib configuration for RTEMS as is and rename all `struct _reent` members, for example add an `TEMPORARY` prefix to all member names, `_errno` to `TEMPORARY_errno`. Then add member access macros until Newlib builds again. Install this Newlib and check that RTEMS and libbsd compiles. Run the RTEMS and libbsd test suites to check for regressions.

In a second step to this for the `_REENT_SMALL` configuration of Newlib.

The third step is to add a new Newlib configuration option, for example `_REENT_THREAD_LOCAL` which turns the `struct _reent` members into thread-local objects with corresponding "member" access macros. Define `_REENT` to `NULL`.

Skills

C and assembly

Difficulty

This is a large (350-hour) project of hard difficulty.

- gcc-10-RTEMS-Use-local-exec-TLS-model-by-default.patch
- gcc-12-RTEMS-Use-local-exec-TLS-model-by-default.patch

Author: Amar Takhar 2024-04-26T01:34:51.829Z

assigned to @tracmigrate

Author: Joel Sherrill 2021-12-03T17:29:59.000Z

Original author: sebastian.huber

One issue with this is that TLS is not supported on all architectures. We would either have to have two methods (current and TLS) to do this or fix TLS everywhere.

Author: Trac Migrate 2021-12-03T19:20:33.000Z

Original author: sebastian.huber

I am not sure what the Newlib maintainer say if we try to add a third reentrancy approach. I guess for backward compatibility they want to keep the existing methods anyway.

Author: Chris Johns 2021-12-06T08:19:37.000Z

Original author: sebastian.huber

I would like to see `libdl` support for TLS added to RTEMS.

Author: Trac Migrate 2022-01-28T07:35:58.000Z

Original author: sebastian.huber

In [changeset:"b519e509a953c25894700531c321f7213fa11e70/rtems" b519e50/rtems]:

```
sptests: Avoid a dependency on errno

Avoid a dependency on errno which might be a thread-local object.  The tests
sp01, spstkalloc02, and sptls03 assume that no thread-local storage object is
present.

Update #4560.
```

Author: Trac Migrate 2022-01-28T07:38:25.000Z

Original author: sebastian.huber

Related discussion on libc-coord:

https://www.openwall.com/lists/libc-coord/2022/01/21/1

Author: Gedare Bloom 2022-02-25T18:27:59.000Z

Original author: sebastian.huber

- **Description** changed

```
= Problem

The state of the art architectures supported by RTEMS have all efficient support for thread-local storage (MIPS has issues with thread-local storage, however, is MIPS state of the art?).

Newlib currently uses a huge object of type `struct _reent` to store thread-specific data. This object is returned by `__getreent()`. It is related to the `__DYNAMIC_REENT__` Newlib configuration option which is always defined for RTEMS.

The reentrancy structure contains `errno` and also the standard input,
```

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```
↪output, and error file streams. This means that if an application␣
↪only uses `errno` it has a dependency on the file stream support␣
↪event if it does not use it. This is an issue for lower end targets␣
↪and the pre-qualification of RTEMS.

= Solution

One approach to disentangle the dependencies introduced by `struct _
↪reent` is to get rid of this structure and replace the individual␣
↪members of the structure with thread-local objects. For example,␣
↪instead of
{{{#!c
struct _reent {
int _errno;
__FILE *_stdin;
__FILE *_stdout;
__FILE *_stderr;
};
}}}
use
{{{#!c
_Thread_local int _errno;
_Thread_local __FILE *_stdin;
_Thread_local __FILE *_stdout;
_Thread_local __FILE *_stderr;
}}}

Newlib already has access macros for the `struct _reent` members, for␣
↪example:
{{{#!c
#define _REENT_SIGNGAM(ptr)     ((ptr)->_new._reent._gamma_signgam)
#define _REENT_RAND_NEXT(ptr)   ((ptr)->_new._reent._rand_next)
#define _REENT_RAND48_SEED(ptr) ((ptr)->_new._reent._r48._seed)
#define _REENT_RAND48_MULT(ptr) ((ptr)->_new._reent._r48._mult)
#define _REENT_RAND48_ADD(ptr)  ((ptr)->_new._reent._r48._add)
}}}

= How-to Implement

The member access macros are incomplete. The first step is to use the␣
↪Newlib configuration for RTEMS as is and rename all `struct _reent`␣
↪members, for example add an `TEMPORARY` prefix to all member names, `_
↪errno` to `TEMPORARY_errno`. Then add member access macros until␣
↪Newlib builds again. Install this Newlib and check that RTEMS and␣
↪libbsd compiles. Run the RTEMS and libbsd test suites to check for␣
↪regressions.

In a second step to this for the `_REENT_SMALL` configuration of Newlib.

```

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```
The third step is to add a new Newlib configuration option, for example␣
↪`_REENT_THREAD_LOCAL` which turns the `struct _reent` members into␣
↪thread-local objects with corresponding "member" access macros.␣
↪Define `_REENT` to `NULL`.
+
+ = Skills =
+ C and assembly
+
+ = Difficulty =
+ This is a large (350-hour) project of hard difficulty.
```

Author: Trac Migrate 2022-06-29T09:04:57.000Z

Original author: sebastian.huber

- **Milestone** changed from rtems%"7.1" to rtems%"6.1"
- **Version** changed from ~"7" to ~"6"

Author: Trac Migrate 2022-07-21T05:15:04.000Z

Original author: sebastian.huber

In [changeset:"57a569efe16c2b8e9579147fdd78ee909c7558d3/rtems" 57a569e/rtems]:

```
sptests: Disable Newlib reentrancy

Update #4560.
```

Author: Trac Migrate 2022-07-21T05:15:06.000Z

Original author: sebastian.huber

In [changeset:"6d4b390f99af0e9d5873a3cb8ebaccfa05cbe37b/rtems" 6d4b390/rtems]:

```
Support _REENT_THREAD_LOCAL Newlib configuration

In case the Newlib _REENT_THREAD_LOCAL configuration option is enabled,␣
↪the
struct _reent is not defined (there is only a forward declaration in
<sys/reent.h>).  Instead, the usual members of struct _reent are␣
↪available as
dedicatd thread-local storage objects.

Update #4560.
```

Author: Trac Migrate 2022-07-21T08:25:04.000Z

Original author: sebastian.huber

In [changeset:"ae6e5983d801cc8c44bc9aa0c6ab85b7d23ac1e8/rtems-source-builder" ae6e598/rtems-source-builder]:

```
6/7: Update Newlib

This makes the --enable-newlib-reent-thread-local (_REENT_THREAD_LOCAL_
↪STORAGE)
Newlib configuration option available.

Update #4560.
```

Author: Trac Migrate 2022-07-21T08:25:05.000Z

Original author: sebastian.huber

In [changeset:"958de508aa141deb4c8a115560aeec80dbdad3e8/rtems-source-builder" 958de50/rtems-source-builder]:

```
newlib: Support --with/without-newlib-tls

This RSB option defines if the --enable-newlib-reent-thread-local
(_REENT_THREAD_LOCAL_STORAGE) Newlib configuration option is used or␣
↪not.

Update #4560.
```

Author: Trac Migrate 2022-07-21T08:25:06.000Z

Original author: sebastian.huber

In [changeset:"f4f5d43a98051f7562103aaa2ec7723c628c6947/rtems-source-builder" f4f5d43/rtems-source-builder]:

```
6/7: Use TLS in Newlib for some targets by default

Use the --enable-newlib-reent-thread-local (_REENT_THREAD_LOCAL_
↪STORAGE) Newlib
configuration option on the aarch64, arm, nios2, powerpc, riscv, and␣
↪sparc
targets by default.

Update #4560.
```

Author: Trac Migrate 2022-08-08T11:00:15.000Z

Original author: sebastian.huber

- **Attachment** gcc-10-RTEMS-Use-local-exec-TLS-model-by-default.patch added

Author: Trac Migrate 2022-08-08T11:00:32.000Z

Original author: sebastian.huber

- **Attachment** gcc-12-RTEMS-Use-local-exec-TLS-model-by-default.patch added

Author: Trac Migrate 2022-08-08T18:23:20.000Z

Original author: sebastian.huber

In [changeset:"eea379370116628dbe91f19e61ad6129aa1951ac/rtems-source-builder" eea3793/rtems-source-builder]:

```
6: Use local-exec TLS model by default

Update #4560.
```

Author: Trac Migrate 2022-09-09T05:32:55.000Z

Original author: sebastian.huber

In [changeset:"91e8654b1151db78b19ddcfe0ad10e386a8f2fe3/rtems-docs" 91e8654/rtems-docs]:

```
user: Document RSB --with/without-newlib-tls

Update #4560.
```

Author: Trac Migrate 2022-10-14T09:41:39.000Z

Original author: sebastian.huber

In [changeset:"b9212e242fd2cb4b7821eea942d414cc84c27006/rtems" b9212e2/rtems]:

```
sptls01: Disable file system and Newlib reentrancy

Update #4560.
```

Author: Chris Johns 2022-11-29T22:38:23.000Z

Original author: sebastian.huber

Are we able to close this ticket?

Author: Trac Migrate 2022-11-30T08:59:07.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Yes, I recently were able to integrate the final patch for GCC 13. A follow up activity is rtems/rtos/rtems#4765.

Author: Trac Migrate 2023-04-26T05:14:33.000Z

Original author: sebastian.huber

In [changeset:"908efe4393f158e6e83a1a9ecc84b469f43201fa/rtems-source-builder" 908efe4/rtems-source-builder]:

```
7: Use TLS in Newlib for m68k by default

Update #4560.
```

Author: Amar Takhar 2024-04-25T20:49:22.256Z

changed the description

3.8.1.19 23 - Port RTEMS to Microblaze

Id	23
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2017-02-06T02:59:16.000Z
Updated	2024-04-26T01:34:29.883Z
Milestone	6.1
Labels	bsp, gsoc, priority::normal, resolution::fixed, tickettype::project, version::4.11
Link	https://gitlab.rtems.org/rtems/programs/gsoc/-/work_items/23
Merges	0

Original author: tokencolour

Port RTEMS to Microblaze

Students: Past, Present, and Potential Students

Status: The tools build from RSB properly, but GDB is not compatible with current XDM (Xilinx Debugging Module), Xilinx GDB version is working fine.

Introduction: A new architecture port, not just BSP. Include a BSP for GDB simulator. Also needs BSP for more complete HW on simulator.

Goal: Update the preliminary Microblaze port, complete clock timer support, merge into RTEMS, and continue to improve the BSP/port.

Some work has been initiated here [1] (By Joel Sherrill and Hesham ALMatary) to get hello world working. It has been tested on Atlys FPGA board [2]. The BSP can run virtually on every FPGA board the Xilinx tools support building MicroBlaze on.

The work will need to be updated against the current RTEMS version and tools and then completed. There are multiple boards supported by qemu-system-microblaze. One of these should be suitable for completing the port including interrupts. It will require investigation to know if qemu includes networking support for the Microblaze but this is likely.

References

- [1] https://github.com/heshamelmatary/rtems-microblaze
- [2] www.digilentinc.com/atlys/

Author: Amar Takhar 2024-04-26T01:34:29.856Z

assigned to @joel

Author: Chris Johns 2017-08-14T00:04:23.000Z

Original author: tokencolour

- **Version** ~"4.11" deleted

Author: Gedare Bloom 2020-01-14T20:53:20.000Z

Original author: tokencolour

- **Description** changed

```
= Port RTEMS to Microblaze =


**Students:** Past, Present, and Potential Students

**Status:** The tools build from RSB properly, but GDB is not compatible with current XDM (Xilinx Debugging Module), Xilinx GDB version is working fine.

**Introduction:**  A new architecture port, not just BSP. Include a BSP for GDB simulator. Also needs BSP for more complete HW on simulator.

- **Goal:** Concise statement of the overall goal of the project. Refine this initial statement to include: project deliverables (code,
```

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```
↪docs, testing), required/suggested methodology, standards of quality,␣
↪possible goal extensions beyond the main objective.
+ **Goal:** Update the preliminary Microblaze port, complete clock␣
↪timer support, merge into RTEMS, and continue to improve the BSP/port.

- **Requirements:** List the requirements and level of expertise you␣
↪estimate are required by the developer tackling this project will␣
↪have to have: Required level of programming language(s), specific␣
↪areas of RTEMS or tools, level of familiarity with RTEMS, cross-
↪development, GNU/Linux, etx., development/documentation/testing tools,
↪ mathematical/algorithmic background, other desirable skills.
-
- **Resources:** Current RTEMS developers, papers, etc that may help␣
↪you in this project.
-
- **Acknowledgements**
-  *  who helped and did work
*  Some work has been initiated here [1] (By Joel Sherrill and Hesham␣
↪ALMatary) to get hello world working. It has been tested on Atlys␣
↪FPGA board [2]. The BSP can run virtually on every FPGA board the␣
↪Xilinx tools support building MicroBlaze on.
-
- = Miscellaneous Sections =
-
- As the project progresses, you will need to add build instructions,␣
↪etc and this page will evolve from a project description into a HOWTO.

= References =
* [1] https://github.com/heshamelmatary/rtems-microblaze
* [2] www.digilentinc.com/atlys/

- **Other sections:** If you have more to say about the project that␣
↪doesn't fit in the proposed sections of this template, feel free to␣
↪add other sections at will.
```

Author: Joel Sherrill 2020-05-29T12:58:33.000Z

Original author: tokencolour

- **Description** changed

```
= Port RTEMS to Microblaze =


**Students:** Past, Present, and Potential Students

**Status:** The tools build from RSB properly, but GDB is not␣
↪compatible with current XDM (Xilinx Debugging Module), Xilinx GDB␣
↪version is working fine.
```

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```
7
8  **Introduction:**  A new architecture port, not just BSP. Include a BSP␣
   ↪for GDB simulator. Also needs BSP for more complete HW on simulator.
9
10 **Goal:** Update the preliminary Microblaze port, complete clock timer␣
   ↪support, merge into RTEMS, and continue to improve the BSP/port.
11
12 -  *  Some work has been initiated here [1] (By Joel Sherrill and␣
   ↪Hesham ALMatary) to get hello world working. It has been tested on␣
   ↪Atlys FPGA board [2]. The BSP can run virtually on every FPGA board␣
   ↪the Xilinx tools support building MicroBlaze on.
13 ? ----                                                              ␣
   ↪                                                                  ␣
   ↪                                                                  ␣
   ↪                                    -
14
15 + Some work has been initiated here [1] (By Joel Sherrill and Hesham␣
   ↪ALMatary) to get hello world working. It has been tested on Atlys␣
   ↪FPGA board [2]. The BSP can run virtually on every FPGA board the␣
   ↪Xilinx tools support building MicroBlaze on.
16 +
17 + The work will need to be updated against the current RTEMS version␣
   ↪and tools and then completed. There are multiple boards supported by␣
   ↪qemu-system-microblaze. One of these should be suitable for␣
   ↪completing the port including interrupts. It will require␣
   ↪investigation to know if qemu includes networking support for the␣
   ↪Microblaze but this is likely.
18
19 = References =
20 * [1] https://github.com/heshamelmatary/rtems-microblaze
21 * [2] www.digilentinc.com/atlys/
```

Author: Joel Sherrill 2021-11-11T17:54:41.000Z

Original author: tokencolour

- **Milestone** changed from rtems%”Indefinite” to rtems%”6.1”
- **Resolution** set to ~”fixed”
- **Status** changed from *new* to *closed*

A Microblaze port and BSP for the KCU105 (HW and Qemu) have been merged. LWIP and libbsd should be supported soon. Closing.

Author: Amar Takhar 2024-04-25T20:45:21.645Z

changed the description

3.9 RTEMS / RTOS / RTEMS

Go to *Issues* (page 998) or *Merge Requests* (page 2535)

Issues Summary

5185 - Waf version support breaks if the version has no version label (page 1393)
5183 - On some platforms, linking requires ABI flags (page 1395)
5171 - Allow relocateable installations for legacy Makefile support (page 1392)
5167 - Update waf to 2.1.4 : rtems/rtos/rtems (page 999)
5164 - While at low sporadic server priority, changing the real priority leads to unpredictable system behaviour (page 1006)
5161 - Zynq QSPI Flash erases two sectors when requested erase is the sector size. (page 1409)
5159 - SMP: Race condition in thread priority changes (page 1387)
5157 - Add interface between Flashdev and JFFS2 (page 1407)
5152 - RTEMS FDT Add read/write handler support to the shell command (page 1382)
5150 - record-server.c: CID 1634787: Error handling issues (page 1412)
5149 - arm/xilinx_zynq_microzed: Microzed timer is running 3 times the required frequency (page 1419)
5148 - Release notes needed from "Improve event record handling" (page 1420)
5147 - Clean up projects list (page 1396)
5144 - libdl and related shell extensions are not supported on RISC-V (page 1401)
5142 - Xilinx Zynq devcfg driver changes. (page 1436)
5139 - RISC-V: hello.exe crashes since 2024-Oct-26 (page 1429)
5133 - README.md does not reference the main branch (page 1438)
5126 - poll.h is in both rtems and newlib (page 1472)
5123 - ZynqMP Cortex-R5 RPU BSP broken (page 1474)
5120 - Refactor xilinx_zynqmp_lp64_cfc400x BSP watchdog disable (page 1405)
5119 - AMD (Xilinx) ZymqMP BSP Review (page 1443)
5118 - confdefs/libio.h references librtemsNfs.h which does not exist (page 1406)
5117 - Spelling of network configuration wrong (page 1347)
5114 - Is xilinx-zynqmp console.c specific to the aarch64/xilinx_zynqmp_lp64_cfc400x BSP? (page 1476)
5113 - bdpart-register.c: Calling close() with negative value (page 1479)
5112 - flashdisk.c: Invalid printf format string (page 1480)
5111 - kern_ntptime.c: Assigning time_t to 32-bit variable truncates time (page 1478)
5110 - Work around STM32 H7 errata unsupported read access with unaligned address (page 1348)
5109 - open: Race condition when called with O_TRUNC (page 1350)
5103 - libdebugger: Add SPDX annotation (page 1471)
5102 - aio_fsync.c: Use of uninitialised memory (page 1475)
5100 - aio_fsync.c: Coverity reports dead code (page 1481)
5099 - Installation is broken by recent text to md file transition (page 1353)
5098 - Add libdebugger support for PowerPC (page 1481)
5097 - testsuites: some fstest on JFFS2 and RFS are being compiled and run even on target that should exclude them (page 1355)
5096 - bsps/m68k/uC5282/README.md: Delete timing test results (page 1353)

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Table 3 – continued from previous page

5084 - objectinitializeinformation.c: Coverity spotted possible over indexing (page 998)
5082 - Change the default stack checker reporter to be a quiet reporter (page 1351)
5080 - Lowercase all directories and files in source. (page 1491)
5076 - objectgetinfo.c: Potential access past end of array (page 1495)
5075 - Update STM32 H7 HAL implementation to the latest 1.11.2 release (page 1352)
5074 - getdents does not hold the IOP of the file descriptor (page 1355)
5072 - JFFS2 rtime decompression bug (page 1390)
5071 - rmdir does not handle dot-dot as specified by POSIX (page 1211)
5069 - rfs: Does not check for names too long (page 1212)
5068 - Asynchronous I/O Interface does not generate notification at request completion (page 1213)
5067 - Remove essentially dead code from _Terminate() (page 1441)
5063 - Add a call to return open file descriptors (page 1498)
5062 - Return task and idle time with getrusage (page 1499)
5061 - waf creation of compile_commands.json (page 1214)
5060 - Add CPU Usage calls to return the time or ticks accounted for in tasks (page 1503)
5058 - dhrystone: Prevent procedure merging (page 1507)
5056 - Add SPI support to Raspberry Pi 4B BSP (page 1215)
5055 - Self-contained object: Add timeout and try wait function for counting semaphore (page 1216)
5053 - testsuit/libtest/dl12: build error (page 1217)
5052 - amd64 BSP crashes on QEMU with KVM enabled (page 1218)
5050 - Add fatal error for rtems_cache_disable_data() (page 1508)
5049 - Add sys/tree.h from newlib to the score with a different name (page 1500)
5046 - x86_64: Global constructors/destructors don't get called (page 1218)
5044 - FAT32 creating a file after a rename of a still opened file can yield back the same file (page 1219)
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1728 - Patch for RTEMS-BSP m68k/mcf5225x (page 2525)
1712 - Add LWIP Support to RTEMS (page 2300)
1593 - RTEMS Sequenced Initialization API (page 2528)
1459 - Add rtems_shell_main_monitor to cpukit/libmisc/shell/shell.h? (page 1374)
1318 - libcpu/shared is not helpful (page 2533)
550 - fcntl() fails to put a non-blocking socket into blocking mode (page 1524)

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359 - spec/pkgconfig: Account for separate compilation and linking (page 2565)
350 - waf: Update to waf-2.1.4 (page 2567)
342 - build: Improve Makefile.inc (page 2568)
332 - 6.1: rtems: Remove pre-qualified constraints (page 2569)
331 - posix/lio_listio: corrected addition of system event (page 2572)
330 - 6.1: Fix POSIX sporadic server (page 2570)
328 - cpukit/jffs2/rtime: Fix off-by-one error in decompression check (page 2573)
327 - cpukit/jffs2/rtime: Fix off-by-one error in decompression check (page 2574)
325 - bsps/xilinx-zynq: Fixed QSPI Flash sector erase (page 2589)
324 - build: Fix native Windows build (page 2590)
322 - Workaround for the in GR740 errata: Level-2 Cache Issues H1 2023 (GRLIB-TN-0021) (page 2597)
321 - LEON3: Update power-down function (page 2598)
320 - SMP: Fix race condition in thread priority changes (page 2566)
319 - bsps/shared/flash: Add a JFFS2 flashdev driver (page 2587)
317 - confdefs: do not CONFIGURE_FILESYSTEM_NFS in ALL (page 2585)
316 - RTEMS FDT Add shell read and write handler support (page 2599)
315 - bsps/aarch64/zynqmp: Factor out the CFC-400X management console (page 2584)
312 - Add RISCV libdl support (page 2574)
311 - libtests/ttest01: Fix CPU counter precision issues (page 2562)
310 - validation: Clarify SMP EDF test case (page 2615)
308 - spfatal34/spfatal36: Avoid RTEMS_UNREACHABLE() (page 2617)
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305 - spec/bsps/xilinx-microzed: Fix the default setting for the Avnet Microzed PCLK (page 2635)
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284 - Fix Zynq SMP on QEMU (page 2676)
283 - bsp/xilinx-zynq: Add devcfg and slcr drivers (page 2660)
282 - Improve event record handling (page 2619)
279 - riscv: fix FDT loads during work area init (page 2656)
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276 - riscv/beaglevfire: disable BSP_START_COPY_FDT_FROM_U_BOOT by default (page 2658)
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268 - Set Python scripts to use Python 3 (page 2696)
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216 - libmisc/stackchk: fix Doxygen file comment (page 2556)
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211 - Add aarch64 cpukit paravirtualization support (page 2753)
210 - cpukit/libmisc/shell:fix command df overflow (page 2549)
209 - score/cpu/arm/cpu.c: Fine tune paravirtualization for interrupt set/get level (page 2815)
208 - spmsgq_err[12]: Add message sizes to configuration (page 2816)
207 - bsps/i386/include/bsp/irq.h is pc386 specific (page 2812)
206 - bsps/stm32h7/spi: Add full duplex and interrupt support (page 2603)
204 - stm32h7: Resolve warnings and add SPI support (page 2817)
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202 - shell:Ignore empty user names as input (page 2543)
201 - Revert "bsps/stm32h7: Workaround STM32 H7 errata by enforcing aligned access only" (page 2535)
199 - dev/serial/zynq: Improve baud calculation and simplify code (page 2805)
198 - arm: Improve default exception handling (page 2851)
197 - cpukit/stackchk: Remove additional offset of SANITY_PATTERN_SIZE_WORDS (page 2848)
196 - spec/zynqmp: Install ECC header definitions (page 2861)
195 - Add support for more than 2G of DDR memory to ZynqMP BSPs (page 2769)
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193 - jffs2: Add checks for long file name (page 2536)
192 - x86_64: Add TLS support (page 2537)
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186 - cpukit/libblock: Close all valid FDs (page 2917)
185 - bsps/shared: Add Abracom EOZ9 RTC driver (page 2541)
183 - Flashdisk.c: Invalid printf format string (page 2540)
182 - bsps/stm32h7: Fix typo causing crash on USB 2 initialization (page 3060)
181 - libblock/src/bdpart-register.c: Do not pass bad value to close() (page 2924)
180 - bsps/stm32h7: Workaround STM32 H7 errata by enforcing aligned access only (page 2846)
179 - cpukit/score/src/kern_ntptime.c: Use time_t not a 32-bit type (page 2922)
178 - open: Fix race condition when called with O_TRUNC (page 2918)
177 - msdos: Fix file truncated to 0 (page 2884)
176 - bsp/gen5200: Add section for GDB pretty-printing (page 3079)
175 - timespec.h, etc.: Eliminate use of 32-bit for time_t (page 2600)
174 - Adding a new NIOS V BSP to the RISC-V architecture (page 2701)
172 - aio_fsync.c: Use calloc() to ensure memory is initialized (page 2854)
171 - objectinitializeinformation.c: Add Assert for API index too high (page 2936)
170 - bsps/shared/arm-gicv3: Calculate cpu_count correctly (page 3053)
169 - x86_64/amd64: Add SMP support (page 2856)
168 - amd64: Restructure the APIC code (page 2920)
167 - bsps: Convert README and other file to MarkDown (page 3078)
166 - bsps/m68k/uC5282/README.md: Delete timing results (page 3084)
165 - aio_fsync.c: Address Coverity dead code issue (page 3081)
164 - fix waf install (page 3067)
163 - libdebugger: Add support for PowerPC (page 2932)
162 - testsuites: Update list of excluded testcases for targets without JFFS2 and RFS (page 3056)
161 - libtests/stackchk04: Add a new testsuite for the detailed reporter (page 3073)
160 - disp_hmsc29xx.c: Address Coverity flagged negative shift (page 3055)
158 - fix system fatal error caused by imperfect user input commands, e.g. "rtl sym -u" (page 3073)
157 - bsps: Fold various files into README.md (page 3086)
156 - Revert "objectgetinfo.c: Add test case for API field too high" (page 3122)
155 - bsps: Fold external documentation into README.md (page 3109)
154 - bsps/stm32h7: update STM32 H7 HAL (page 3069)
153 - Convert LICENSE to LICENSE.md (page 3085)
152 - Convert various files to README.md MarkDown (page 3112)
151 - rtc: Convert STATUS and README. to MarkDown* (page 3113)
150 - bsps/sh/gensh2: Fold README.EVB7045F into README.md (page 3091)
149 - cpukit: Convert files to README.md MarkDown (page 3108)
148 - Rename COPYING to LICENSE.md (page 2862)
147 - testsuites/benchmarks/dhrystone: Convert documents to single README.md (page 3111)
146 - cpukit: Convert cpukit//README to MarkDown* (page 3088)
*145 - testsuites: Convert */README to MarkDown* (page 3114)
144 - testsuites: Convert README to MarkDown (page 3115)
143 - make: Convert README to MarkDown (page 3119)
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141 - bsps: Convert README to MarkDown (page 3092)

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139 - bsps: Convert bsps//README to MarkDown* (page 3120)
138 - cpukit: Convert cpukit//README to MarkDown* (page 3093)
137 - testsuites: Fix fstests/fsrmdirparent testcase (page 3077)
136 - objectgetinfo.c: Add test case for API field too high (page 3068)
135 - Remove errant URL. (page 3132)
134 - Move old devel links to GitLab (page 3126)
133 - Update Doxygen to point to GitLab. (page 3134)
132 - Remove Makefile.maint (page 3133)
131 - Remove MAINTAINERS file (page 3128)
130 - Remove INSTALL file. (page 3131)
129 - getdents: hold the IOP while performing the operation (page 3071)
128 - cpukit/posix/aio: added support for O_DSYNC* (page 2828)
127 - cpukit/posix/src/aio_misc.c: Fix incorrect operator in condition (page 3050)
126 - Set default UART on Microzed to UART1 (page 3066)
125 - testsuite/libiofdopen: Add missing spec file (page 3135)
124 - bsps/aarch64: Homogenize ZynqMP ECC info structs (page 3082)
123 - cpukit/libfs/jffs2: Prevent memory corruption due to corrupted data (page 2697)
122 - libdl: Constify TLS offset table (page 3052)
121 - Simplify termination procedure (page 2867)
120 - aarch64/raspberrypi: Add Watchdog Timer driver (page 2925)
119 - Add ACPICA support to the amd64 BSP (page 3057)
118 - cpukit/posix/aio: Create notification at request completion* (page 2832)
117 - libcsupport/libio: Add rtems_libio_count_open_iops to return open descriptors (page 3135)
116 - libcsupport/getrusage: Return task and idle time using getrusage (page 3140)
115 - score: Add Doxygen file comment to bsd-tree.h (page 3040)
114 - cpukit/shell: Account for tick rate in timeouts (page 3141)
112 - x: Remove junk file (page 3143)
111 - libtests/dl: Make build reproducible* (page 2849)
109 - libtest: Move parts to extra files (page 3051)
108 - bsps/arm/xilinx-zynq: Enable SMP for all variants (page 3029)
107 - amd64: Fix reference to wrong linkcmds in amd64 obj.yml (page 3030)
106 - dhrystone: Prevent procedure merging (page 3030)
105 - aarch64/xilinx-zynqmp: Fix BSP build (page 3025)
104 - Convert licenses to a single LICENSE.md file. (page 2757)
103 - aarch64/raspberrypi: Add SPI support (page 3061)
102 - psxfenv01: Use a floating-point task (page 3034)
101 - smptests/smpipi01: Fix more sporadic test failures (page 3039)
100 - add rtems_counting_semaphore_wait_timed_ticks and rtems_counting_semaphore_try_wait for self-contained object counting semaphore (page 3036)
99 - validation: Fix bad thread dispatch validation (page 3144)
98 - Add new section: .debug_gdb_scripts, across all executables on RTEMS (page 2877)
97 - validation: Fix comment (page 3033)
96 - amd64: Refactor amd64 and amd64efi spec files (page 3031)
95 - x86_64: Enable and add support for FP tasks (page 3026)

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93 - bsp/tms570: Fix SCI baud calculation (page 2998)
91 - libtest/dl12: Fix build issue (page 3017)
90 - bsps/xqspipsu: Add timeouts to NOR transfers (page 3007)
89 - doxygen: Clarify system termination (page 2997)
88 - amd64: Remove unneeded paging flags (page 3010)
87 - rtems: Fix typos in documentation (page 3018)
86 - Feature/stack reporter config (page 2886)
85 - cpukit/posix/aio: Corrected aio_return() and aio_error() behaviour* (page 3011)
84 - zynqmp: Add support for ECC error reporting (page 3164)
83 - amd64: Add doxygen group (page 3020)
82 - amd64: Add rtemsrwset section to linker script (page 3019)
81 - x86_64: Fix interrupts being enabled during system initialization (page 3016)
80 - msdos: update inode during rename (page 3095)
79 - Improve ISR locks (page 3160)
78 - bsp/powerpc: Remove e500 machine state for asm functions (page 3171)
77 - cputkit/include: Add bsd-tree.h to RTEMS and update existing references. (page 3041)
76 - rtems: Format typedef parameters in comments (page 2974)
75 - x86_64: Set CPU_USE_LIBC_INIT_FINI_ARRAY to TRUE (page 2970)
74 - testsuites: Update lock init validation test (page 3172)
73 - cpukit: Resolve gcc14 warnings (page 3168)
72 - amd64: Change console device_file to /dev/ttyS0 (page 2985)
71 - x86_64: Fix ISR handler macros (page 3021)
70 - Synchronize with FreeBSD (page 3173)
69 - microblaze: Move interrupt context save to BSP (page 2975)
68 - bsps/aarch64: Unify clock driver build (page 2971)
67 - bsps: Fix Xilinx QSPI build (page 2986)
66 - spec/stm32h7: Default nucleo-h755zi BSP to build for CORE_M7 (page 2989)
65 - build: Fix double use of objects item (page 2987)
64 - dev/pl011: Fix incorrect macro definition (page 3145)
63 - BSP fatal extension improvements (page 3190)
62 - aarch64/xilinx-zynqmp: Small improvements (page 3188)
59 - aarch64/raspberrypi: Add gpio driver (page 2999)
58 - smpschedaffinity02: Fix sporadic test failures (page 3192)
57 - rtems: Clarify rtems_interrupt_set_priority() (page 3191)
56 - cpukit/posix/aio: Updated aio files documentation* (page 2976)
55 - amd64: Add bsp_reset (page 2982)
53 - New ST Nucleo STM32H755ZI BSP (page 2990)
52 - x86_64/include/rtems/score/cpuimpl.h: Relicense to 2-BSD (page 3194)
51 - bsps/xilinx-versal: fix BSP_INTERRUPT_VECTOR_COUNT too large (page 3034)
48 - bsps/amd64: Add comments to start.s (page 2988)
47 - dev/serial: Refactor the pl011 driver to be extensible (page 2771)
46 - score: Add _SMP_barrier_Wait_for_other() (page 3193)
45 - validation: Improve interrupt controller tests (page 2956)
44 - bsps/arm: Fix L2C-310 cache disable (page 3156)
42 - cpukit/posix/src/aio_misc.c: Created helper method for rtems_aio_handle() (page 2958)

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41 - posix: Fixed header comment of aio_read.c (page 3196)
40 - corrected the content of psxaio01.scn (page 2967)
39 - bsps: Assign file to Doxygen group (page 2968)
38 - score: Add _Processor_mask_And_not() (page 2969)
36 - spec/xilinx-zynqmp-rpu: Calculate correct RAM area (page 3202)
35 - bsps: Add a Bit Banged SPI (page 2938)
34 - x86_64: Fix stack aligment for x86-64 SysV ABI (page 2972)
31 - build: Simplify wscript code (page 3194)
30 - cpukit/libdl/aarch64: Improve debug output (page 3201)
29 - bsps/aarch64/a72: Avoid use of reserved INTIDs (page 3147)
27 - aarch64/xilinx-zynqmp: Enable errata workarounds (page 3214)
25 - testsuites/libtest/dl12: add DL test for incrementally linked objects (page 3151)
24 - bsps/powerpc: Introduction of interrupt locks (page 3216)
23 - bsps: Use interrupt entry in clock driver (page 3215)
22 - Doxygen improvements (page 2966)
21 - QSPI Flash on Xilinx Versal (page 3176)
20 - Synchronize timecounter support with FreeBSD 2024-05-06 (page 3209)
18 - libdl:fix dynamic loading error. (page 2949)
17 - rtems: Add get/set interrupt priorities (page 3204)
16 - bsp/tms570 Improvements (page 2951)
15 - Doxygen improvements (page 2954)
14 - Build optimizations for arm BSPs (page 3212)
13 - bsps: Use interrupt entry in clock driver (page 2953)
12 - arm: Fix Armv7-M floating-point support (page 3198)
11 - bsps/powerpc: Introduction of interrupt locks (page 2950)
7 - validation: Fix powerpc in test case (page 2957)
5 - Drop index.html from directory it loads by default. (page 3217)
4 - Add an additional line for consistency. (page 3218)
2 - bsp/arm/zynq: Move README to README.md (page 3219)
1 - Convert README to MarkDown (page 3219)

355 - score: Fix RTEMS_DEBUG build (closed) (page 3250)
334 - Modify the 'exit' coding style for libtests (closed) (page 3254)
243 - aarch64/raspberrypi: Add FDT support (closed) (page 3256)
236 - cpukit/rtems: include types.h in optionsimpl.h (closed) (page 3270)
227 - SMP: Minor system start improvements (closed) (page 3271)
219 - shell/cat_file:Fix cat not outputting file with no newline at end (closed) (page 3268)
215 - libtests/shell01:add test empty and NULL usernames check (closed) (page 3263)
200 - Draft: Add programmatic interface for data produced by cpuuse (closed) (page 3226)
190 - Draft: include/rtems: Fix Doxygen comments (closed) (page 3255)
184 - bsps/stm32h7: make errata configurable (closed) (page 3230)
173 - ftpd.c: Do not use negative socket descriptor (closed) (page 3282)
159 - objectinitializeinformation.c: Add Assert for API index too high (closed) (page 3281)
113 - bsp/aarch64:SMP improvement on aarch64 (closed) (page 3273)
92 - libtests/dl12: Fix build error (closed) (page 3239)
61 - Draft: Resolve "User manual test documentation update" (closed) (page 3285)
60 - Resolve "MicroBlaze BSPs modify carry flag before MSR is saved" (closed) (page 3283)
54 - Draft: Added documentation for cpukit/libmisc/stackchk/check.c (closed) (page 3251)
50 - Draft: Added description/documentation to stackchk test files (closed) (page 3264)
43 - Draft: Add new PL011 driver with IRQ support (closed) (page 3258)
37 - This is a test commit for CODEOWNERS. (closed) (page 3242)
33 - Test branch 2, do not merge (closed) (page 3267)
32 - This is a test MR, do not merge (closed) (page 3285)
28 - aarch64/arm: Make _CPU_Fatal_halt() BSP-specific (closed) (page 3243)
26 - Draft: Main (closed) (page 3222)
19 - testsuites/libtest/dl12: add DL test for incrementally linked objects (closed) (page 3286)
10 - Draft: Fix 4923 (FPU context init/switch on ARMv7-M platform) (closed) (page 3222)
9 - test MR (closed) (page 3226)
8 - Fix how GitLab picks up our license. (closed) (page 3289)
6 - Resolve "Migrate commits from master to main after gitlab transition" (closed) (page 3287)
3 - Add an additional line for consistency. (closed) (page 3289)

3.9.1 Issues

3.9.1.1 5084 - objectinitializeinformation.c: Coverity spotted possible over indexing

Id	5084
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Joel Sherrill
Created	2024-08-02T16:13:29.457Z
Closed	2024-08-11T01:40:00.135Z
Updated	2026-03-13T01:11:25.623Z
Milestone	6.1
Labels	qualification, rtems::score, scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5084
Merges	3

Summary

Coverity flagged a spot where the _Objects_Information_table may be used with an index that is too large. However, this method is only used during initialization and the API and class fields passed should be able to be trusted. In light of this, the decision was made to add an _Assert which will let Coverity Scan know it is accounted for.

Coverity CID 1512508

```
71  /*
72   *  Register this Object Class in the Object Information Table.
73   */

CID 1512508: (#1 of 1): Out-of-bounds read (OVERRUN)
1. overrun-local: Overrunning array _Objects_Information_table of 4 4-byte␣
↪elements at element index 7 (byte offset 31) using index _Objects_Get_
↪API(maximum_id) (which evaluates to 7).
74  _Objects_Information_table[ _Objects_Get_API( maximum_id ) ]
75    [ _Objects_Get_class( maximum_id ) ] = information;
```

Steps to reproduce

Author: Joel Sherrill 2024-08-02T16:13:29.639Z

assigned to @joel

Author: Joel Sherrill 2024-08-02T16:18:18.240Z

mentioned in merge request !159

Author: Joel Sherrill 2024-08-02T16:32:41.629Z

mentioned in merge request !160

Author: Joel Sherrill 2024-08-07T13:14:33.307Z

MR !160 closed this since the commit message reference this issue. Since the MR was on the right issue, the issue for disp_hmsc29xx.c, it got closed. Leaving this one open and no code in a MR.

Author: Joel Sherrill 2024-08-07T13:18:01.082Z

mentioned in merge request !171

Author: Joel Sherrill 2024-08-10T15:01:47.326Z

This is not resolved.

Author: Joel Sherrill 2024-10-22T19:59:59.887Z

mentioned in commit hongran86/rtems-rh@5580f70bbd991e39dc15aad12d280ddfe06eb65e

3.9.1.2 5167 - Update waf to 2.1.4 : rtems/rtos/rtems

Id	5167
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-12-04T22:20:47.644Z
Closed	2024-12-22T03:34:14.955Z
Updated	2026-03-12T06:59:01.772Z
Milestone	6.1
Labels	backport, qualification, tool::waf
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5167
Merges	4

For https://gitlab.rtems.org/rtems/rtos/rtems.

Summary

The latest verison of waf fixes several issues on Windows. We also have a huge inconsistency in the version we're running which we should probably fix:

```
./rtems-deployment/waf       waf 2.0.24 (1af97c71f5a6756abf36d0f78ed8fd551596d7cb)
./rtems-docs/waf             waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
./rtems-examples/waf         waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-libbsd/waf           waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-littlevgl/waf        waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-lwip/waf             waf 2.0.18 (314689b8994259a84f0de0aaef74d7ce91f541ad)
./rtems-net-legacy/waf       waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems-net-services/waf     waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-tools/waf            waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems/waf                  waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
```

Steps to reproduce

3.9.1.2.2.1 Pre-set options

Author: Amar Takhar 2024-11-16T20:21:25.689Z

marked this issue as blocking rtems/docs/rtems-docs#54

Author: Amar Takhar 2024-11-16T20:21:31.439Z

changed the description

Author: Gedare Bloom 2024-11-17T00:11:44.128Z

Should we automate an approach to keep all our repos in sync with waf version?

Author: Amar Takhar 2024-11-17T00:19:39.724Z

Yeah I already have that written down but it's not that easy. We need to think about the workflow of how this should happen. There needs to be a process to test the new version against all the repositories to make sure it works and then update so we need to be more deliberate about it.

I have some ideas about it but the procedural part needs to be discussed: what's important enough to upgrade for and do we want to support one repo getting ahead of others to avoid increasing the size of our repositories or whether we care or not. Clearly the above is not great having `2.0` vs `2.1` Having said that `2.1.4` has fixes we really want for Windows.

Author: Amar Takhar 2024-11-17T01:08:46.506Z

See also: https://gitlab.com/ita1024/waf/-/issues/2452

Author: Amar Takhar 2024-11-17T03:50:21.836Z

assigned to @amar

Author: Amar Takhar 2024-11-17T04:22:19.639Z

After this update is done I'll create another issue for the next update. As we require an update we should collect reasons, issues and MRs until we trigger the next update. Of course a critical issue should be an immediate update but smaller things for instance if it's specific to one repo we can let that one repo get out of sync until we have more of are reason to update project-wide. otherwise we may end up update too often.

Author: Amar Takhar 2024-11-18T20:19:26.807Z

mentioned in merge request !318

Author: Amar Takhar 2024-11-20T23:35:55.569Z

mentioned in commit amar/rtems-deployment@c8fd177b03fb5130697a7411d716f1542c6175b1

Author: Amar Takhar 2024-11-20T23:36:01.722Z

mentioned in commit amar/rtems-docs@ff70333104a0aaa05877df336d1bb1672b205b73

Author: Amar Takhar 2024-11-20T23:36:04.790Z

mentioned in commit amar/rtems-examples@8056cf5ccaaff51477096bdd3ae3850cecee957d

Author: Amar Takhar 2024-11-20T23:36:05.900Z

mentioned in commit amar/rtems-libbsd@2cac334d6a21b6006dfee4613d3da78eec26b1c8

Author: Amar Takhar 2024-11-20T23:36:08.424Z

mentioned in commit amar/rtems-littlevgl@7831e7125a6efe283e3c65efec1e24a96fdfc2ac

Author: Amar Takhar 2024-11-20T23:36:10.195Z

mentioned in commit amar/rtems-lwip@24f46d35dedf08807d6088443ab5c82e95c36ed8

Author: Amar Takhar 2024-11-20T23:36:12.174Z

mentioned in commit amar/rtems-net-legacy@8845824db452168140610db037ea0359e363cf1d

Author: Amar Takhar 2024-11-20T23:36:14.636Z

mentioned in commit amar/rtems-net-services@7bcc152d49267e5b5ca3c00c1707cc40b2ef95b6

Author: Amar Takhar 2024-11-20T23:36:17.086Z

mentioned in commit amar/rtems-tools@12a94b63506ad84ec1c4feed56d3ce2e85475d85

Author: Amar Takhar 2024-11-20T23:36:21.347Z

mentioned in commit amar/rtems@62baa874b823fea35b7cdea78734d277ada7b455

Author: Amar Takhar 2024-11-20T23:39:31.029Z

mentioned in merge request !323

Author: Amar Takhar 2024-11-20T23:39:48.843Z

mentioned in merge request rtems/tools/rtems-tools!44

Author: Amar Takhar 2024-11-20T23:40:09.031Z

mentioned in merge request rtems/pkg/rtems-net-services!9

Author: Amar Takhar 2024-11-20T23:40:25.975Z

mentioned in merge request rtems/pkg/rtems-net-legacy!6

Author: Amar Takhar 2024-11-20T23:40:33.280Z

mentioned in merge request rtems/pkg/rtems-lwip!11

Author: Amar Takhar 2024-11-20T23:40:41.082Z

mentioned in merge request rtems/pkg/rtems-littlevgl!4

Author: Amar Takhar 2024-11-20T23:40:53.742Z

mentioned in merge request rtems/pkg/rtems-libbsd!25

Author: Amar Takhar 2024-11-20T23:41:01.964Z

mentioned in merge request rtems-examples!5

Author: Amar Takhar 2024-11-20T23:41:10.912Z

mentioned in merge request rtems/docs/rtems-docs!89

Author: Amar Takhar 2024-11-20T23:41:24.453Z

mentioned in merge request rtems/tools/rtems-deployment!13

Author: Gedare Bloom 2024-11-21T00:03:44.787Z

mentioned in commit gedare/rtems-docs@2f1694269539dc59177b203df1b8481ee52f989a

Author: Gedare Bloom 2024-11-21T00:04:29.322Z

mentioned in merge request rtems/docs/rtems-docs!85

Author: Gedare Bloom 2024-11-21T00:06:48.926Z

mentioned in commit gedare/rtems-docs@816d14787b8bb89e7830c9885946fa8dc6dadf79

Author: Amar Takhar 2024-11-22T10:02:29.944Z

mentioned in commit amar/rtems-docs@24cf46b966d77bada338422de2ead632f79beb89

Author: Amar Takhar 2024-11-24T23:02:01.254Z

mentioned in commit amar/rtems-docs@7582461dbcff0287bb8bc1a615734696a416b266

Author: Amar Takhar 2024-11-24T23:03:10.673Z

mentioned in commit amar/rtems-examples@ac68170083fc3b2e5ce9a63a6c64b4b2e5d7915f

Author: Amar Takhar 2024-11-24T23:03:49.371Z

mentioned in commit amar/rtems-libbsd@a2d65d78fbe832a50ca6c986936c9b0c16647739

Author: Amar Takhar 2024-11-24T23:06:27.181Z

mentioned in commit amar/rtems@03c5b7e88f165ea56487e78822cf0b8595c79cfa

Author: Amar Takhar 2024-11-25T01:33:09.501Z

mentioned in commit amar/rtems-docs@b9af7d8fad94c310f7d973c10b5a7c2da8d4e7e8

Author: Amar Takhar 2024-12-04T21:56:00.650Z

mentioned in commit amar/rtems@8d71cc5dc4a0e11fd7b8d7b5b94bb2e54d3a6f9e

Author: Gedare Bloom 2024-12-04T22:16:38.325Z

cloned to rtems/docs/rtems-docs#62

Author: Gedare Bloom 2024-12-04T22:17:50.530Z

cloned to rtems/tools/rtems-deployment#3

Author: Gedare Bloom 2024-12-04T22:18:09.565Z

cloned to rtems-examples#5

Author: Gedare Bloom 2024-12-04T22:18:26.985Z

cloned to rtems/pkg/rtems-libbsd#22

Author: Gedare Bloom 2024-12-04T22:18:50.350Z

cloned to rtems/pkg/rtems-littlevgl#3

Author: Gedare Bloom 2024-12-04T22:19:03.866Z

cloned to rtems/pkg/rtems-lwip#4

Author: Gedare Bloom 2024-12-04T22:19:19.835Z

cloned to rtems/pkg/rtems-net-legacy#3

Author: Gedare Bloom 2024-12-04T22:19:38.159Z

cloned to rtems/pkg/rtems-net-services#7

Author: Gedare Bloom 2024-12-04T22:20:52.678Z

cloned from #5153

Author: Gedare Bloom 2024-12-04T22:20:47.782Z

assigned to @amar

Author: Gedare Bloom 2024-12-04T22:21:50.505Z

Author: Gedare Bloom 2024-12-04T22:26:42.960Z

marked this issue as blocking rtems/docs/rtems-docs#54

Author: Gedare Bloom 2024-12-04T22:46:42.872Z

Author: Chris Johns 2024-12-21T23:31:36.985Z

changed the description

Author: Chris Johns 2024-12-21T23:32:03.856Z

changed title from **Update waf to 2.1.4** to **Update waf to 2.1.4{+ : rtems/rtos/rtems+}**

Author: Chris Johns 2024-12-21T23:44:28.871Z

mentioned in merge request !350

Author: Chris Johns 2024-12-21T23:44:47.800Z

assigned to @chris and unassigned @amar

Author: Chris Johns 2025-02-11T05:38:22.648Z

mentioned in commit d61a739e418d42846012518be57c7e3b08750371

3.9.1.3 5164 - While at low sporadic server priority, changing the real priority leads to unpredictable system behaviour

Id	5164
State	closed
Type	ISSUE
Author	Sebastian Huber
Assignee(s)	Sebastian Huber
Closed by	Chris Johns
Created	2024-11-26T02:06:04.732Z
Closed	2025-01-16T23:33:24.491Z
Updated	2026-03-12T06:58:16.451Z
Milestone	6.1
Labels	api::posix, qualification
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5164
Merges	0

Summary

The POSIX sporadic server removes the real priority while a thread is in low priority mode. All operations which change the real priority and assume that the real priority node is active corrupt the system state (`rtems_task_set_priority()`, `rtems_task_set_scheduler()`, `rtems_task_restart()`, `pthread_setschedprio()`).

Author: Sebastian Huber 2024-11-26T02:06:04.847Z

assigned to @sebhub

Author: Sebastian Huber 2024-11-26T03:18:16.061Z

changed the description

Author: Sebastian Huber 2024-11-26T03:33:25.963Z

mentioned in merge request !329

Author: Sebastian Huber 2024-11-26T05:42:04.502Z

mentioned in merge request !330

Author: Gedare Bloom 2024-12-04T21:39:42.032Z

Author: Sebastian Huber 2024-12-05T02:24:32.038Z

cloned to #5168

Author: Sebastian Huber 2025-02-11T05:38:22.549Z

mentioned in commit 78e5e765725d6e20599299bebe0eade0adf1a9e1

Author: Sebastian Huber 2025-02-11T05:38:22.720Z

mentioned in commit e565dbba65ee0d0183223f8180d0073a03810883

Author: Sebastian Huber 2025-02-11T05:38:22.774Z

mentioned in commit 5eb938283d933f8b35d27ae864069f3202adeb3c

Author: Sebastian Huber 2025-02-11T05:38:22.939Z

mentioned in commit 63c5d062c34c4d29c0443181652ce0f00278a591

Author: Sebastian Huber 2025-02-11T05:38:23.076Z

mentioned in commit 7f00921b078873bc707af107576bb39b13e6d630

Author: Sebastian Huber 2025-02-11T05:38:23.179Z

mentioned in commit 65e480312c3398bd5c41d6b6b9c74e11b0de6a4f

3.9.1.4 5038 - CPUKit score uses empty structs

Id	5038
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Amar Takhar
Created	2024-06-13T04:41:27.382Z
Closed	2024-06-14T02:46:38.420Z
Updated	2026-03-12T06:57:28.584Z
Milestone	6.1
Labels	qualification, rtems::score
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5038
Merges	1

Summary

GCC is now generating a warning for empty structures. We are using them and we should address as I do not think it is part of the C standard.

An example warning:

```
In file included from ../../../cpukit/include/rtems/rtems/intr.h:73,
from ../../../cpukit/include/rtems.h:69,
from ../../../testsuites/sptests/spstdc17/init.c:32:
../../../cpukit/include/rtems/score/isrlock.h:72:9: warning: struct has no␣
↪members [-Wpedantic]
72 | typedef struct {
|         ^~~~~~
```

Steps to reproduce

Build using this configuration:

```
[DEFAULT]
RTEMS_DEBUG = True
RTEMS_POSIX_API = True

[aarch64/xilinx_zynqmp_lp64_zu3eg]
BUILD_TESTS = True
```

Author: Chris Johns 2024-06-13T04:41:54.853Z

changed the description

Author: Kinsey Moore 2024-06-13T12:35:49.624Z

marked this issue as related to #4957

Author: Kinsey Moore 2024-06-13T22:27:42.388Z

mentioned in merge request !73

Author: Chris Johns 2024-06-19T23:05:55.276Z

mentioned in merge request !79

3.9.1.5 4986 - Improve CONFIGURE_TICKS_PER_TIMESLICE configuration and documentation

Id	4986
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2024-01-31T07:13:03.000Z
Updated	2026-03-12T06:57:07.805Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::config, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4986
Merges	0

Original author: sebastian.huber

The documentation allows a value of zero for CONFIGURE_TICKS_PER_TIMESLICE. This should be changed to make zero an invalid value and it should be rejected by an #error configuration error.

Author: Trac Migrate 2024-03-21T07:07:18.000Z

Original author: sebastian.huber

In [changeset:"d62f299b3452329efc121bd546e1bc9cf2bf8af9/rtems" d62f299/rtems]:

```
Do not define CONFIGURE_TICKS_PER_TIMESLICE to 0

Unconditionally make a CONFIGURE_TICKS_PER_TIMESLICE value less than or equal
to zero an error.

Update #4986.
```

Author: Trac Migrate 2024-03-21T07:08:40.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"150c2e8b551e1cff3bcc914c02c6faea4cfbf395/rtems-docs" 150c2e8/rtems-docs]:

```
c-user: Clarify CONFIGURE_TICKS_PER_TIMESLICE

Close #4986.
```

Author: Trac Migrate 2024-03-21T10:56:07.000Z

Original author: sebastian.huber

In [changeset:"f5e42e5d9fae95e50f41a2ed71ee94e9908612c0/rtems-central" f5e42e5/rtems-central]:

```
spec: Fix CONFIGURE_TICKS_PER_TIMESLICE constraint

Update #4986.
```

Author: Gedare Bloom 2024-04-29T15:49:30.437Z

mentioned in commit ff3b11c1f67172f150c9891a96a43ad5281e0fe5

Author: Sebastian Huber 2026-03-12T06:57:07.873Z

changed the description

3.9.1.6 4957 - spstdc17 warnings building i386/pc686

Id	4957
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Closed by	Amar Takhar
Created	2023-10-04T01:49:08.000Z
Closed	2024-06-14T02:46:38.414Z
Updated	2026-03-12T06:56:51.284Z
Milestone	6.1
Labels	priority::normal, qualification, tickettype::defect, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4957
Merges	1

This test has these warnings:

```
[4070/4522] Compiling testsuites/sptests/spstdc17/init.c
In file included from ../../../cpukit/include/rtems/rtems/intr.h:73,
from ../../../cpukit/include/rtems.h:69,
from ../../../testsuites/sptests/spstdc17/init.c:32:
../../../cpukit/include/rtems/score/isrlock.h:72:9: warning: struct has no␣
↪members [-Wpedantic]
72 | typedef struct {
|         ^~~~~~
In file included from ../../../cpukit/include/rtems/scheduler.h:40,
from ../../../cpukit/include/rtems/confdefs/scheduler.h:65,
```

(continues on next page)

(continued from previous page)

```
from ../../../cpukit/include/rtems/confdefs/threads.h:49,
from ../../../cpukit/include/rtems/confdefs/inittask.h:56,
from ../../../cpukit/include/rtems/confdefs.h:68,
from ../../../testsuites/sptests/spstdc17/init.c:57:
../../../cpukit/include/rtems/score/scheduler.h:318:16: warning: struct has no␣
↪members [-Wpedantic]
318 | typedef struct Scheduler_Context {
|                ^~~~~~~~~~~~~~~~~
```

Author: Chris Johns 2023-10-04T01:50:08.000Z

- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-10-17T00:30:19.000Z

deleted comment

Author: Trac Migrate 2023-10-18T01:42:13.000Z

Does removing the precompiler defines affect how gcc sees struts? right now i removed the defines to fix this issue

typedef struct { SMP_lock_Control Lock; } ISR_lock_Control;

for example removing the #defines gives me this compiler error? do you have any suggestions?

../../../cpukit/include/rtems/score/isrlock.h:73:3: error: unknown type name ‘SMP_lock_Control’ 73 | SMP_lock_Control Lock; | ^~~~~~~~~~~~~~~~~ smplock.h is defined above

Author: Joel Sherrill 2023-10-18T02:44:14.000Z

It has a single field which is smp specific. When built for uniprocessor, the structure ends up with no fields which is the problem. I am guessing that all code that uses this should be smp only and the structure not present.

Author: Trac Migrate 2023-10-18T05:17:50.000Z

Through typedefs this structure is part of the API. We could add a dummy member to the API visible structure for uniprocessor configurations if we really want to fix warnings like this. Internally, we need more #ifdefs to avoid using the lock control.

Author: Kinsey Moore 2024-06-13T12:35:49.656Z

marked this issue as related to #5038

Author: Kinsey Moore 2024-06-13T22:29:34.192Z

mentioned in merge request !73

Author: Chris Johns 2024-06-19T23:05:55.246Z

mentioned in merge request !79

Author: Sebastian Huber 2026-03-12T06:56:51.372Z

changed the description

3.9.1.7 4941 - Test suite files produced by rtems-syms are not reproducible

Id	4941
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Amar Takhar
Created	2023-08-10T09:59:51.000Z
Closed	2024-07-18T00:12:24.899Z
Updated	2026-03-12T06:56:24.017Z
Milestone	6.1
Labels	priority::normal, qualification, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4941
Merges	1

Original author: sebastian.huber

The test suite files produced by rtems-syms

- dl01-sym.o
- dl02-sym.o
- dl04-sym.o
- dl05-sym.o
- dl06-sym.o
- dl07-sym.o
- dl08-sym.o
- dl09-sym.o
- dl10-sym.o
- dl11-sym.o

are not reproducible. They change after each build. Maybe the mtime is added to the archive.

Author: Chris Johns 2023-08-11T00:03:24.000Z

Original author: sebastian.huber

What is the requirement you are attempting to resolve here? I am not aware of any requirement in the current project related to reproducibility?

Would any test that embeds a tar file have the same issue?

Author: Trac Migrate 2023-08-11T05:07:23.000Z

Original author: sebastian.huber

From my point of view reproducible builds are state of the art. Yes, tar files generated by the build need to be reproducible as well.

Author: Chris Johns 2023-08-11T05:29:25.000Z

Original author: sebastian.huber

Does the setting the metadata in the tar file resolve this issue?

Author: Chris Johns 2023-08-11T05:30:14.000Z

Original author: sebastian.huber

Replying to Sebastian Huber:

> From my point of view reproducible builds are state of the art.
>
> Is this a new requirement for 6 for it to be released?

Author: Trac Migrate 2023-08-11T05:44:52.000Z

Original author: sebastian.huber

After the fix for the tar archives, the only not reproducible build artifacts are:

- testsuites/libtests/dl01.exe
- testsuites/libtests/dl01/dl01-sym.o
- testsuites/libtests/dl02.exe
- testsuites/libtests/dl02/dl02-sym.o
- testsuites/libtests/dl04.exe
- testsuites/libtests/dl04/dl04-sym.o
- testsuites/libtests/dl05.exe
- testsuites/libtests/dl05/dl05-sym.o
- testsuites/libtests/dl06.exe

- testsuites/libtests/dl06/dl06-sym.o
- testsuites/libtests/dl07.exe
- testsuites/libtests/dl07/dl07-sym.o
- testsuites/libtests/dl08.exe
- testsuites/libtests/dl08/dl08-sym.o
- testsuites/libtests/dl09.exe
- testsuites/libtests/dl09/dl09-sym.o
- testsuites/libtests/dl10.exe
- testsuites/libtests/dl10/dl10-sym.o
- testsuites/libtests/dl11.exe
- testsuites/libtests/dl11/dl11-sym.o

For me this issue is not important enough to delay the release.

Author: Chris Johns 2023-08-11T05:47:01.000Z

Original author: sebastian.huber

What if the files are stripped?

Do you know why they are different?

Author: Trac Migrate 2023-08-11T05:51:05.000Z

Original author: sebastian.huber

My off hand guess is that a file mtime, ctime, or atime is added to the *-sym.o object by rtems-syms.

Author: Chris Johns 2023-08-11T05:54:01.000Z

Original author: sebastian.huber

Replying to Sebastian Huber:

> My off hand guess is that a file mtime, ctime, or atime is added to the *-sym.o object by rtems-syms.
>
> This is not a tar file, it is linked into the test executable because the tests run with embedded symbols. This is the reason the link process has 2 phases.
>
> > For me this issue is not important enough to delay the release.
> >
> > Why then set the milestone for 6.1?

Author: Trac Migrate 2023-08-11T07:15:01.000Z

Original author: sebastian.huber

Replying to Chris Johns:

> Replying to Sebastian Huber:
>
> > My off hand guess is that a file mtime, ctime, or atime is added to the *-sym.o object by rtems-syms.
>
> This is not a tar file, it is linked into the test executable because the tests run with embedded symbols. This is the reason the link process has 2 phases.
>
> The input files are identical except the file metadata.
>
> > For me this issue is not important enough to delay the release.
>
> Why then set the milestone for 6.1?
>
> It would be nice to have.

Author: Chris Johns 2023-08-11T22:21:11.000Z

Original author: sebastian.huber

Replying to Sebastian Huber:

> Replying to Chris Johns:
>
> > Replying to Sebastian Huber:
> >
> > > My off hand guess is that a file mtime, ctime, or atime is added to the *-sym.o object by rtems-syms.
> >
> > This is not a tar file, it is linked into the test executable because the tests run with embedded symbols. This is the reason the link process has 2 phases.
>
> The input files are identical except the file metadata.
>
> I am not sure what metadata you are referring to?
>
> > For me this issue is not important enough to delay the release.
>
> Why then set the milestone for 6.1?
>
> It would be nice to have.
>
> Is this ticket the only outstanding issue related to having reproducible builds?

Author: Trac Migrate 2023-08-12T11:05:39.000Z

Original author: sebastian.huber

> Replying to Chris Johns:
>
> > Replying to Sebastian Huber:
> >
> > > Replying to Chris Johns:
> > >
> > > > Replying to Sebastian Huber:
> > > >
> > > > > My off hand guess is that a file mtime, ctime, or atime is added to the *-sym.o object by rtems-syms.
> > > > >
> > > > > This is not a tar file, it is linked into the test executable because the tests run with embedded symbols. This is the reason the link process has 2 phases.
> > > >
> > > > The input files are identical except the file metadata.
> > >
> > > I am not sure what metadata you are referring to?
> > >
> > > The file metadata such as mtime, ctime, atime, uid, gid, etc.
> > >
> > > > > For me this issue is not important enough to delay the release.
> > > > >
> > > > > Why then set the milestone for 6.1?
> > > >
> > > > It would be nice to have.
> > > >
> > > > Is this ticket the only outstanding issue related to having reproducible builds?
> > > >
> > > > I found another issue with gzip. I am not sure if extra options are required for xz. It seems the rtems-syms is the only missing piece.

Author: Chris Johns 2024-02-16T00:49:01.000Z

Original author: sebastian.huber

- **Milestone** changed from %"6.1" to %"Indefinite"
- **Version** ~"6" deleted

Author: Sebastian Huber 2024-07-02T07:35:23.442Z

mentioned in commit 8cadc340db25959e7e994520ae0b1b3e4480e284

Author: Sebastian Huber 2024-07-09T08:09:15.242Z

The issue is that `rtems-syms` directly creates the object file using a temporary source file. The name of this temporary file changes each time the object file is created. This can be fixed by creating the source file and then compile the object using the build system.

Author: Sebastian Huber 2024-07-09T08:09:44.506Z

changed the description

Author: Sebastian Huber 2024-07-09T08:57:27.467Z

mentioned in merge request !111

3.9.1.8 4772 - Remove use of interval from rtems_task_wake_after() documentation

Id	4772
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Kinsey Moore
Created	2022-12-06T22:35:30.000Z
Updated	2026-03-12T06:55:59.203Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4772
Merges	0

The Classic API documentation for `rtems_task_wake_after()` refers to an **interval** while the call accepts `ticks`. The exact interval is not known because the period of time to next tick is not known when the call is made.

1. Clarify the wording
2. Recommend new applications use the POSIX based calls `nanosleep()` and `clock_nanosleep()` for applications that have intervals in a time base rather than system ticks.

The Gemini, Verify the fidelity of RTEMS System Tick issue provides some back ground to this change.

Author: Joel Sherrill 2023-06-22T22:03:49.000Z

This is requested as an outcome of RTEMS System Tick Resolution (#30) from NSF NOIRLab / Gemini. This is about verifying the fidelity of RTEMS System Tick. A recent test of our systemTickTest tool inside GemUtils is discussed here.

https://gitlab.com/nsf-noirlab/gemini/rtsw/epics-base/epics-base/uploads/3ef07e7417e9e14903de65fd91c8417f/EPICS_Task_Sleep-CCJ.pdf

The intent is to be clear it is “number of ticks” and not an arbitrarily precise “interval”. Now that RTEMS can have nanosecond granularity this distinction becomes important.

Author: Joel Sherrill 2023-06-22T22:04:43.000Z

- **Owner** set to @kinsey

- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-07-06T18:40:05.000Z

In [changeset:"981ba2de41ade670813d401cba9abff086a5a6e0/rtems-docs" 981ba2d/rtems-docs]:

```
c-user: Update references to rtems_task_wake_after

rtems_task_wake_after takes a parameter in terms of a count of clock
ticks and not a measure in a subunit of seconds. This updates
documentation to reflect that. This also makes obvious the caveat about
the first tick wait not being a whole tick and points the user at a
replacement for better accuracy.

Updates #4772
```

Author: Kinsey Moore 2023-07-13T20:15:22.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Author: Trac Migrate 2023-07-20T09:06:02.000Z

In [changeset:"20fc133693e8502994cd0deb4d38600cfeb5320e/rtems-central" 20fc133/rtems-central]:

```
spec/wake-after: Update references to intervals

rtems_task_wake_after takes a parameter in terms of a count of clock
ticks and not a measure in a subunit of seconds. This updates
documentation to reflect that and recommends clock_nanosleep() for
applications requiring sleep for a time-based duration instead of a
count of clock ticks.

Updates #4772
```

Author: Trac Migrate 2023-07-20T09:06:29.000Z

In [changeset:"be789ee60ee14a8005dd5cbc07593da63141b563/rtems-docs" be789ee/rtems-docs]:

```
c-user: Update copyright and use glossary terms

Updates #4772.
```

Author: Trac Migrate 2023-07-20T09:09:35.000Z

In [changeset:"21429f681dfc94881b5d26763102c1e604889a24/rtems" 21429f6/rtems]:

```
rtems: Update references to rtems_task_wake_after

rtems_task_wake_after takes a parameter in terms of a count of clock
ticks and not a measure in a subunit of seconds. This updates
documentation to reflect that. This also makes obvious the caveat about
the first tick wait not being a whole tick and points the user at a
replacement for better accuracy.

Updates #4772
```

Author: Trac Migrate 2023-07-20T12:41:48.000Z

In [changeset:"63a5c190b0076bd7f916f5e038955b8ff84cc039/rtems-docs" 63a5c19/rtems-docs]:

```
c-user: Fix typo

Updates #4772.
```

Author: Trac Migrate 2023-07-20T12:43:36.000Z

In [changeset:"49356594d3e86d3618d0613c26898e1c3884a1db/rtems" 4935659/rtems]:

```
rtems: Fix typo

Update #4772.
```

Author: Sebastian Huber 2026-03-12T06:55:59.295Z

changed the description

3.9.1.9 4769 - config: Add CONFIGURE_RECORD_INTERRUPTS_ENABLED

Id	4769
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-12-01T11:36:04.000Z
Updated	2026-03-12T06:55:33.523Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::config, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4769
Merges	0

Original author: sebastian.huber

```
/**
* @brief This configuration option is a boolean feature define.
*
* In case
*
* * this configuration option is defined
*
* * and #CONFIGURE_RECORD_PER_PROCESSOR_ITEMS is properly defined,
*
* then the interrupt event recording is enabled.
*
* @par Default Configuration
* If this configuration option is undefined, then the described feature is not
* enabled.
*
* @par Notes
* The interrupt event recording generates interrupt entry and exit events when
* interrupt entries are dispatched.
*/
#define CONFIGURE_RECORD_INTERRUPTS_ENABLED
```

Author: Trac Migrate 2022-12-02T09:13:28.000Z

Original author: sebastian.huber

In [changeset:"71d1acd41d2de193730a44284b16ddd7eddea738/rtems" 71d1acd/rtems]:

```
bsps/irq: Rename handler in dispatch table

The name handler table was a bit misleading after the last rework.
Rename it to distach table.  Update the documentation accordingly.
```

(continues on next page)

(continued from previous page)

```
5
6 Update #4769.
```

Author: Trac Migrate 2022-12-02T09:13:31.000Z

Original author: sebastian.huber

In [changeset:"0d5e41afde424bec6ce59c1e8ce1181980b9844f/rtems" 0d5e41a/rtems]:

```
1 bsps/irq: Add bsp_interrupt_get_dispatch_table_slot()
2
3 Update #4769.
```

Author: Trac Migrate 2022-12-02T09:13:33.000Z

Original author: sebastian.huber

In [changeset:"c46fbb955258df3ff3c325dadd1a6c17ee81a914/rtems" c46fbb9/rtems]:

```
1 config: Add CONFIGURE_RECORD_INTERRUPTS_ENABLED
2
3 This enables the tracing of interrupt entry/exit events through an
4 application configuration option.  The interrupt processing can be
5 viewed with Trace Compass using rtems-record-lttng from the RTEMS Tools.
6
7 Update #4769.
```

Author: Trac Migrate 2022-12-02T09:14:41.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"47e1f6e06b188bbf8f4da587f2fca15dbe304af4/rtems-docs" 47e1f6e/rtems-docs]:

```
1 Document CONFIGURE_RECORD_INTERRUPTS_ENABLED
2
3 Close #4769.
```

Author: Trac Migrate 2022-12-02T09:26:31.000Z

Original author: sebastian.huber

In [changeset:"492c2d44cbe148a447304519efc5a3ccb54235a8/rtems-central" 492c2d4/rtems-central]:

```
spec: Specify CONFIGURE_RECORD_INTERRUPTS_ENABLED

Update #4769.
```

Author: Trac Migrate 2023-01-03T14:51:55.000Z

Original author: sebastian.huber

In [changeset:"074e28758704514998390 78e279f59ba540298ee/rtems-central" 074e287/rtems-central]:

```
spec: Rename interrupt handler in dispatch table

Update #4769.
```

Author: Sebastian Huber 2026-03-12T06:55:33.599Z

changed the description

3.9.1.10 4702 - Fix warnings for indexing past array bounds (primarily validation tests)

Id	4702
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Amar Takhar
Created	2022-08-15T19:39:21.000Z
Closed	2024-05-17T00:44:01.374Z
Updated	2026-03-12T06:55:07.532Z
Milestone	6.1
Labels	priority::normal, qualification, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4702
Merges	0

Original author: rlong

Building for AArch64 <BSP> it looks like most of the warnings are for indexing past the end of an array. Most are from the validation tests, but a few aren't. Hopefully they all have the same fix.

I attached the log file of the warnings.

- errors2.txt

Author: Trac Migrate 2022-08-15T19:40:54.000Z

Original author: rlong

- **Attachment** errors2.txt added

Author: Joel Sherrill 2022-08-15T20:08:18.000Z

Original author: rlong

Per https://bugzilla.redhat.com/show_bug.cgi?id=2047439, do [0] arrays need to change to [1]?

Author: Trac Migrate 2022-08-16T16:46:06.000Z

Original author: rlong

Replying to Ryan Long:

> Building for AArch64 <BSP> it looks like most of the warnings are for indexing past the end of an array. Most are from the validation tests, but a few aren't. Hopefully they all have the same fix. I forgot to add the BSP when I submitted this. I've been building RTEMS for xilinx_zynqmp_lp64_qemu on AArch64.

Author: Trac Migrate 2022-08-31T11:13:02.000Z

Original author: rlong

In [changeset:"b1072f5ae2225b4ca45845c3a5d224507d87d2c8/rtems" b1072f5/rtems]:

```
validation: Ignore array bounds warnings

Update #4702.
```

Author: Trac Migrate 2022-09-05T06:47:06.000Z

Original author: rlong

In [changeset:"654b3ee0ce45239235e7e3afac72c3eca477f291/rtems-central" 654b3ee/rtems-central]:

```
spec: Ignore array bounds warnings

Update #4702.
```

Author: Trac Migrate 2022-09-05T06:48:23.000Z

Original author: rlong

In [changeset:"9e9ce43dcb48ecdb73d7ec1016725dd8a71141f8/rtems" 9e9ce43d/rtems]:

```
validation: Regenerate

Update #4702.
```

Author: Trac Migrate 2022-09-12T07:27:54.000Z

Original author: rlong

In [changeset:"4fdf79cca5d76d3985a79a89a38709141130a801/rtems" 4fdf79c/rtems]:

```
score: Prevent an out of bounds warning

Update #4702.
```

Author: Chris Johns 2022-11-29T22:53:27.000Z

Original author: rlong

Can this be closed?

Author: Joel Sherrill 2023-06-22T22:20:58.000Z

Original author: rlong

This will be closed before 6. If you wish to continue this before 7, clone.

Author: Amar Takhar 2024-05-17T00:44:01.085Z

Closing as per Joel 10 months ago.

Author: Amar Takhar 2024-05-17T00:44:01.512Z

changed the description

3.9.1.11 4670 - Add option to build RTEMS with coverage instrumentation

Id	4670
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-06-28T06:38:31.000Z
Updated	2026-03-12T06:54:35.816Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4670
Merges	0

Original author: sebastian.huber

Add build options to build RTEMS with coverage instrumentation. Dump the gcov information after each test.

Author: Trac Migrate 2022-07-04T06:24:59.000Z

Original author: sebastian.huber

In [changeset:"857fb17db1c467ce72fd4a6e410a653b26e31c34/rtems" 857fb17/rtems]:

```
build: Add more flags to BuildItemContext

Add cppflags, cflags, and cxxflags to BuildItemContext.  This allows to
propagate the flags from parent items to child items.

Update #4670.
```

Author: Trac Migrate 2022-07-04T06:25:03.000Z

Original author: sebastian.huber

In [changeset:"4aeebaee5b80dd2eeb8686f0dd2fa2ec3ad38b1c/rtems" 4aee-bae/rtems]:

```
build: Fix identifier pattern

Allow upper case characters in identifiers.

Update #4670.
```

Author: Trac Migrate 2022-07-04T06:25:06.000Z

Original author: sebastian.huber

In [changeset:"0bb7b84698e380b86896a3163371648e88f2af21/rtems" 0bb7b84/rtems]:

```
build: Improve value substitution

The waf build system uses lists for tool flags.  The build items may use
variable substitution.  Add the ability to use the variable substitution in
lists.  For example:

MORE_FLAGS = ['-more', '-flags']

flags:
- -some-flag
- ${MORE_FLAGS}

Before this change, the ${MORE_FLAGS} was substituted to "-more -flags".  This
would be passed by waf as a single command line argument to the tool.

After this change, the ${MORE_FLAGS} list extends the flags list:

flags = ['-some-flag', '-more', '-flags']

This list extension is performed if a list element consists of exactly one
variable.

Update #4670.
```

Author: Trac Migrate 2022-07-04T06:25:08.000Z

Original author: sebastian.huber

In [changeset:"42da08dd9d0fa34b047625e570049e2546e17acf/rtems" 42da08d/rtems]:

```
build: Add cppflags, cflags, cxxflags to groups

Propagate the group defined cppflags, cflags, and cxxflags from parent groups
to child items through the build item context.

Update #4670.
```

Author: Trac Migrate 2022-07-04T06:25:10.000Z

Original author: sebastian.huber

In [changeset:"a0aaa394b68727d204904b59514cb0f90840ba6f/rtems" a0aaa39/rtems]:

```
build: Fix optimization flags definition order

OPTIMIZATION_FLAGS must be defined before /build/bsp/bspopts is
↪processed.

Update #4670.
```

Author: Trac Migrate 2022-07-04T06:25:12.000Z

Original author: sebastian.huber

In [changeset:"a13047ca0e965136815a77ee2651d5e7821b59f7/rtems" a13047c/rtems]:

```
build: Allow separate optimization flags

Allow separate optimization flags for the BSP, cpukit, and tests.  For
↪example,
the BSP and cpukit may be built without optimization if coverage
instrumentation is enabled, however, the tests may still use
↪optimization.

Update #4670.
```

Author: Trac Migrate 2022-07-04T06:25:15.000Z

Original author: sebastian.huber

In [changeset:"2bc233fe585e755f62086e13b9bbbfe1bad31a1c/rtems" 2bc233fe/rtems]:

```
gcov: Add fork(), etc. gcov wrappers

The compiler wraps fork(), etc. system calls if coverage generation is
↪enabled.
These functions must be provided by the system.  For RTEMS, they just
↪return an
error status.

Update #4670.
```

Author: Trac Migrate 2022-07-04T06:25:17.000Z

Original author: sebastian.huber

In [changeset:"4f87edbb75865cb92efd3166d1faeb5fd720a47f/rtems" 4f87edb/rtems]:

```
gcov: Add functions to dump the gcov information

Update #4670.
```

Author: Trac Migrate 2022-07-04T06:25:19.000Z

Original author: sebastian.huber

In [changeset:"7452f67dd9e62247cc5df7427fc9fab2f2371b35/rtems" 7452f67d/rtems]:

```
gcov: Add wrapper to dump the gcov info

Update #4670.
```

Author: Trac Migrate 2022-07-04T06:25:22.000Z

Original author: sebastian.huber

In [changeset:"5c13a96f367564678b2759d8a89744340bb6099d/rtems" 5c13a96/rtems]:

```
build: Add RTEMS_GCOV_COVERAGE option

Update #4670.
```

Author: Trac Migrate 2022-07-05T07:19:33.000Z

Original author: sebastian.huber

In [changeset:"f048c15c7d805ca8286d8fc6c85500d02eeafd32/rtems-central" f048c15/rtems-central]:

```
spec: Update due to API changes

Update #4670.
```

Author: Trac Migrate 2022-07-20T06:38:48.000Z

Original author: sebastian.huber

In [changeset:"329a1ccf93f49a85c7664d2870c3fe6418d2752f/rtems" 329a1ccf/rtems]:

```
build: Add missing cxxflags

Update #4670.
```

Author: Trac Migrate 2022-08-04T17:29:39.000Z

Original author: sebastian.huber

In [changeset:"52b7a5840a13476fb0ba413746cd536a321c455c/rtems" 52b7a58/rtems]:

```
build: Install <rtems/score/gcov.h>

Update #4670.
```

Author: Trac Migrate 2022-09-08T06:26:43.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"c33cca3352a639143a1e5d33dba2e9fd3e738649/rtems-docs" c33cca3/rtems-docs]:

```
eng: Document new build item attributes

Close #4670.
```

Author: Trac Migrate 2022-09-08T06:27:10.000Z

Original author: sebastian.huber

In [changeset:"5ee830fab93431dab2a6abcb12d7775302eb9821/rtems-central" 5ee830f/rtems-central]:

```
spec: Add attributes to build items

Update #4670.
```

Author: Sebastian Huber 2026-03-12T06:54:35.895Z

changed the description

3.9.1.12 2300 - MIPS Tools fail to build.

Id	2300
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2015-03-12T10:40:11.000Z
Updated	2025-09-19T01:33:41.587Z
Milestone	6.1
Labels	old-indefinite, priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::4.11, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2300
Merges	0

On FreeBSD 10.1 the MIPS tools fail to build. Attached is the RSB report.

- rsb-report-mips-rtems4.11-gcc-4.9.2-newlib-b75c57950318ed657807f87a4c694e7b8d68fcae-x86_64-freebsd10.1-1.txt.gz

Author: Chris Johns 2015-03-12T10:41:30.000Z

- **Attachment** rsb-report-mips-rtems4.11-gcc-4.9.2-newlib-b75c57950318ed657807f87a4c694e7b8d68fcae-x86_64-freebsd10.1-1.txt.gz added

Author: Gedare Bloom 2015-03-12T13:51:22.000Z

xgcc: error: addsf3: No such file or directory xgcc: error: subsf3: No such file or directory gmake[4]: *** [subsf3.o] Error 1 ../../../../gcc-4.9.2/libgcc/config/t-hardfp:71: recipe for target ‘subsf3.o’ failed

Author: Gedare Bloom 2015-03-12T14:49:25.000Z

- **Milestone** changed from %”4.11” to %”4.11.1”

Tools build fine on Ubuntu 14.04. I am unable to reproduce your bug.

Author: Gedare Bloom 2015-03-12T14:50:47.000Z

Check your gcc version. My host gcc uses 4.8.2

Author: Chris Johns 2015-03-12T20:46:11.000Z

- **Milestone** changed from %”4.11.1” to %”4.11”

It fails on FreeBSD so that is a 4.11 issue. FreeBSD uses clang so that could be an issue.

Author: Trac Migrate 2015-08-30T10:46:49.000Z

This is a bug in the build system of GCC 4.9+, the sed scripts in t-hardfp use non-standard regexes that require GNU sed. See GCC bug 62097, https://gcc.gnu.org/bugzilla/show_bug.cgi?id=62097

Author: Joel Sherrill 2015-09-02T14:11:59.000Z

I tracked the change down to the particular commit by Richard Sandiford and assigned it to him. I would expect him to be reasonably responsive.

Author: Trac Migrate 2017-01-26T07:05:37.000Z

- **Milestone** changed from %"4.11" to %"4.11.2"

Author: Trac Migrate 2017-02-15T13:37:51.000Z

- **Milestone** changed from %"4.11.2" to %"Indefinite"
- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*

Author: Chris Johns 2022-09-14T06:22:21.000Z

- **Owner** set to @chrisj
- **Version** changed from ~"4.11" to ~"6"

This is caused by the MIPS build of gcc requiring a GNU sed. It is the only architecture we support that has a need for GNU sed. It seems this will not change and I believe GCC says GNU sed is required.

Check the host sed command to see if it is GNU sed and if not build a local copy. No need to add it as a dependency package a host has to install.

Author: Trac Migrate 2022-09-14T20:52:57.000Z

In [changeset:"27c61da6df55787e4848c28ee2e0ea764a1246c2/rtems-source-builder" 27c61da/rtems-source-builder]:

```
textproc/gsed: Add GNU sed build support

Updates #2300
```

Author: Trac Migrate 2022-09-14T20:52:58.000Z

- **Resolution** set to ~"fixed"

- **Status** changed from *assigned* to *closed*

In [changeset:"468fc79e8c7c8076e8b65be82ba2009e41dd6c8e/rtems-source-builder" 468fc79/rtems-source-builder]:

```
devel/gcc: Check and build GNU sed if not available on build host

Closes #2300
```

Author: Amar Takhar 2025-09-05T02:57:35.162Z

changed the description

3.9.1.13 4913 - libbsd/ipsec-tools: Problems with more than 64 open files

Id	4913
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-05-31T05:56:47.000Z
Updated	2025-09-19T01:11:15.377Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4913
Merges	0

Original author: Christian Mauderer

IPSec with racoon doesn't work if there are more than 64 open file descriptors in the system.

Author: Trac Migrate 2023-05-31T06:01:36.000Z

Original author: Christian Mauderer

In [changeset:"dfb21446417ba93240d018bebe84a51601ba2df5/rtems-libbsd" dfb2144/rtems-libbsd]:

```
ipsec-tools: Fix copying fd_set prior to select

The racoon session code copies an fd_set from one variable into another
prior to calling select. That works well for simple structures.

In libbsd we have to allocate fd_sets instead of using fixed structures
to avoid a problem with file numbers bigger than FD_SETSIZE. The simple
assignment didn't work in that case.

This patch makes sure that a memcpy is used instead.

Update #4913
```

Author: Trac Migrate 2023-05-31T06:03:37.000Z

Original author: Christian Mauderer

In [changeset:"8ed211f4a1940ba714ed1c43a302b1a2c622e102/rtems-libbsd" 8ed211f/rtems-libbsd]:

```
ipsec-tools: Fix copying fd_set prior to select

The racoon session code copies an fd_set from one variable into another
prior to calling select. That works well for simple structures.

In libbsd we have to allocate fd_sets instead of using fixed structures
to avoid a problem with file numbers bigger than FD_SETSIZE. The simple
assignment didn't work in that case.

This patch makes sure that a memcpy is used instead.

Update #4913
```

Author: Trac Migrate 2023-05-31T06:04:26.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Author: Chris Johns 2025-09-19T01:11:15.339Z

mentioned in issue #4914

3.9.1.14 4760 - RSB fatal error on missing hash checksums

Id	4760
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2022-11-15T02:25:19.000Z
Closed	2024-10-18T00:19:05.534Z
Updated	2025-09-19T01:11:14.970Z
Milestone	6.1
Labels	priority::high, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4760
Merges	0

The time has come to raise a fatal error if a hash is missing rather than a warning. This will stop missing checksums being present when releasing.

It also makes it simpler to test releases for no missing checksums.

Author: Joel Sherrill 2023-02-09T20:56:06.000Z

Hasn't this been implemented?

Author: Joel Sherrill 2023-06-22T21:14:45.000Z

- **Resolution** set to ~"duplicate"
- **Status** changed from *assigned* to *closed*

Dupe of #4857

Author: Chris Johns 2023-06-22T21:17:53.000Z

- **Resolution** ~"duplicate" deleted
- **Status** changed from *closed* to *reopened*

Please check and then confirm before closing

Author: Gedare Bloom 2024-10-06T21:03:59.286Z

changed the description

Author: Chris Johns 2024-10-18T00:19:04.933Z

Fixed. If no hash is found an error is raised.

Author: Chris Johns 2025-09-19T01:11:14.934Z

mentioned in issue #4761

3.9.1.15 4726 - RSB decode exception stops build

Id	4726
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2022-09-26T05:38:51.000Z
Updated	2025-09-19T01:11:13.881Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4726
Merges	0

Building in a Rocky VM on FB 12 with 5 I got:

```
Traceback (most recent call last):
File "/usr/lib64/python3.9/threading.py", line 973, in _bootstrap_inner
self.run()
File "/usr/lib64/python3.9/threading.py", line 910, in run
self._target(*self._args, **self._kwargs)
File "/opt/work/chris/rtems/rsb/rtems-source-builder.git/source-builder/sb/
↪execute.py", line 204, in _readthread
data = data.decode(sys.stdout.encoding)
UnicodeDecodeError: 'utf-8' codec can't decode byte 0xe2 in position 4095:␣
↪unexpected end of data
```

If the data is corrupted or broken things stop. Fix to attempt to keep going.

This issue also effect `rtems-tools`.

Author: Trac Migrate 2022-09-29T09:18:56.000Z

I have seen similar errors in special build environments. These two are from March 2022, RSB for RTEMS 6 (note the slight difference in the error message in the last line):

```
GIT BUILD HEAD: 4cdec141b1320a1e5a04b898e13e04c43ec233c3 ubuntu-nios2
DevTools: Build #124 ubuntu-nios2 (Mar 9, 2022, 12:38:59
building: nios2-rtems6-gcc-0f001dd-newlib-85f2dca-x86_64-linux-gnu-1
21:08:10  Exception in thread _stderr[]:
21:08:10  Traceback (most recent call last):
21:08:10    File "/usr/lib/python3.8/threading.py", line 932, in _
↪bootstrap_inner
21:08:10      self.run()
21:08:10    File "/usr/lib/python3.8/threading.py", line 870, in run
21:08:10      self._target(*self._args, **self._kwargs)
21:08:10    File "/home/minna/src/rtems-source-builder/source-builder/
↪sb/execute.py", line 204, in _readthread
21:08:10      data = data.decode(sys.stdout.encoding)
```

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```
21:08:10  UnicodeDecodeError: 'utf-8' codec can't decode byte 0xe2 in
↪position 4095: unexpected end of data
```

```
GIT_HEAD="6fe98f91d94bbf965bc0e78015585ff8823d17bd
BUILD_ACTUAL_RSB_OPTIONS="--with_ada --with_cxx --with_objc --jobs=12"
building: v850-rtems6-gcc-0f001dd-newlib-d88cbd0-x86_64-linux-gnu-1
18:55:36  Exception in thread _stderr[]:
18:55:36  Traceback (most recent call last):
18:55:36    File "/usr/lib/python3.8/threading.py", line 932, in _
↪bootstrap_inner
18:55:36      self.run()
18:55:36    File "/usr/lib/python3.8/threading.py", line 870, in run
18:55:36      self._target(*self._args, **self._kwargs)
18:55:36    File "/home/minna/src/rtems-source-builder/source-builder/
↪sb/execute.py", line 204, in _readthread
18:55:36      data = data.decode(sys.stdout.encoding)
18:55:36  UnicodeDecodeError: 'utf-8' codec can't decode bytes in
↪position 4094-4095: unexpected end of data
```

Setting the _locale_ to any “only-one-byte-unicode” linke `LANG=en_US.iso885915` when invoking the source-builder avoids the error.

There is most likely no error in the input data but the loop decoding it has probably a bug. Unicode code points encoded in UTF-8 can be up to 4 bytes long. The input data is read by `source-builder/sb/execute.py` in blocks of 4096 bytes. I guess it cuts through a multi-byte code point with the first byte(s) at the end of the current block and the rest of the bytes in the beginning of the next block. Note that the error always points to the end of the block `position 4095` or `position 4094-4095`. Moreover, `byte 0xe2` indicates that this is not the last byte of the code point (`0xe2` is the first byte of a 3 byte code point?).

I know in Linux there exist some GNU Unicode decoding function which keeps a state between consecutive calls. This function is intended for use in cases where not the complete text can be decoded at once. I guess there is such a function for Python too. An alternative may be to read and decode the input in one large piece.

Author: Chris Johns 2022-09-29T09:26:56.000Z

Thanks for input and feedback. I agree with what you are saying.

The input can be in hundreds of mega so that is not practical to hold it until the end. This code is a performance hot spot so what happens needs to be kept as simple as possible.

Would you be able to make a buffer of data I could test solution with?

Author: Chris Johns 2022-09-29T09:34:21.000Z

It looks like using Python `codecs` with streaming is the way to handle this.

Again thank you for the insights in how the data is handled.

Author: Trac Migrate 2022-09-29T10:00:33.000Z

I case this helps, this script

1) writes 4093 spaces (note the field with is 4094)
2) a single “A” character
3) A 4 byte unicode
4) A new line

```
env LANG=en_US.UTF-8 printf '%4094c\\U0001F0A1\\n' A >file.txt
```

You can visualize it:

```
$ wc file.txt
1    1 4099 file.txt
$ hexdump -C file.txt
00000000  20 20 20 20 20 20 20 20  20 20 20 20 20 20 20 20  |                |
*
00000ff0  20 20 20 20 20 20 20 20  20 20 20 20 20 41 f0 9f  |             A..|
00001000  82 a1 0a                                        |...|
00001003
```

Author: Chris Johns 2022-09-29T10:22:52.000Z

Thanks. I have a patch I am testing. It uses the `codecs.getincrementaldecoder()` factory function to create a decoder that hold state across decodes.

Author: Chris Johns 2022-09-29T10:23:27.000Z

- **Description** changed

```
Building in a Rocky VM on FB 12 with `5` I got:
{{{
Traceback (most recent call last):
File "/usr/lib64/python3.9/threading.py", line 973, in _bootstrap_inner
self.run()
File "/usr/lib64/python3.9/threading.py", line 910, in run
self._target(*self._args, **self._kwargs)
File "/opt/work/chris/rtems/rsb/rtems-source-builder.git/source-builder/
↪sb/execute.py", line 204, in _readthread
data = data.decode(sys.stdout.encoding)
UnicodeDecodeError: 'utf-8' codec can't decode byte 0xe2 in position␣
↪4095: unexpected end of data
}}}
If the data is corrupted or broken things stop. Fix to attempt to keep␣
```

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```
↪going.
+
+ This issue also effect `rtems-tools`.
```

Author: Chris Johns 2022-09-29T10:46:08.000Z

I am testing with this code:

```
import codecs
import sys
bad = True
if bad:
data = ''
with open('file.txt', 'rb') as f:
while True:
block = f.read(4096)
data += block.decode(sys.stdout.encoding)
if len(block) < 4096:
break
print(len(data), len(block))
else:
decoder = codecs.getincrementaldecoder(sys.stdout.encoding)()
data = ''
with open('file.txt', 'rb') as f:
while True:
block = f.read(4096)
data += decoder.decode(block)
if len(block) < 4096:
break
print(len(data), len(block))
```

and I cannot generate a failure with `bad = True`.

Author: Trac Migrate 2022-09-29T11:05:33.000Z

When I paste your code in `f.py` with `bad = True` I get the error:

```
$ python f.py
Traceback (most recent call last):
File "f.py", line 9, in <module>
data += block.decode(sys.stdout.encoding)
File "/usr/lib64/python2.7/encodings/utf_8.py", line 16, in decode
return codecs.utf_8_decode(input, errors, True)
UnicodeDecodeError: 'utf8' codec can't decode bytes in position 4094-
↪4095: unexpected end of data
```

with `bad = False` it works:

```
$ python f.py
(4096, 3)
```

I tested on an OpenSUSE 15.4, `file.txt` produced by the line from comment 4. `locale` prints

```
$ locale
LANG=en_US.UTF-8
LC_CTYPE="en_US.UTF-8"
LC_NUMERIC="en_US.UTF-8"
LC_TIME="en_US.UTF-8"
LC_COLLATE=POSIX
LC_MONETARY="en_US.UTF-8"
LC_MESSAGES="en_US.UTF-8"
LC_PAPER="en_US.UTF-8"
LC_NAME="en_US.UTF-8"
LC_ADDRESS="en_US.UTF-8"
LC_TELEPHONE="en_US.UTF-8"
LC_MEASUREMENT="en_US.UTF-8"
LC_IDENTIFICATION="en_US.UTF-8"
LC_ALL=
```

Author: Chris Johns 2022-09-29T11:12:41.000Z

Thanks for testing. I think the patch I posted to the devel list should fix this. If you could be so kind and review the patch I would appreciate it.

Author: Trac Migrate 2022-09-29T20:56:03.000Z

In [changeset:"d7fb57fa9fae3071793a57d92ff8e0f4adb8b819/rtems-source-builder" d7fb57f/rtems-source-builder]:

```
sb/execute: Use a decoder that maintains state aross blocks

Update #4726
```

Author: Chris Johns 2022-09-30T02:27:15.000Z

The change has broken a `dry-run`. There is no `stdout` and so no encoder. The incremental decoder needs an encoding.

Author: Trac Migrate 2022-09-30T21:07:04.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"e04c84191b790b7bddd179bc67337e4205b61f8e/rtems-source-builder" e04c841/rtems-source-builder]:

```
sb/execute: Fix incremental decoder with --dry-run

Closes #4726
```

Author: Chris Johns 2025-09-19T01:11:13.845Z

mentioned in issue #4734

3.9.1.16 4732 - Set top in RSB version.py

Id	4732
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2022-09-29T08:15:17.000Z
Updated	2025-09-19T01:11:13.611Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4732
Merges	0

Setting the top lets the code be used in deployment to get the version of the RSB being used. An RSB version lets a user track the exact tools being built and version numbers reported by the tools can match the packaged build, eg an rpm name and version info.

Author: Chris Johns 2022-09-29T23:06:09.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

https://git.rtems.org/rtems-source-builder/commit/?id=cfed1659a297cb0f95a03e053345962097aa02bf

Author: Chris Johns 2025-09-19T01:11:13.572Z

mentioned in issue #4733

3.9.1.17 4730 - rtems-source-builder doesn't generate tar archives for all packages any more

Id	4730
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2022-09-29T07:49:53.000Z
Updated	2025-09-19T01:11:13.362Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4730
Merges	0

Original author: Christian Mauderer

Like discussed in the following mailing list thread, the rtems-source-builder doesn't generate tar archives for all packages anymore:

https://lists.rtems.org/pipermail/devel/2022-September/073369.html

All RTEMS tools build sets 6/rtems-* work fine except for 6/rtems-microblaze. devel/qemu and devel/dtc do not generate a tar archive. If the patch

https://git.rtems.org/rtems-source-builder/commit/?id=6205068c5a429e9ee1b471f4c8a3a119bb6757b2

is reverted, the tar files are generated just like before.

Author: Trac Migrate 2022-09-29T11:40:47.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"336f15cc754d994b1988c23da7137b67c454ec31/rtems-source-builder" 336f15c/rtems-source-builder]:

```
sb/set-builder: Fix staging and tar file generation with a single␣
↪config build

Closes #4730
```

Author: Chris Johns 2022-09-30T02:25:24.000Z

Original author: Christian Mauderer

- **Milestone** set to %"6.1"
- **Version** set to ~"6"

This has broken staging for multiple packages in a top level buildset.

Author: Chris Johns 2022-09-30T20:23:01.000Z

Original author: Christian Mauderer

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

The RSB is now not installing packages or internally staging them.

Author: Trac Migrate 2022-09-30T21:07:06.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

In [changeset:"953b8391c0dc7298005347429912856d4e08517e/rtems-source-builder" 953b839/rtems-source-builder]:

```
sb/set-bulder: Fix installing builds when a single buildset

- Always stage a build

- Install if installable and outter most buildset instance

Closes #4730
```

Author: Chris Johns 2025-09-19T01:11:13.328Z

mentioned in issue #4731

3.9.1.18 4710 - RSB does not expand dir type macros correctly

Id	4710
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2022-08-28T22:34:02.000Z
Updated	2025-09-19T01:11:12.328Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4710
Merges	0

The expansion of the `dir` type macros is not done correctly. Macro replacement only appends the file part to the last element of a path list. For example:

```
%{mydir}/abc.cfg
```

with a path of:

```
%define mydir x:y:z
```

results in:

```
x:y:z/abc.cfg
```

The config load code handles this but it is wrong. The expansion of `dir` type macro variables should handle path separators (`:`) so you get:

```
x/abc.cfg:y/abc.cfg:z.abc.cfg
```

This has not been a problem in the RSB because the `_configdir` has only had two elements and the last one only ever had subdirectories.

Author: Trac Migrate 2022-09-09T01:32:29.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"18b4507fc5721fdd9d6bc1081a03bc5080b7055f/rtems-source-builder" 18b4507/rtems-source-builder]:

```
sb/config: Correctly handle multiple config paths

- Add rtems/config to the config directories searched to better
support deployment

- Correctly expand the configdir and path searchs

Close #4710
```

Author: Chris Johns 2025-09-19T01:11:12.293Z

mentioned in issue #4711

3.9.1.19 2348 - Timecounter: Add NTP support

Id	2348
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2015-05-20T06:30:47.000Z
Updated	2025-09-19T01:11:05.156Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::enhancement, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2348
Merges	0

Original author: sebastian.huber

The FreeBSD timecounter implementation supports the NTP. This support is currently disabled in RTEMS.

Author: Chris Johns 2017-08-14T00:08:25.000Z

Original author: sebastian.huber

- **Milestone** changed from %”5.0” to %”Indefinite”
- **Version** ~”4.11” deleted

Author: Chris Johns 2021-10-27T00:47:22.000Z

Original author: sebastian.huber

There needs to be an interface in the `score` to provide access to `ntp_update_second()`. The call may not be present in the kernel sources, it will mostly likely be provided by an application or an external library such as `libbsd.a`.

I suggest a file is added to the `score` that contains `ntp_update_second()` and that function checks a function pointer and if set the function is called. This brings `kern_tc.c` closer to upstream FreeBSD sources.

While on the topic of `kern_tc.c` and being as close to FB as we can, I think the RTEMS doxygen comments should be removed. We should maintain a common policy for imported sources like this.

Author: Trac Migrate 2021-10-27T05:37:47.000Z

Original author: sebastian.huber

Good timing, I recently updated kern_tc.c to the latest FreeBSD version:

https://git.rtems.org/sebh/rtems.git/log/?h=timecounter-2021

I just didn't send the patch set for review yet, since nobody commented on the new clock manager directives so far:

https://lists.rtems.org/pipermail/devel/2021-October/069697.html

The kern_tc.c is quite close to the original FreeBSD code and the Doxygen comment block on top of the file is not an issue.

In this patch set I removed the NTP code block since nobody was interested in NTP support in the last 6 years:

https://git.rtems.org/sebh/rtems.git/commit/?h=timecounter-2021&id=f85259b1edfff1d89c013c97510a9427825ea81b

This enabled a performance optimization here:

https://git.rtems.org/sebh/rtems.git/commit/?h=timecounter-2021&id=04ed8d3c8cf88b7f1e3fb7ad78a91be1fefc396c

The performance optimization is important for targets with slow 64-bit divisions (which are most RTEMS targets). If you want to add NTP support, then we have to restructure the FreeBSD code a bit. This can be integrated in FreeBSD. I can do this it just depends on how urgent it is.

In a first approach the proposed callback makes sense. If someone using lwIP needs NTP support, then we can add kern_ntptime.c to RTEMS.

Author: Chris Johns 2021-10-27T06:33:28.000Z

Original author: sebastian.huber

Replying to Sebastian Huber:

> Good timing, I recently updated kern_tc.c to the latest FreeBSD version:
>
> It does seem so. :)
>
> > https://git.rtems.org/sebh/rtems.git/log/?h=timecounter-2021
> > I just didn't send the patch set for review yet, since nobody commented on the new clock manager directives so far:
> >
> > I only suspected something was in the works because of the posts to FreeBSD hackers. It would be good to resolve the PTP support.
> >
> > > https://lists.rtems.org/pipermail/devel/2021-October/069697.html
> > >
> > > I saw this but I did not look closely. I did not know it was a request for a new feature. I will add it to my list so sorry about that.
> > >
> > > > The kern_tc.c is quite close to the original FreeBSD code and the Doxygen comment block on top of the file is not an issue.
> > > >
> > > > Why the special exception here?
> > > >
> > > > My focus for the leadership group, including you, is to set policies for this sort of thing and then hav-

ing everyone accept and adhere to them. It is simpler and more democratic to do this. My concern is having a rule that creates an exceptions because it makes things complicated. I know this is a single file but there are other places where more code comes across and this is where things become confusing.

> In this patch set I removed the NTP code block since nobody was interested in NTP support in the last 6 years: https://git.rtems.org/sebh/rtems.git/commit/?h=timecounter-2021&id=f85259b1edfff1d89c013c97510a9427825ea81b
>
> It is needed. I have openly discuss this topic ...
>
> https://lists.rtems.org/pipermail/devel/2021-March/065608.html
>
> The PTP changes for RTEMS have only just been posted upstream ..
>
> https://github.com/ptpd/ptpd/pull/85
>
> Gabriel has done a fantastic job getting my hacks into a suitable state they would be pushed upstream.
>
> > This enabled a performance optimization here: https://git.rtems.org/sebh/rtems.git/commit/?h=timecounter-2021&id=04ed8d3c8cf88b7f1e3fb7ad78a91be1fefc396c The performance optimization is important for targets with slow 64-bit divisions (which are most RTEMS targets). If you want to add NTP support, then we have to restructure the FreeBSD code a bit. This can be integrated in FreeBSD. I can do this it just depends on how urgent it is.
> >
> > I have nothing to offer here and will happily be guided by you. I am sorry I have no time to spend looking at the detail.
> >
> > > In a first approach the proposed callback makes sense. If someone using lwIP needs NTP support, then we can add kern_ntptime.c to RTEMS.
> > >
> > > The support being added is LibBSD so I am not sure where `kern_ntptime.c` is being added. Maybe Gabriel can be comment more on this.

Author: Trac Migrate 2021-10-27T12:03:51.000Z

Original author: sebastian.huber

`kern_ntptime.c` is ported from freebsd-org to freebsd in rtems-libbsd. The last commits of this branch https://github.com/GabrielDai/rtems-libbsd/tree/ptpd show the changes.

Regarding adding the function `ntp_update_second()` in `score`, do you know where the function pointer should be updated (to point to `ntp_update_second()` in `kern_ntptime.c`)?

Author: Trac Migrate 2021-10-28T05:25:49.000Z

Original author: sebastian.huber

Replying to Chris Johns:

> Replying to Sebastian Huber:
>
> > The kern_tc.c is quite close to the original FreeBSD code and the Doxygen comment block on top of the file is not an issue.
>
> Why the special exception here? My focus for the leadership group, including you, is to set policies for this sort of thing and then having everyone accept and adhere to them. It is simpler and more democratic to do this. My concern is having a rule that creates an exceptions because it makes things complicated. I know this is a single file but there are other places where more code comes across and this is where things become confusing.
>
> There is not just one rule involved here. The timekeeping is an important service of an operating system. It should be visible in the internal documentation (Doxygen). The file history shows that there is no issue with keeping it in synchronization with FreeBSD.

Author: Trac Migrate 2021-10-28T05:35:06.000Z

Original author: sebastian.huber

Replying to GabrielMoyano:

> `kern_ntptime.c` is ported from freebsd-org to freebsd in rtems-libbsd. The last commits of this branch https://github.com/GabrielDai/rtems-libbsd/tree/ptpd show the changes. Regarding adding the function `ntp_update_second()` in `score`, do you know where the function pointer should be updated (to point to `ntp_update_second()` in `kern_ntptime.c`)?
>
> The callback for `ntp_update_second()` is currently not implemented. I would like to integrate my patch set which updates `kern_tc.c` to the latest FreeBSD version first. I would like to also try to rearrange the code a bit in the FreeBSD upstream. For libbsd my approach would be to add an internal API to `#include <rtems/score/timecounter.h>` which can be used to set the NTP callback in `kern_ntptime.c`.

Author: Chris Johns 2021-10-28T07:47:23.000Z

Original author: sebastian.huber

Replying to Sebastian Huber:

> Replying to Chris Johns:
>
> > Replying to Sebastian Huber:
> >
> > > The kern_tc.c is quite close to the original FreeBSD code and the Doxygen comment block on top of the file is not an issue.
> >
> > Why the special exception here? My focus for the leadership group, including you, is to set policies for this sort of thing and then having everyone accept and adhere to them. It is simpler and more democratic to do this. My concern is having a rule that creates an exceptions because it makes things complicated. I know this is a single file but there are other places where more code comes across and this is where things become confusing.
>
> There is not just one rule involved here. The timekeeping is an important service of an operating system. It should be visible in the internal documentation (Doxygen). The file history shows that there is no issue with keeping it in synchronization with FreeBSD.
>
> This is not about the history. The history of this file reflects the quality of the person currently doing the work and it is a very high standard. Expecting that standard everywhere is asking a lot. I think we need to document how we integrate external code and for that I was considering the following as the basis:
>
> https://git.rtems.org/rtems-libbsd/tree/CONTRIBUTING.md#n248
>
> I would be interested to understand how this `score` file or files like it could be handled by a rule or rules? A rule in the ticket may not be clean and suitable documentation however it provides me with a means to show what we consider as OK if you could provide this.

Author: Trac Migrate 2021-10-28T09:17:20.000Z

Original author: sebastian.huber

Replying to Chris Johns:

> Replying to Sebastian Huber:
>
> > Replying to Chris Johns:
> >
> > > Replying to Sebastian Huber:
> > >
> > > > The kern_tc.c is quite close to the original FreeBSD code and the Doxygen comment block on top of the file is not an issue.

> > > Why the special exception here? My focus for the leadership group, including you, is to set policies for this sort of thing and then having everyone accept and adhere to them. It is simpler and more democratic to do this. My concern is having a rule that creates an exceptions because it makes things complicated. I know this is a single file but there are other places where more code comes across and this is where things become confusing.
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>
> The libbsd contributing rules make sense for libbsd which deals with a couple of hundred files and a semi-automatic synchronization support.
>
> External files placed in the score should integrate into the score documentation and be maintainable. Here we need a bit more flexibility.

Author: Trac Migrate 2021-10-28T09:33:48.000Z

Original author: sebastian.huber

I updated the timecounter update branch to include support for an NTP update second handler:

https://git.rtems.org/sebh/rtems.git/log/?h=timecounter-2021

https://git.rtems.org/sebh/rtems.git/commit/?h=timecounter-2021&id=817437b6dda00764f368b2da9eeab67ec284a3bd

I wait for some feedback on the FreeBSD mailing list before I send the patch set for review.

Author: Trac Migrate 2021-10-28T11:29:14.000Z

Original author: sebastian.huber

Replying to Sebastian Huber:

> I updated the timecounter update branch to include support for an NTP update second handler: https://git.rtems.org/sebh/rtems.git/log/?h=timecounter-2021 https://git.rtems.org/sebh/rtems.git/commit/?h=timecounter-2021&id=817437b6dda00764f368b2da9eeab67ec284a3bd
>
> This looks nice, thx. Now, I guess that one option is to call _Timecounter_Set_NTP_update_second() just before starting ptpd
>
> > I wait for some feedback on the FreeBSD mailing list before I send the patch set for review.
> >
> > ok

Author: Chris Johns 2021-10-28T22:57:18.000Z

Original author: sebastian.huber

Replying to Sebastian Huber:

> Replying to Chris Johns:
>
> > Replying to Sebastian Huber:
> >
> > > Replying to Chris Johns:
> > >
> > > > Replying to Sebastian Huber:
> > > >
> > > > > The kern_tc.c is quite close to the original FreeBSD code and the Doxygen comment block on top of the file is not an issue.
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> > >
> > > There is not just one rule involved here. The timekeeping is an important service of an operating system. It should be visible in the internal documentation (Doxygen). The file history shows that there is no issue with keeping it in synchronization with FreeBSD.
> >
> > This is not about the history. The history of this file reflects the quality of the person currently doing the work and it is a very high standard. Expecting that standard everywhere

> is asking a lot. I think we need to document how we integrate external code and for that I was considering the following as the basis: https://git.rtems.org/rtems-libbsd/tree/CONTRIBUTING.md#n248 I would be interested to understand how this score file or files like it could be handled by a rule or rules? A rule in the ticket may not be clean and suitable documentation however it provides me with a means to show what we consider as OK if you could provide this.

The libbsd contributing rules make sense for libbsd which deals with a couple of hundred files and a semi-automatic synchronization support. External files placed in the score should integrate into the score documentation and be maintainable. Here we need a bit more flexibility.

This makes sense. Should the documentation should be limited to a single block at the start of the file and else where in the file the LibBSD rules apply?

Author: Trac Migrate 2021-11-15T08:16:56.000Z

Original author: sebastian.huber

In [changeset:"ffb8833dd28418cb7e427f0a0469bfc49e18ecf2/rtems" ffb8833d/rtems]:

```
score: Add _Timecounter_Set_NTP_update_second()

Allow the installation of an NTP update second handler which may be used by an
NTP service.

Update #2348.
```

Author: Trac Migrate 2021-11-15T08:19:27.000Z

Original author: sebastian.huber

Replying to GabrielMoyano:

> Replying to Sebastian Huber:
>
> > I updated the timecounter update branch to include support for an NTP update second handler: https://git.rtems.org/sebh/rtems.git/log/?h=timecounter-2021 https://git.rtems.org/sebh/rtems.git/commit/?h=timecounter-2021&id=817437b6dda00764f368b2da9eeab67ec284a3bd
>
> This looks nice, thx. Now, I guess that one option is to call _Timecounter_Set_NTP_update_second() just before starting ptpd
>
> > I wait for some feedback on the FreeBSD mailing list before I send the patch set for review.

> ok
>
> I checked in the patch set. The kern_tc.c is now fully synchronized with the latest FreeBSD version. You can now install an NTP update second handler via `_Timecounter_Set_NTP_update_second()` from `#include <rtems/score/timecounter.h>`.

Author: Trac Migrate 2021-11-15T10:56:37.000Z

Original author: sebastian.huber

> I checked in the patch set. The kern_tc.c is now fully synchronized with the latest FreeBSD version. You can now install an NTP update second handler via `_Timecounter_Set_NTP_update_second()` from `#include <rtems/score/timecounter.h>`.
>
> Thank you very much Sebastian. Are the changes portable to the branch 5? Our development is based on that branch and it will be very nice to have them there too

Author: Trac Migrate 2021-11-15T11:25:13.000Z

Original author: sebastian.huber

- **Milestone** changed from %"Indefinite" to %"6.1"
- **Version** set to ~"4.11"

Author: Trac Migrate 2021-11-15T11:27:10.000Z

Original author: sebastian.huber

Replying to GabrielMoyano:

> > I checked in the patch set. The kern_tc.c is now fully synchronized with the latest FreeBSD version. You can now install an NTP update second handler via `_Timecounter_Set_NTP_update_second()` from `#include <rtems/score/timecounter.h>`.
>
> Thank you very much Sebastian. Are the changes portable to the branch 5? Our development is based on that branch and it will be very nice to have them there too
>
> I think the patch set is back portable to RTEMS 5 without breaking the ABI/API. Just clone this ticket and set the mile stone to 5.2. Then try to back port all the changes or a subset and send it for review. I have no time to work on it.

Author: Trac Migrate 2021-11-15T11:40:42.000Z

Original author: sebastian.huber

> I think the patch set is back portable to RTEMS 5 without breaking the ABI/API. Just clone this ticket and set the mile stone to 5.2. Then try to back port all the changes or a subset and send it for review. I have no time to work on it.
>
> Thx. I'll do so. Here the ticket https://devel.rtems.org/ticket/4549#ticket

Author: Joel Sherrill 2021-12-17T17:02:43.000Z

Original author: sebastian.huber

Is this ticket ready to close?

Author: Trac Migrate 2022-02-21T13:15:10.000Z

Original author: sebastian.huber

In [changeset:"91057b3bdfa5c339a4435d0826e1581acd0ce197/rtems" 91057b3/rtems]:

```
kern_ntptime.c: Import from FreeBSD

The file was imported from this repository:

https://github.com/freebsd/freebsd.git

This commit was used:

commit 3ec0dc367bff27c345ad83240625b2057af391b9
Author: Sebastian Huber <sebastian.huber@embedded-brains.de>
Date:   Mon Feb 7 14:16:16 2022 -0700

kern_ntptime.c: Remove ntp_init()

The ntp_init() function did set a couple of global objects to zero. These
objects are in the .bss section and already initialized to zero during kernel
or module loading.

Update #2348.
```

Author: Trac Migrate 2022-02-21T13:15:14.000Z

Original author: sebastian.huber

In [changeset:"8f1e8f8f26525a8819c8982a2d2c4e339e9921a0/rtems" 8f1e8f8f/rtems]:

```
kern_ntptime.c: Port to RTEMS

Remove previous adjtime() implementation.

Update #2348.
```

Author: Trac Migrate 2022-06-07T06:54:14.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Author: Amar Takhar 2024-04-25T20:44:46.247Z

changed the description

Author: Amar Takhar 2025-09-05T02:57:38.296Z

mentioned in issue #2870

Author: Chris Johns 2025-09-19T01:11:05.117Z

mentioned in issue #4549

3.9.1.20 4426 - clock_nanosleep() may use wrong clock for relative times

Id	4426
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-18T11:09:45.000Z
Updated	2025-09-19T01:11:00.456Z
Milestone	6.1
Labels	api::posix, priority::normal, qualification, resolution::fixed, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4426
Merges	0

Original author: sebastian.huber

For relative times, the clock identifier is not used to select the clock and instead always the CLOCK_MONOTONIC is used. A side-effect is that sleep() and nanosleep() use the wrong clock (CLOCK_MONOTONIC instead of CLOCK_REALTIME).

Author: Trac Migrate 2021-05-18T11:55:05.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
- For relative times, the clock identifier is not used to select the␣
↪clock and instead always the CLOCK_REALTIME is used.
+ For relative times, the clock identifier is not used to select the␣
↪clock and instead always the CLOCK_MONOTONIC is used. A side-effect␣
↪is that sleep() and nanosleep() use the wrong clock (CLOCK_MONOTONIC␣
↪instead of CLOCK_REALTIME).
```

Author: Trac Migrate 2021-05-18T18:32:39.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"24c6293294916e0224278854f73434205aa5d0c8/rtems" 24c62932/rtems]:

```
posix: Fix use of clock for relative times

Close #4426.
```

Author: Amar Takhar 2024-04-25T20:49:01.283Z

changed the description

Author: Chris Johns 2025-09-19T01:11:00.419Z

mentioned in issue #4429

3.9.1.21 3331 - i386 targets don't compile with –enable-smp

Id	3331
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-03-10T12:32:28.000Z
Updated	2025-09-19T01:08:36.046Z
Milestone	6.1
Labels	arch:i386, priority::normal, resolution::fixed, smp, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3331
Merges	0

Original author: amaan

Build error:

```
/home/amaan/repos/rtems/kernel/cpukit/include/rtems/score/percpu.h:384:23: error:␣
↪variable or field 'Interrupt_frame' declared void
CPU_Interrupt_frame Interrupt_frame;
^~~~~~~~~~~~~~~
/home/amaan/repos/rtems/kernel/cpukit/include/rtems/score/percpu.h:520:8: error:␣
↪size of array 'unused_space_for_cache_line_alignment' is too large
char unused_space_for_cache_line_alignment
^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Makefile:764: recipe for target 'ckinit.o' failed
```

Besides these compile and link-time issues, the i386 does not support SMP fully, but as a first step, we should at least have it build.

Possibly related to #2623.

Author: Trac Migrate 2018-03-16T16:02:17.000Z

Original author: amaan

- **Owner** set to Amaan Cheval <amaan.cheval@gmail.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"efa0039ee94416e98636ae8228c04b1fafb42c90/rtems" efa0039e/rtems]:

```
i386/smp: Export _CPU_SMP_Prepare_start_multitasking as a function

When it's a macro, a function declaration causes a compiler error due␣
↪to the
macro being expanded.

```

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```
Partial log showing error:
https://gist.github.com/AmaanC/ab3521141479aa6f61ea25f5d74ebb4d

Closes #3331
```

Author: Trac Migrate 2018-03-17T06:29:50.000Z

Original author: amaan

Closing this issue involved 3 commits:

https://devel.rtems.org/changeset/e9fb313/rtems https://devel.rtems.org/changeset/51614c0/rtems https://devel.rtems.org/changeset/efa0039/rtems

The git-hook only posted the last to this ticket - perhaps because the commit message said “updates” instead of “update”?

Author: Amar Takhar 2024-04-25T20:46:07.267Z

changed the description

3.9.1.22 3322 - powerPC bsp not booting with memory larger than 256Mb

Id	3322
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-03-06T17:59:04.000Z
Updated	2025-09-19T01:08:35.925Z
Milestone	6.1
Labels	arch:powerpc, priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3322
Merges	0

Original author: e.tremblay

Whenever memory available to the bsp is greater than 256Mb the bootloader remain stuck after decompressing the kernel.

My understanding of the problem is that the bootloader only give access to the 1st 256Mb of RAM but when more memory is used the kernel and other components are stored in the top of the RAM beyond the first 256Mb.

The provided patch gives top of the RAM access to the system so it can correctly boot.

I am using: * source from rtems release 4.11.3 * Qemu v2.5.0 * Host system is Ubuntu Linux 16.04.1 in a VM (x86 64bits)

The problem is easily reproducible with Qemu with the following command but could surely affect hardware too:

qemu-system-ppc -M prep -kernel ./hello.ralf -bios /home/qemu_fakerom/qemu_fakerom.bin -cpu 750cxe -nographic -no-reboot -m 384

Console output:

Model: Serial: Processor/Bus frequencies (Hz): 300000000/100000000 Time Base Divisor: 1000 Memory Size: 18000000 Residual: 102afd4 (length 27148)

PCI: Probing PCI hardware

RTEMS 4.x/PPC load: Uncompressing the kernel... Kernel at 0x00000000, size=0x495b0 Initrd at 0x00000000, size=0x0 Residual data at 0x0004a000 Command line at 0x00051000 done Now booting... <<<<< execution stuck here

- qemu_powerpc_largememory.diff

Author: Joel Sherrill 2018-03-16T17:43:19.000Z

Original author: e.tremblay

I wanted to note two things:

- Chris is supposed to be given access to real hardware to test this on.
- Sebastian committed a change to switch qemuppc to use the shared linker script. This might impact your patch. Please update the patch if needed per the master.

Author: Trac Migrate 2018-03-17T10:05:10.000Z

Original author: e.tremblay

We have two Qemu PowerPC BSPs qemuprep and qemuppc. I touched qemuppc. This ticket is for qemuprep?

Author: Joel Sherrill 2018-03-17T14:30:28.000Z

Original author: e.tremblay

The patch touches code used by motorola_shared and beatnik. The patch has only been tested on qemu. We need it tested on hardware.

Author: Trac Migrate 2018-03-19T15:09:27.000Z

Original author: e.tremblay

- **Attachment** qemu_powerpc_largememory.diff added

Corrected comments and removed unnecessary label in assembly file.

Author: Trac Migrate 2018-03-21T05:59:24.000Z

Original author: e.tremblay

Ticker runs with beatnik BSP on MVME6100:

```
MVME6100> tftpGet -c141.14.128.53 -s141.14.133.59 -m255.255.240.0 -
↪a04000000 -fticker.ralf
Network Loading from: /dev/enet0
Loading File: ticker.ralf
Load Address: 04000000
Download Buffer Size = User Defined

Client IP Address      = 141.14.128.53
Server IP Address      = 141.14.133.59
Gateway IP Address     = 141.14.128.253
Subnet IP Address Mask = 255.255.240.0

Network File Load in Progress...

Bytes Received =&215224, Bytes Loaded =&215224
Bytes/Second   =&215224, Elapsed Time =1 Second(s)
MVME6100> go -a04000000
----------------------------------------
config addr is 0xf1000cf8
config data is 0xf1000cfc
Welcome to RTEMS rtems-5.0.0 (PowerPC/Generic (classic FPU)/beatnik)
CPU: MPC7457
Board Type: MVME6100-0163 (S/N E173D29)
Bus Clock Freq:   133333333 Hz
CPU Clock Freq:  1266666654 Hz
Memory:           536870912 bytes
----------------------------------------
Now BSP_mem_size = 0x1fe00000
Configuration.work_space_size = 16110
Page table setup finished; will activate it NOW...
Going to start PCI buses scanning and initialization
Number of PCI buses found is : 3
MSR 0x2003032
Exit from bspstart
unable to find the universe in pci config space
Tundra Tsi148 PCI-VME bridge detected at 0x81100000, IRQ 84
Tsi148 Outbound Ports:
Port  VME-Addr   Size       PCI-Adrs   Mode:
0:    0x20000000 0x0e000000 0x90000000 A32, SUP, D32, SCT
1:    0x00000000 0x00ff0000 0x9f000000 A24, SUP, D32, SCT
2:    0x00000000 0x00010000 0x9fff0000 A16, SUP, D32, SCT
7:    0x00000000 0x01000000 0x9e000000 CSR, SUP, D32, SCT
Tsi148 Inbound Ports:
Port  VME-Addr   Size       PCI-Adrs   Mode:
0:    0x90000000 0x1fe00000 0x00000000 A32, PGM, DAT, SUP, USR, MBLT,␣
↪BLT
vmeTsi148 IRQ manager: looking for registers on VME...
Trying to find CSR on VME...
vmeTsi148 - IRQ manager using VME CSR to flush FIFO
```

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```
48
49
50 *** BEGIN OF TEST CLOCK TICK ***
51 *** TEST VERSION: 5.0.0.5cf06565149c8cab4c9437e44f1acfda93bdaa55
52 *** TEST STATE: EXPECTED-PASS
53 *** TEST BUILD: RTEMS_NETWORKING RTEMS_POSIX_API
54 *** TEST TOOLS: 7.3.0 20180125 (RTEMS 5, RSB␣
   ↪4b3e0f8e3d6998b84a2503dd2e11578989b1672b, Newlib 3.0.0)
55 TA1  - rtems_clock_get_tod - 09:00:00   12/31/1988
56 TA2  - rtems_clock_get_tod - 09:00:00   12/31/1988
57 TA3  - rtems_clock_get_tod - 09:00:00   12/31/1988
58 TA1  - rtems_clock_get_tod - 09:00:05   12/31/1988
```

Author: Trac Migrate 2018-03-21T05:59:37.000Z

Original author: e.tremblay

- **Owner** set to Éric Tremblay <e.tremblay@axis-canada.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"5cf06565149c8cab4c9437e44f1acfda93bdaa55/rtems" 5cf0656/rtems]:

```
1 bsps/powerpc: Support more than 256MiB of RAM
2
3 Close #3322.
```

Author: Amar Takhar 2024-04-25T20:46:04.026Z

changed the description

3.9.1.23 4372 - STM32H7: SDMMC driver

Id	4372
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-01T07:03:16.000Z
Updated	2025-09-19T01:06:58.810Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4372
Merges	0

Original author: Christian Mauderer

The STM32H7 BSP is missing a SDMMC driver.

Author: Trac Migrate 2021-04-01T07:08:43.000Z

Original author: Christian Mauderer

In [changeset:"aa9e3c621129c612ecfe90e34636aa0765e9a3ee/rtems" aa9e3c62/rtems]:

```
stm32h7: Add SDMMC modules to clock

Update #4372
```

Author: Trac Migrate 2021-04-01T07:08:47.000Z

Original author: Christian Mauderer

In [changeset:"8fd29cfbc5c911c46f065e36389c3d246aa97854/rtems" 8fd29cfb/rtems]:

```
stm32h7: Add init for sdmmc pins

Update #4372
```

Author: Trac Migrate 2021-04-01T07:11:00.000Z

Original author: Christian Mauderer

In [changeset:"20893c5cfd31af74752b03820d10f941908e1cb0/rtems-docs" 20893c5/rtems-docs]:

```
user/bsps: Add STM32H7 SDMMC driver

Update #4372
```

Author: Trac Migrate 2021-04-01T07:19:03.000Z

Original author: Christian Mauderer

rtems-libbsd master:

[changeset:"6064dbfcc4a8ba1e9b2cbe9edcb02e27bbca1e2c/rtems-libbsd"]: testsuite/media01: Enable md5 command [changeset:"d7bdff489d3a33d195ec9cd3d6be1370d319dcb4/rtems-libbsd"]: testsuite/media01: Add pattern test [changeset:"1bb4a56e4d7804bed0e44cd2204a1fce22a4011c/rtems-libbsd"]: STM32H7: Add SDMMC driver

rtems-libbsd 6-freebsd-12:

[changeset:”43ae62ed7fd1334a6317142633f50a660f272bb1/rtems-libbsd”]: testsuite/media01: Enable md5 command [changeset:”2caeaafb9287c1aaef471fc513e97faaaa522b31/rtems-libbsd”]: testsuite/media01: Add pattern test [changeset:”e0fcb31f0162ec61126e5dfe11eaa14a36d0a5c3/rtems-libbsd”]: STM32H7: Add SDMMC driver

Author: Trac Migrate 2021-04-01T07:19:27.000Z

Original author: Christian Mauderer

- **Resolution** set to ~”fixed”
- **Status** changed from *assigned* to *closed*

Author: Trac Migrate 2023-07-31T16:11:59.000Z

Original author: Christian Mauderer

In [changeset:”1e99148578f8a2f79ee087ce93a656a37abd3104/rtems” 1e991485/rtems]:

```
bsps/stm32h7: Add init for sdmmc pins

Re-apply based on:

commit 8fd29cfbc5c911c46f065e36389c3d246aa97854
Author: Christian Mauderer <christian.mauderer@embedded-brains.de>
Date:   Tue Mar 2 16:14:41 2021 +0100

stm32h7: Add init for sdmmc pins

Update #4372
```

Author: Chris Johns 2025-09-19T01:06:58.868Z

changed the description

3.9.1.24 4367 - gdb-9-1 fails to build for powerpc (cloned)

Id	4367
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-30T22:01:30.000Z
Updated	2025-09-19T01:06:58.554Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::gdb, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4367
Merges	0

Original author: thelunatic

Cloned from #4366:

The RSB fails to build powerpc-rtems5-gdb-9.1 due to link errors.

> **Author:** Joel Sherrill 2021-10-06T14:17:44.000Z
>
> Original author: thelunatic
>
> - **Resolution** set to ~"fixed"
> - **Status** changed from *new* to *closed*
>
> The patch on #4366 appears to be applied to the RSB in rtems-gdb-9.1-1.cfg on the 5 branch. Closing. Reopen and clarify if this is not correct.
>
> **Author:** Chris Johns 2025-09-19T01:06:58.623Z
>
> changed the description

3.9.1.25 4366 - gdb-9-1 fails to build for powerpc

Id	4366
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-30T21:35:20.000Z
Updated	2025-09-19T01:06:58.348Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::gdb, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4366
Merges	0

Original author: thelunatic

The RSB fails to build powerpc-rtems5-gdb-9.1 due to link errors.

- gdb-9-1-linker-error-fix.diff

Author: Trac Migrate 2021-03-30T23:44:46.000Z

Original author: thelunatic

- **Attachment** gdb-9-1-linker-error-fix.diff added

GDB commit: ad8464f799a4c96c7ab8bdfec3f95846cf54f9b0

Author: Trac Migrate 2021-03-31T04:50:07.000Z

Original author: thelunatic

- **Owner** set to Vijay Kumar Banerjee <vijay@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"1b3f09251ae53a93ea647e4d8ebeffeead91a880/rtems-source-builder" 1b3f092/rtems-source-builder]:

```
gdb-9-1: Add patch to fix linker error with gcc10

Close #4366
```

Author: Chris Johns 2025-09-19T01:06:58.417Z

changed the description

Author: Chris Johns 2025-09-19T01:06:58.722Z

mentioned in issue #4367

3.9.1.26 4361 - libbsd: racoon and ping6 don't honor file descriptor maximum

Id	4361
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-26T12:51:30.000Z
Updated	2025-09-19T01:06:58.024Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4361
Merges	0

Original author: Christian Mauderer

Cloned from #4360:

---

racoon and ping6 use fd_sets. If RTEMS is build with a big number of file descriptors, the default fd_set size is too small and memory near the fd_set can be overwritten. Other applications in libbsd use allocated fd_sets to avoid that problem.

Author: Trac Migrate 2021-05-11T06:46:53.000Z

Original author: Christian Mauderer

Fixed with

https://git.rtems.org/rtems-libbsd/commit/?h=5-freebsd-12&id=c385e86b3fbbbf6ce52b546980ce8d5c5bbfcf06 https://git.rtems.org/rtems-libbsd/commit/?h=5-freebsd-12&id=35bdef1fa0c03d26d5a9f767b5857d88adef7ae1

Author: Trac Migrate 2021-05-11T06:47:04.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Author: Chris Johns 2025-09-19T01:06:58.108Z

changed the description

3.9.1.27 4360 - libbsd: racoon and ping6 don't honor file descriptor maximum

Id	4360
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-26T12:50:50.000Z
Updated	2025-09-19T01:06:57.821Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4360
Merges	0

Original author: Christian Mauderer

racoon and ping6 use fd_sets. If RTEMS is build with a big number of file descriptors, the default fd_set size is too small and memory near the fd_set can be overwritten. Other applications in libbsd use allocated fd_sets to avoid that problem.

Author: Trac Migrate 2021-03-26T13:12:16.000Z

Original author: Christian Mauderer

Fixed with:

https://git.rtems.org/rtems-libbsd/commit/?id=a7273c070463f53611153595b18b341d3c960a01
https://git.rtems.org/rtems-libbsd/commit/?id=7afe0ba8f36c0aed21bdc01d1aee4598f100baac

https://git.rtems.org/rtems-libbsd/commit/?h=6-freebsd-12&id=e7fb073f3a1040847daab3ef917aeade755eb30b https://git.rtems.org/rtems-libbsd/commit/?h=6-freebsd-12&id=33e3cf8eaff0081e74593f8a91edc8e37f732430

Author: Trac Migrate 2021-03-26T13:12:31.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Author: Chris Johns 2025-09-19T01:06:57.896Z

changed the description

Author: Chris Johns 2025-09-19T01:06:58.232Z

mentioned in issue #4361

3.9.1.28 4350 - Infinite loop in rtems-fdt.c

Id	4350
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-21T06:59:36.000Z
Updated	2025-09-19T01:06:57.592Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4350
Merges	1

Original author: niteesh

The function rtems_fdt_load in file rtems-fdt.c contains an infinite loop. https://git.rtems.org/rtems/tree/cpukit/libmisc/rtems-fdt/rtems-fdt.c#n583 The loop termination condition, size is not being decremented in the above line. Instead, the amount of bytes read is being decremented.

This bug is present in RTEMS 6 as well as 5

I have attached a patch below that fixes this.

- 0001-rtems-fdt-rtems-fdt.c-Fix-bug-in-loop-termination.patch

Author: Trac Migrate	2021-03-21T07:01:00.000Z

Original author: niteesh

- **Attachment** 0001-rtems-fdt-rtems-fdt.c-Fix-bug-in-loop-termination.patch added

Author: Trac Migrate	2021-03-21T07:02:20.000Z

Original author: niteesh

- **Owner** set to niteesh
- **Status** changed from *new* to *accepted*

Author: Trac Migrate	2021-03-21T11:40:25.000Z

Original author: niteesh

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"08f807e64a2bf34a716a27cdfde022664979b46a/rtems" 08f807e/rtems]:

```
rtems-fdt/rtems-fdt.c: Fix bug in loop termination

The while loop, loops infinitely in case of raw FDT data.
The loop condition (size) is not modified during iterations.

Fixes #4350
```

Author: Chris Johns 2025-09-19T01:06:57.676Z

changed the description

3.9.1.29 4343 - sp14 test failing on ARM and AArch64

Id	4343
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Created	2021-03-15T21:34:01.000Z
Updated	2025-09-19T01:06:56.970Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4343
Merges	0

Since 8778a0e1188ee00932ce47d410de54c4e053f3bf got merged, sp14 fails on at least ARM and AArch64 due to a new conditional added to rtems_signal_catch that returns RTEMS_NOT_IMPLEMENTED.

Author: Kinsey Moore 2021-03-15T21:43:28.000Z

Specifically, this was tested on the xilinx_zynq_a9_qemu BSP.

Author: Kinsey Moore 2021-03-16T02:38:25.000Z

The subsequent commit a7e180b95dcc3c2f0bab82ec8eaa211cb0a4956a seems to have broken sp14 on AArch64 further, but did not affect ARM. I need to look closer to see why.

Author: Trac Migrate 2021-03-16T06:44:38.000Z

Somehow I didn't notice this during my test runs using the arm/realview_pbx_a9_qemu BSP which I normally use for development.

The sp14 test case is broken on CPU ports with:

```
#define CPU_ENABLE_ROBUST_THREAD_DISPATCH TRUE
```

I will fix this.

Author: Trac Migrate 2021-03-16T13:01:39.000Z

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"5d752e7b48e47a260c33e33d7717c7421c1eb1f7/rtems" 5d752e7b/rtems]:

```
sp14: Fix for SMP or robust thread dispatch

Close #4343.
```

Author: Chris Johns 2025-09-19T01:06:57.031Z

changed the description

3.9.1.30 4337 - RSB build error with gmp-6.1.0.cfg (cloned)

Id	4337
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-11T16:51:58.000Z
Updated	2025-09-19T01:06:56.639Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4337
Merges	0

Original author: thelunatic

Cloned from #4335:

The RSB is crashing with the following error while building the toolchains:

```
reporting: devel/gmp-6.1.0.cfg -> gmp-6.1.0-x86_64-linux-gnu-1.xml
making dir: /home/rcardene/tmp/MVME2700/rsb/rtems/build/tmp/gmp-6.1.0-x86_64-
↪linux-gnu-1-3201/home/rcardene/tmp/MVME2700/rtems/6/share/rtems/rsb
config: tools/rtems-gdb-10.cfg
error: shell macro failed: /home/rcardene/tmp/MVME2700/rsb/source-builder/sb/
```

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```
↪rtems-build-dep -c gcc  -l Usage: /usr/bin/python2-config [--prefix|--exec-
↪prefix|--includes|--libs|--cflags|--ldflags|--extension-suffix|--help]: 127: /
↪bin/sh: --exec-prefix: command not found
/bin/sh: --includes: command not found
/bin/sh: --libs: command not found
/bin/sh: --cflags: command not found
/bin/sh: --ldflags: command not found
/bin/sh: --extension-suffix: command not found
/bin/sh: --help]: command not found
Build Set: Time 0:00:49.185317
```

Author: Trac Migrate 2021-03-11T16:54:41.000Z

Original author: thelunatic

- **Owner** set to Ricardo Cárdenes <rcardenes@gemini.edu>
- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"e5aa419d3581b034b4bf7c2f93982500b6efa34e/rtems-source-builder" e5aa419d/rtems-source-builder]:

```
sb/config.py: Fix operator reconstruction

Close #4337
```

Author: Chris Johns 2025-09-19T01:06:56.740Z

changed the description

3.9.1.31 4335 - RSB build error with gmp-6.1.0.cfg

Id	4335
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-11T02:42:37.000Z
Updated	2025-09-19T01:06:56.369Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4335
Merges	0

Original author: thelunatic

The RSB is crashing with the following error while building the toolchains:

```
reporting: devel/gmp-6.1.0.cfg -> gmp-6.1.0-x86_64-linux-gnu-1.xml
making dir: /home/rcardene/tmp/MVME2700/rsb/rtems/build/tmp/gmp-6.1.0-x86_64-
↪linux-gnu-1-3201/home/rcardene/tmp/MVME2700/rtems/6/share/rtems/rsb
config: tools/rtems-gdb-10.cfg
error: shell macro failed: /home/rcardene/tmp/MVME2700/rsb/source-builder/sb/
↪rtems-build-dep -c gcc  -l Usage: /usr/bin/python2-config [--prefix|--exec-
↪prefix|--includes|--libs|--cflags|--ldflags|--extension-suffix|--help]: 127: /
↪bin/sh: --exec-prefix: command not found
/bin/sh: --includes: command not found
/bin/sh: --libs: command not found
/bin/sh: --cflags: command not found
/bin/sh: --ldflags: command not found
/bin/sh: --extension-suffix: command not found
/bin/sh: --help]: command not found
Build Set: Time 0:00:49.185317
```

Author: Trac Migrate 2021-03-11T16:50:19.000Z

Original author: thelunatic

- **Owner** set to Ricardo Cárdenes <rcardenes@gemini.edu>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"5e449fb5c2cb6812a238f9f9764fd339cbbf05c2/rtems-source-builder" 5e449fb/rtems-source-builder]:

```
sb/config.py: Fix operator reconstruction

Close #4335
```

Author: Chris Johns 2025-09-19T01:06:56.460Z

changed the description

Author: Chris Johns 2025-09-19T01:06:56.866Z

mentioned in issue #4337

3.9.1.32 4330 - RSB: Build error with rtems-bsp.cfg (cloned)

Id	4330
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-10T18:43:26.000Z
Updated	2025-09-19T01:06:56.074Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4330
Merges	0

Original author: thelunatic

Cloned from #4319:

The RSB recipe for rtems-libbsd fails with powerpc/beatnik with the following error:

```
RTEMS Source Builder - Set Builder, 6 (2031e457ab0b)
warning: exe: absolute exe found in path: (__chown) /usr/sbin/chown
Build Set: 6/rtems-net-legacy
config: tools/rtems-net-legacy-6.cfg
error: rtems-bsp.cfg:155: invalid %if operator:  -mcpu=7400 -I/home/vijay/
↪development/rtems/6/powerpc-rtems6/beatnik/lib/include ==
Build FAILED
Build Set: Time 0:00:00.045206
Build FAILED
```

Author: Trac Migrate 2021-03-10T18:49:34.000Z

Original author: thelunatic

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"d638f2b9a0a1f19d45529c7f4a85135432fe8bb2/rtems-source-builder" d638f2b/rtems-source-builder]:

```
sb/config.py: Fix relational operator

Close #4330
```

Author: Chris Johns 2025-09-19T01:06:56.152Z

changed the description

3.9.1.33 4319 - RSB: Build error with rtems-bsp.cfg

Id	4319
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-09T02:36:43.000Z
Updated	2025-09-19T01:06:55.877Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4319
Merges	0

Original author: thelunatic

The RSB recipe for rtems-libbsd fails with powerpc/beatnik with the following error:

```
RTEMS Source Builder - Set Builder, 6 (2031e457ab0b)
warning: exe: absolute exe found in path: (__chown) /usr/sbin/chown
Build Set: 6/rtems-net-legacy
config: tools/rtems-net-legacy-6.cfg
error: rtems-bsp.cfg:155: invalid %if operator:  -mcpu=7400 -I/home/vijay/
↪development/rtems/6/powerpc-rtems6/beatnik/lib/include ==
Build FAILED
Build Set: Time 0:00:00.045206
Build FAILED
```

Author: Chris Johns 2021-03-09T02:55:12.000Z

Original author: thelunatic

Does another BSP build?

I suggest running with `--trace` and comparing the output with a libbsd with `--trace`.

Author: Chris Johns 2021-03-09T02:58:38.000Z

Original author: thelunatic

Also use `--dry-run` and comment some of the packages int he bset you do not need to build, ie gcc etc, to speed things up.

Author: Trac Migrate 2021-03-10T18:23:56.000Z

Original author: thelunatic

- **Owner** set to Vijay Kumar Banerjee <vijay@rtems.org>

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"2f9a68bfb13313456034932a08c6d06ebbf151b3/rtems-source-builder" 2f9a68b/rtems-source-builder]:

```
sb/config.py: Fix relational operator

Close #4319
```

Author: Chris Johns 2025-09-19T01:06:55.960Z

changed the description

Author: Chris Johns 2025-09-19T01:06:56.258Z

mentioned in issue #4330

3.9.1.34 4297 - rtems-fdt.c: Resource leak error spotted by Coverity

Id	4297
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-04T15:59:42.000Z
Updated	2025-09-19T01:06:55.764Z
Milestone	6.1
Labels	library, old-indefinite, priority::normal, resolution::fixed, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4297
Merges	0

Original author: rlong

CID 1437645: Resource leak in rtems_fdt_load().

```
607  if (fe < 0)
608  {
609    free (blob);
610    close (bf);
611    return fe;
612  }
613
CID 1437645 (#1-2 of 2): Resource leak (RESOURCE_LEAK)33. leaked_handle: Handle variable bf going out of scope leaks the handle.
614  return 0;
615}
```

Author: Trac Migrate 2021-12-16T21:37:54.000Z

Original author: rlong

- **Milestone** changed from %"6.1" to %"Indefinite"

Author: Trac Migrate 2021-12-17T16:21:29.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"98ab69323ea3799dbd1c418517c72526af699c5a/rtems" 98ab693/rtems]:

```
libmisc/rtems-fdt: close() file 'bf'

close() file 'bf' to avoid leaking descriptor.

CID 1437645: Resource leak in rtems_fdt_load().

Closes #4297
```

Author: Amar Takhar 2025-09-05T02:57:47.633Z

changed the description

3.9.1.35 4293 - Remove unused files from beatnik/net

Id	4293
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-03T22:32:19.000Z
Updated	2025-09-19T01:06:55.593Z
Milestone	6.1
Labels	network::legacy, priority::normal, resolution::fixed, ticket-type::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4293
Merges	1

Original author: thelunatic

The powerpc/beatnik has some files that are not being built by the build system and they're unused. These can be removed. The list of files are:

mve_smallbuf_tst.c, if_xxx.modini.c, testing.c

Author: Trac Migrate 2021-03-04T02:43:18.000Z

Original author: thelunatic

- **Version** set to ~"5"

Author: Trac Migrate 2021-03-04T02:46:13.000Z

Original author: thelunatic

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"f4d00aa53893ab5e979b670b01ac7d4da44afa3f/rtems" f4d00aa/rtems]:

```
powerpc/beatnik/net: Remove unused files

Close #4293
```

Author: Chris Johns 2025-09-19T01:06:55.652Z

changed the description

3.9.1.36 4271 - Add common malloc family extension method malloc_usable_size()

Id	4271
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2021-02-25T20:19:13.000Z
Updated	2025-09-19T01:06:55.493Z
Milestone	6.1
Labels	api::posix, gsoc::small, old-indefinite, priority::normal, resolution::duplicate, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4271
Merges	0

RTEMS already has this functionality so it should not be hard to implement this.

https://man7.org/linux/man-pages/man3/malloc_usable_size.3.html https://www.freebsd.org/cgi/man.cgi?query=malloc_usable_size

The prototype would need to be added to the appropriate newlib header file with the same guard as Linux and FreeBSD.

The method would need to be fully tested.

The method would need to be documented.

Author: Joel Sherrill 2021-09-08T20:22:08.000Z

- **Resolution** set to ~"duplicate"
- **Status** changed from *new* to *closed*

Duplicate of #4503

Author: Amar Takhar 2024-04-25T20:48:38.797Z

changed the description

3.9.1.37 4257 - main_edit.c: Unchecked return value error spotted by Coverity

Id	4257
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-19T20:43:11.000Z
Updated	2025-09-19T01:06:55.395Z
Milestone	6.1
Labels	library, old-indefinite, priority::normal, resolution::fixed, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4257
Merges	0

Original author: rlong

CID 1255318: Unchecked return value in display_line().

```
1082static void display_line(struct editor *ed, int pos, int fullline) {
1083  int hilite = 0;
1084  int col = 0;
1085  int margin = ed->margin;
1086  int maxcol = ed->env->cols + margin;
1087  unsigned char *bufptr = ed->env->linebuf;
1088  unsigned char *p = text_ptr(ed, pos);
1089  int selstart, selend, ch;
1090  char *s;
1091
CID 1255318 (#1 of 1): Unchecked return value (CHECKED_RETURN)1. check_return:
↪Calling get_selection without checking return value (as is done elsewhere 5 out
↪of 6 times).
1092  get_selection(ed, &selstart, &selend);
```

Author: Trac Migrate 2021-02-24T16:56:08.000Z

Original author: rlong

Issue can be tracked here https://github.com/ringgaard/sanos/issues/7 .

Author: Trac Migrate 2021-03-08T20:56:14.000Z

Original author: rlong

In [changeset:"3246fa42e21b3aaa8703c95544a38850cc97334f/rtems" 3246fa42/rtems]:

```
main_edit.c: Fix Unchecked return value (CID #1255318)

CID 1255318: Unchecked return value in display_line().

Updates #4257
```

Author: Trac Migrate 2021-12-16T16:56:27.000Z

Original author: rlong

- **Milestone** changed from %"6.1" to %"Indefinite"
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Author: Amar Takhar 2025-09-05T02:57:47.035Z

changed the description

3.9.1.38 4256 - fdt_rw.c: Unchecked return value error spotted by Coverity

Id	4256
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-19T20:37:30.000Z
Updated	2025-09-19T01:06:55.288Z
Milestone	6.1
Labels	library, old-indefinite, priority::normal, resolution::fixed, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4256
Merges	0

Original author: rlong

CID 1047324: Unchecked return value in fdt_add_subnode_namelen().

```
350         /* Try to place the new node after the parent's properties */
CID 1047324 (#1 of 1): Unchecked return value (CHECKED_RETURN)4. check_return: Calling fdt_next_tag without checking return value (as is done elsewhere 7 out of 8 times).
351         fdt_next_tag(fdt, parentoffset, &nextoffset); /* skip the BEGIN_NODE */
```

Author: Trac Migrate 2021-02-24T16:56:56.000Z

Original author: rlong

Issue can be tracked here https://github.com/dgibson/dtc/issues/46 .

Author: Trac Migrate 2021-12-16T17:02:07.000Z

Original author: rlong

- **Milestone** changed from %"6.1" to %"Indefinite"
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Author: Amar Takhar 2025-09-05T02:57:46.823Z

changed the description

3.9.1.39 4255 - aarch64 GCC alignment bug

Id	4255
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Created	2021-02-17T21:08:00.000Z
Updated	2025-09-19T01:06:55.126Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4255
Merges	0

This issue exists to track <gcc bug will be added when I can submit it>. GCC generates bad alignments for sections with elements smaller than 8 bytes on AArch64.

This was previously worked around by using SUBALIGN() in the linker script, but this causes other problems when larger elements are stored in linker sections.

Author: Kinsey Moore 2021-03-02T14:09:12.000Z

I can't edit the ticket description. Here is the link to the GCC bug: https://gcc.gnu.org/bugzilla/show_bug.cgi?id=99143

According to the commentary on the bug, these alignments are not guaranteed and a patch to address them is currently up for review on the mailing list.

Author: Trac Migrate 2021-03-05T14:43:38.000Z

- **Owner** set to Kinsey Moore <kinsey.moore@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"bbc9974a2450e7599cf9c08dbfd394b523bf6c51/rtems" bbc9974a/rtems]:

```
cpukit: Explicitly enforce alignment requirements

According to commentary on GCC bug
https://gcc.gnu.org/bugzilla/show_bug.cgi?id=99143, the alignment
behavior of linker sections on which RTEMS has relied was never
guaranteed to be consistent across platforms and any alignment
requirements for linker sections needs to be enforced explicitly.
This adds those explicit alignment requirements.

Closes #4255.
```

Author: Chris Johns 2025-09-19T01:06:55.178Z

changed the description

3.9.1.40 4227 - arm-gicv2.c causes build warning when compiling rtems6 for aarch64/xilinx_zynqmp

Id	4227
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-01-28T17:55:25.000Z
Updated	2025-09-19T01:06:54.458Z
Milestone	6.1
Labels	arch:aarch64, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4227
Merges	0

Original author: stephenclark

Commit b5aceef5d921de3d146b45c20f6f8aa7e9413717 seems to have introduced a build warning on aarch64/xilinx_zynqmp. When trying to build rtems 6 for xilinx_zynqmp, waf gives the following build warning:

```
../../../bsps/shared/dev/irq/arm-gicv2.c:53:6: warning: no previous prototype for
↪'bsp_interrupt_dispatch' [-Wmissing-prototypes]
53 | void bsp_interrupt_dispatch(void)
|      ^~~~~~~~~~~~~~~~~~~~~~
```

This was built using aarch64-rtems6-gcc (GCC) 10.2.1 20200918 (RTEMS 6, RSB f5fc2bfabbd18f31901ffa6fc0e5b6b47874797c, Newlib 749cbcc).

When the bug occurred, the config.ini file used by waf contained the following:

```
[aarch64/xilinx_zynqmp_lp64]
BUILD_TESTS = True
RTEMS_POSIX_API = True
[aarch64/xilinx_zynqmp_ilp32]
BUILD_TESTS = True
RTEMS_POSIX_API = True
```

Author: Trac Migrate 2021-01-28T18:28:58.000Z

Original author: stephenclark

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"44ae183090f3bc1a4ee281ff98525209b3fda7a7/rtems" 44ae183/rtems]:

```
bsps/aarch64: Add missing include

Fixes:

bsps/shared/dev/irq/arm-gicv2.c:53:6: warning: no previous prototype for
'bsp_interrupt_dispatch' [-Wmissing-prototypes]

Close #4227.
```

Author: Chris Johns 2025-09-19T01:06:54.578Z

changed the description

3.9.1.41 4220 - imx BSP: System counter is not initialized on i.MX6UL/ULL with certain bootloaders

Id	4220
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-01-21T09:23:37.000Z
Updated	2025-09-19T01:06:54.260Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4220
Merges	1

Original author: Christian Mauderer

The bootloader Barebox does not initialize the system counter for the i.MX6UL/ULL by default. The BSP can only be used with a hack on these systems. Without the hack, the system will run into a fatal error.

Author: Trac Migrate 2021-01-21T09:30:10.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"0d44334ca1c35a23a90eca8945acfe95fc9e2827/rtems" 0d44334c/rtems]:

```
bsp/imx: Fix system counter init for imx6

For i.MX7 U-Boot initializes the system counter. On i.MX6 Barebox is
often used which doesn't initialize the counter. With this patch, we try
to auto-detect whether the counter is initialized or not and do the
initialization ourself if necessary.

Closes #4220
```

Author: Chris Johns 2025-09-19T01:06:54.323Z

changed the description

3.9.1.42 4216 - prinf/vsnprintf crash when used in interrupt context

Id	4216
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-01-20T06:59:31.000Z
Updated	2025-09-19T01:06:54.081Z
Milestone	6.1
Labels	arch:arm, priority::high, resolution::invalid, tickettype::defect, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4216
Merges	0

Original author: ceasar

RTEMS crashed when i used printf() to print a float/double data in interrupt service routine. the test code is simple and shown below: float f = 3.131415926; printf("logi float: %fn", f);

any help would be appreciated.

Author: Trac Migrate 2021-01-20T08:34:05.000Z

Original author: ceasar

- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*

Using any of the printf() functions in interrupt context is undefined behaviour. You can use the interrupt server to run interrupt handlers in a thread context. You can use the event recording as a low overhead alternative to printf() to trace your application:

https://docs.rtems.org/branches/master/user/tracing/eventrecording.html

Author: Trac Migrate 2021-01-20T10:03:53.000Z

Original author: ceasar

Hi Sebastian ,

What you said any of the printf() functions in interrupt context is undefined is really true. I wrongly thought only float/double data print by printf() in interrupt context would crash, but int play the same. after a test.

I show you the background why i get the wrong thought. I implemented a system logger feature which supply LOG_I/LOG_E/LOG_W interface to format and record logs to the storage device in RTEMS, supported both in thread and interrupt. Logs in interrupt context formatted to a string by vsnprintf firstly and then send to a async handler task by using message queue. Teammate raise an issue said float/double data deliver to LOG_X interface in interrupt context would crash OS.

After a deep dig, i found the stack as follows: vsnprintf->_vsnprintf_r->_svfprintf_r->cvt->_DTOA_R->d2b an data abort exception happened in d2b() function. So i just want to double check vsnprintf() function have the same defect as printf().

BTW can you tell me why printf function can't used in interrupt? I heard if irq handler cost more than 1ms RTEMS would go wrong in some way.

Author: Trac Migrate 2021-01-20T11:05:55.000Z

Original author: ceasar

The printf() family of functions may use mutexes and dynamic memory (this includes the string variants).

Author: Chris Johns 2025-09-19T01:06:54.145Z

changed the description

3.9.1.43 4211 - _Timespec_To_ticks overflow

Id	4211
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2021-01-07T03:47:11.000Z
Updated	2025-09-19T01:06:53.980Z
Milestone	6.1
Labels	old-indefinite, priority::normal, resolution::fixed, rtems::score, ticket-type::defect, version::6, version::7
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4211
Merges	0

The FreeBSD NFSv4 sets a timeout of `INT_MAX` seconds and that translates as a call to `tvtohz()` with the `struct timeval` argument fields set to:

```
tvtohz: tv_sec=2147483647 tv_usec=0
```

The call overflows the unsigned 32bit integer number of ticks. Should an overflow be checked and the maximum number of ticks returned?

Author: Trac Migrate 2021-01-07T08:23:23.000Z

I would simply use the tvtohz() implementation from FreeBSD.

Author: Chris Johns 2021-01-07T22:21:25.000Z

Replying to Sebastian Huber:

> I would simply use the tvtohz() implementation from FreeBSD. The ticket is about correctness in the `score` and not `libbsd`.

Author: Trac Migrate 2021-01-08T05:42:44.000Z

Replying to Chris Johns:

> Replying to Sebastian Huber:
>
> > I would simply use the tvtohz() implementation from FreeBSD.
>
> The ticket is about correctness in the `score` and not `libbsd`. The ticket description doesn't mention _Timespec_To_ticks().
>
> _Timespec_To_ticks() is used for the sporadic server and the POSIX timer. Maybe the implementation should be changed to use CLOCK_MONOTONIC, but I don't really know what is specified by POSIX. Maybe Joel can have a look at this.

Author: Trac Migrate 2021-01-08T05:44:23.000Z

Replying to Sebastian Huber:

> Replying to Chris Johns:
>
> > Replying to Sebastian Huber:
> >
> > > I would simply use the tvtohz() implementation from FreeBSD.
> >
> > The ticket is about correctness in the `score` and not `libbsd`.
>
> The ticket description doesn't mention _Timespec_To_ticks(). Sorry, it is in the subject.

Author: Trac Migrate 2021-01-08T06:07:06.000Z

I think the general question is what should be the behaviour if a user specifies a timeout which is after the specified uptime of the system (which is WATCHDOG_MAX_SECONDS, about 544 years). See also _Watchdog_Is_far_future_timespec().

Author: Chris Johns 2021-01-10T01:09:21.000Z

Replying to Sebastian Huber:

> I think the general question is what should be the behaviour if a user specifies a timeout which is after the specified uptime of the system (which is WATCHDOG_MAX_SECONDS, about 544 years). See also _Watchdog_Is_far_future_timespec().

> Yes that would work. If the `tv_sec` field is more than `WATCHDOG_MAX_SECONDS` limit it to that value. We need to make the conversion predictable for all possible `timespec` input values.

Author: Joel Sherrill 2021-12-17T17:04:17.000Z

Did this get resolved? Any updates?

Author: Chris Johns 2022-11-29T23:34:37.000Z

- **Milestone** changed from %"6.1" to %"Indefinite"
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*
- **Version** changed from ~"6" to ~"7"

Author: Amar Takhar 2025-09-05T02:57:46.622Z

changed the description

3.9.1.44 4191 - MSYS2 build error

Id	4191
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Amar Takhar
Created	2020-11-27T09:34:42.000Z
Closed	2024-10-06T23:24:32.874Z
Updated	2025-09-19T01:06:53.732Z
Milestone	6.1
Labels	priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4191
Merges	1

Original author: rmueller

I think this is an issue which has happended before:

https://devel.rtems.org/ticket/3783

However, its happening again for me:

When running the RTEMS RSB to install the toolsuite:

../source-builder/sb-set-builder –prefix=$RTEMS_INST 6/rtems-arm

RTEMS Source Builder - Set Builder, 6 (31dd1ab4424e modified) Build Set: 6/rtems-arm Build Set: 6/rtems-autotools.bset Build Set: 6/rtems-autotools-internal.bset

config: tools/rtems-autoconf-2.69-1.cfg ... reporting: devel/expat-2.1.0-1.cfg -> expat-2.1.0-x86_64-w64-mingw32-1.xml config: tools/rtems-gdb-head.cfg error: shell macro failed: sh -c "/mingw64/bin/python2-config –ldflags | awk 'BEGIN{FS=" "}/python/{for(i=1;i<NF;++i)if(match($i,".*lpython.*")) print "lib"substr($i,3)"";}'": *1: awk: cmd. line:1: BEGIN{FS=" "}/python/{for(i=1;i<NF;++i)if(match(,".*lpython.*")) print "lib"substr(,3)"*";}* awk: cmd. line:1: ^ syntax error awk: cmd. line:1: BEGIN{FS=" "}/python/{for(i=1;i<NF;++i)if(match(,".*lpython.*")) print "lib"substr(,3)"*";} awk: cmd. line:1: ^ 1 is invalid as number of arguments for match close failed in file object destructor: sys.excepthook is missing lost sys.stderr Build FAILED Build Set: Time 0:07:20.475176 Build FAILED

Anyone have an idea what might cause this? I am using MinGW64 like recommended in the QuickStart guide

Author: Trac Migrate 2020-11-27T09:45:37.000Z

Original author: rmueller

Another issue: https://devel.rtems.org/ticket/3792

Author: Trac Migrate 2020-11-27T10:00:44.000Z

Original author: rmueller

Actually, this is another error. It's propably because $i yields no value. But I don't know from where this shell command was called and why $i is empty.

Author: xiaojun zheng 2024-07-19T03:22:06.163Z

mentioned in issue rtems/tools/rtems-source-builder#27

Author: Gedare Bloom 2024-10-06T22:11:07.446Z

mentioned in merge request rtems/tools/rtems-source-builder!63

Author: Chris Johns 2025-09-19T01:06:53.825Z

changed the description

3.9.1.45 4186 - Update QuickStart 2.4 for git install

Id	4186
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-11-24T10:52:37.000Z
Updated	2025-09-19T01:06:53.636Z
Milestone	6.1
Labels	doc, priority::normal, resolution::duplicate, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4186
Merges	0

Original author: rmueller

When installing the tool suite for a git clone, the build set 5/rtems-sparc does not appear to be available anymore.

It would be a good idea to update to Quick Start guide accordingly.

Running ../source-builder/sb-set-builder –list-bsets yields:

6/rtems-aarch64.bset 6/rtems-all.bset 6/rtems-arm.bset 6/rtems-autotools-base.bset 6/rtems-autotools-internal.bset 6/rtems-autotools.bset 6/rtems-base.bset 6/rtems-bfin.bset 6/rtems-default.bset 6/rtems-i386.bset 6/rtems-kernel.bset 6/rtems-libbsd.bset 6/rtems-llvm.bset 6/rtems-lm32.bset 6/rtems-m68k.bset 6/rtems-microblaze.bset 6/rtems-mips.bset 6/rtems-moxie.bset 6/rtems-nios2.bset 6/rtems-or1k.bset 6/rtems-packages.bset 6/rtems-powerpc.bset 6/rtems-riscv.bset 6/rtems-sh.bset 6/rtems-sparc.bset 6/rtems-sparc64.bset 6/rtems-tools.bset 6/rtems-v850.bset 6/rtems-x86_64.bset 7/rtems-aarch64.bset 7/rtems-all.bset 7/rtems-arm.bset 7/rtems-base.bset 7/rtems-bfin.bset 7/rtems-default.bset 7/rtems-i386.bset 7/rtems-lm32.bset 7/rtems-m68k.bset 7/rtems-microblaze.bset 7/rtems-mips.bset 7/rtems-moxie.bset 7/rtems-nios2.bset 7/rtems-or1k.bset 7/rtems-powerpc.bset 7/rtems-riscv.bset 7/rtems-sh.bset 7/rtems-sparc.bset 7/rtems-sparc64.bset 7/rtems-v850.bset 7/rtems-x86_64.bset bsps/atsamv.bset bsps/beagleboneblack.bset bsps/erc32.bset bsps/gr712rc.bset bsps/gr740.bset bsps/imx7.bset bsps/pc.bset bsps/qoriq_e500.bset bsps/qoriq_e6500_32.bset bsps/qoriq_e6500_64.bset bsps/raspberrypi2.bset bsps/xilinx_zynq_zc702.bset bsps/xilinx_zynq_zc706.bset bsps/xilinx_zynq_zedboard.bset databases/sqlite.bset devel/autotools-base.bset devel/autotools-internal.bset devel/autotools.bset devel/capstone.bset devel/dtc.bset devel/libtool.bset devel/libusb.bset devel/or1ksim.bset devel/qemu-couverture.bset devel/qemu.bset devel/sis.bset devel/spike.bset devel/swig.bset ftp/curl.bset gnu-tools-4.6.bset gnu-tools-4.8.2.bset graphics/freetype2.bset graphics/graphics-all.bset graphics/libjpeg.bset graphics/libpng.bset graphics/libtiff.bset graphics/microwindows.bset graphics/nxlib.bset graphics/t1lib.bset lang/gcc491.bset net-mgmt/net-snmp.bset net/lwip.bset net/ntp.bset net/protobuf.bset rtems-base.bset rtems-package.bset rtems-urls.bset rtems-version.bset

So installing 5/rtems-sparc is not possible.

Kind Regards Robin

Author: Trac Migrate 2020-11-24T10:56:08.000Z

Original author: rmueller

- **Resolution** set to ~"duplicate"
- **Status** changed from *new* to *closed*

Author: Amar Takhar 2024-04-25T20:48:29.713Z

changed the description

3.9.1.46 4178 - Resolve use of SUBALIGN in AArch64 under ILP32 multilib variant

Id	4178
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Created	2020-11-16T16:38:20.000Z
Updated	2025-09-19T01:06:53.481Z
Milestone	6.1
Labels	arch:aarch64, priority::normal, resolution::fixed, tickettype::task
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4178
Merges	0

Currently, the AArch64 ILP32 multilib variant is functional, but requires use of SUBALIGN to adjust the default alignment of the rtemsroset and rtemsrwset from 8 bytes to 4 bytes to match the pointer size. Without this alignment adjustment, execution of linker set based initializers on ILP32 results in a crash due to the 4 bytes above the aligned pointer being treated as another initializer pointer.

Though this is currently functional, it would be best to understand why this alignment change is required for AArch64 ILP32 when other architectures such as SPARC don't require this change to be explicitly made between their 32 and 64 bit variants.

Author: Trac Migrate 2021-03-05T14:43:32.000Z

- **Owner** set to Kinsey Moore <kinsey.moore@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"6bfbfb5a3d01ee2b413364c22d056b916d0dfe1d/rtems" 6bfbfb5/rtems]:

```
bsps/aarch64: Resolve usage of SUBALIGN()

Remove usage of SUBALIGN() in aarch64 linkcmds which works around a
difference in behavior on AArch64 platforms. This is no longer necessary
since alignment is now enforced explicitly.

Closes #4178.
```

Author: Chris Johns 2025-09-19T01:06:53.534Z

changed the description

3.9.1.47 4177 - Update arm64/aarch64 support

Id	4177
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Created	2020-11-12T20:03:31.000Z
Updated	2025-09-19T01:06:53.314Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4177
Merges	0

This allows libbsd to compile under aarch64 which is also called arm64 in FreeBSD.

- 0001-Update-arm64-aarch64-support.patch

Author: Kinsey Moore 2020-11-12T20:04:16.000Z

- **Attachment** 0001-Update-arm64-aarch64-support.patch added

Patch to allow build under AArch64

Author: Kinsey Moore 2020-11-16T16:17:43.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Author: Chris Johns 2025-09-19T01:06:53.372Z

changed the description

3.9.1.48 4176 - Address libbsd build issues with AArch64

Id	4176
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Created	2020-11-10T16:02:50.000Z
Updated	2025-09-19T01:06:53.076Z
Milestone	6.1
Labels	arch:aarch64, priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4176
Merges	0

The attached pair of patches addresses compilation issues in libbsd caused by missing files in the installed BSP and linking problems caused by a SUBALIGN(4) that is only required for ILP32 multilib variant builds, but is present but benign in LP64 multilib variant builds.

- 0001-spec-aarch64-Ensure-that-libbsd-can-build-properly.patch
- 0002-spec-aarch64-Only-apply-SUBALIGN-4-to-ILP32.patch

Author: Kinsey Moore 2020-11-10T16:04:13.000Z

- **Attachment** 0001-spec-aarch64-Ensure-that-libbsd-can-build-properly.patch added

Patch to add missing files to BSP install

Author: Kinsey Moore 2020-11-10T16:05:21.000Z

- **Attachment** 0002-spec-aarch64-Only-apply-SUBALIGN-4-to-ILP32.patch added

Patch to correct libbsd linking on LP64

Author: Kinsey Moore 2020-11-23T16:27:17.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Patches resolving this issue have been committed.

Author: Chris Johns 2025-09-19T01:06:53.166Z

changed the description

3.9.1.49 4173 - atsam BSP: SD/MMC driver doesn't work any more

Id	4173
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-11-06T14:34:40.000Z
Updated	2025-09-19T01:06:52.727Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4173
Merges	0

Original author: Christian Mauderer

Cloned from #4172:

The SD/MMC driver of the atsam BSP causes the system to crash. Reason for that is a change in the XDMAD handling.

Author: Trac Migrate 2020-11-12T07:31:09.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"cab11b5b805b5fd54113b51992d900607870cb75/rtems" cab11b5/rtems]:

```
bsp/atsam: Fix XDMAD status

In "bsp/atsam: Simplify XDMAD_Handler()" (5f813694f68cee) the interrupt
callback has been made unconditional. That allowed to avoid some special
deadlock situations in error cases. But it removed part of the XDMAD
status handling.

This patch adds the ability to update the XDMAD status from the
callback if that is necessary for the driver.

Fixes #4173
```

Author: Chris Johns 2025-09-19T01:06:52.812Z

changed the description

3.9.1.50 4172 - atsam BSP: SD/MMC driver doesn't work any more

Id	4172
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-11-06T14:33:29.000Z
Updated	2025-09-19T01:06:52.541Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4172
Merges	1

Original author: Christian Mauderer

The SD/MMC driver of the atsam BSP causes the system to crash. Reason for that is a change in the XDMAD handling.

Author: Trac Migrate 2020-11-12T07:32:15.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"0af682cf5d04b0406e117b20cbf81fd84d9319f2/rtems" 0af682c/rtems]:

```
bsp/atsam: Fix XDMAD status

In "bsp/atsam: Simplify XDMAD_Handler()" (5f813694f68cee) the interrupt
callback has been made unconditional. That allowed to avoid some special
deadlock situations in error cases. But it removed part of the XDMAD
status handling.

This patch adds the ability to update the XDMAD status from the
callback if that is necessary for the driver.

Fixes #4172
```

Author: Chris Johns 2025-09-19T01:06:52.601Z

changed the description

Author: Chris Johns 2025-09-19T01:06:52.934Z

mentioned in issue #4173

3.9.1.51 4163 - Error in documentation regarding C/C++ large comment styles

Id	4163
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-10-23T12:37:13.000Z
Updated	2025-09-19T01:06:52.317Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4163
Merges	0

Original author: abutterfield

In the RTEMS Software Engineering manual, Sec 6.3.2.1

https://docs.rtems.org/branches/master/eng/coding-80cols.html#breaking-long-lines

it recommends excessively long comments be broken as follows:

```
/* first line
* second line
* third, and in this case last line */
```

After a discussion on the devel mailing list at

https://lists.rtems.org/pipermail/devel/2020-October/062906.html

it was agreed that it should be

```
/*
* first line
* second line
* third line (no longer matters that it is last)
*/
```

Author: Trac Migrate 2020-10-23T12:38:55.000Z

Original author: abutterfield

- **Owner** set to abutterfield
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-05-24T14:16:01.000Z

Original author: abutterfield

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

Was fixed by Sebastian Huber when he tidied up the documentation.

There has also been a filename change:

See https://docs.rtems.org/branches/master/eng/coding-formatting.html

Author: Chris Johns 2025-09-19T01:06:52.398Z

changed the description

3.9.1.52 4113 - add rtems_cmdline option 129 to dhcpcd

Id	4113
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-10-02T07:16:24.000Z
Updated	2025-09-19T01:06:52.113Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4113
Merges	0

Original author: junkes@fhi-berlin.mpg.de

To get the most out of epics with libbsd, option 129 rtems_cmdline added to dhcpcd.

- libbsd-dhcpcd.diff

Author: Trac Migrate 2020-10-02T07:20:34.000Z

Original author: junkes@fhi-berlin.mpg.de

- **Attachment** libbsd-dhcpcd.diff added

patch

Author: Chris Johns 2020-10-07T00:31:06.000Z

Original author: junkes@fhi-berlin.mpg.de

How is this used?

How does the patch differ from the `vendopt code type variable` conf file option?

See https://www.freebsd.org/cgi/man.cgi?query=dhcpcd.conf

Adding changes like this makes long term maintenance harder.

Author: Trac Migrate 2021-01-18T13:13:33.000Z

Original author: junkes@fhi-berlin.mpg.de

Works well with adding “define 129 string rtems_cmdlinen” to /etc/dhcpcd.conf

Author: Trac Migrate 2021-01-18T13:14:16.000Z

Original author: junkes@fhi-berlin.mpg.de

- **Resolution** set to ~”fixed”
- **Status** changed from *new* to *closed*

Author: Chris Johns 2025-09-19T01:06:52.186Z

changed the description

3.9.1.53 4090 - libbsd: bfin architecture build is broken

Id	4090
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2020-09-23T06:03:46.000Z
Closed	2025-01-31T16:16:37.930Z
Updated	2025-09-19T01:06:52.002Z
Milestone	6.1
Labels	arch:bfin, old-indefinite, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4090
Merges	0

Original author: sebastian.huber

```
1 /build/rtems/6/lib/gcc/bfin-rtems6/10.2.1/../../../../bfin-rtems6/bin/ld: ./
  ↪libbsd.a(route.c.11.o):/ramdisk/git-rtems-libbsd/build/bfin-rtems6-TLL6527M-
  ↪default/../../freebsd/usr.bin/netstat/route.c:291: more undefined references to␣
  ↪`err' follow
2 /build/rtems/6/lib/gcc/bfin-rtems6/10.2.1/../../../../bfin-rtems6/bin/ld: ./
  ↪libbsd.a(getprotoent.c.11.o): in function `setprotoent':
3 /ramdisk/git-rtems-libbsd/build/bfin-rtems6-TLL6527M-default/../../freebsd/lib/
  ↪libc/net/getprotoent.c:522: undefined reference to `nsdispatch'
4 /build/rtems/6/lib/gcc/bfin-rtems6/10.2.1/../../../../bfin-rtems6/bin/ld: ./
  ↪libbsd.a(getprotoent.c.11.o): in function `endprotoent':
5 /ramdisk/git-rtems-libbsd/build/bfin-rtems6-TLL6527M-default/../../freebsd/lib/
  ↪libc/net/getprotoent.c:543: undefined reference to `nsdispatch'
```

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```
/build/rtems/6/lib/gcc/bfin-rtems6/10.2.1/../../../../bfin-rtems6/bin/ld: ./
↪libbsd.a(getprotoent.c.11.o): in function `getprotoent_r':
/ramdisk/git-rtems-libbsd/build/bfin-rtems6-TLL6527M-default/../../freebsd/lib/
↪libc/net/getprotoent.c:495: undefined reference to `nsdispatch'
/build/rtems/6/lib/gcc/bfin-rtems6/10.2.1/../../../../bfin-rtems6/bin/ld: ./
↪libbsd.a(if.c.11.o): in function `bsd_netstat_intpr':
/ramdisk/git-rtems-libbsd/build/bfin-rtems6-TLL6527M-default/../../freebsd/usr.
↪bin/netstat/if.c:297: undefined reference to `err'
/build/rtems/6/lib/gcc/bfin-rtems6/10.2.1/../../../../bfin-rtems6/bin/ld: /
↪ramdisk/git-rtems-libbsd/build/bfin-rtems6-TLL6527M-default/../../freebsd/usr.
↪bin/netstat/if.c:295: undefined reference to `err'
/build/rtems/6/lib/gcc/bfin-rtems6/10.2.1/../../../../bfin-rtems6/bin/ld: ./
↪libbsd.a(getprotoname.c.11.o): in function `getprotobyname_r':
/ramdisk/git-rtems-libbsd/build/bfin-rtems6-TLL6527M-default/../../freebsd/lib/
↪libc/net/getprotoname.c:133: undefined reference to `nsdispatch'
collect2: error: ld returned 1 exit status
```

Author: Kinsey Moore	2025-01-31T16:16:37.684Z

The blackfin architecture has been obsoleted.

Author: Kinsey Moore	2025-01-31T16:16:38.075Z

changed the description

3.9.1.54 4089 - lm32: internal compiler error: in dwarf2out_frame_debug_expr, at dwarf2cfi.c:1809

Id	4089
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2020-09-23T05:49:39.000Z
Closed	2025-01-31T16:18:31.107Z
Updated	2025-09-19T01:06:51.882Z
Milestone	6.1
Labels	arch:lm32, old-indefinite, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4089
Merges	0

Original author: sebastian.huber

```
during RTL pass: dwarf2
../../freebsd/lib/libc/nameser/ns_print.c: In function '__ns_sprintrrf':
```

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```
../../freebsd/lib/libc/nameser/ns_print.c:1092:1: internal compiler error: in dwarf2out_frame_debug_expr, at dwarf2cfi.c:1809
1092 | }
| ^
0x5bd365 dwarf2out_frame_debug_expr
../../gnu-mirror-gcc-949e0ad/gcc/dwarf2cfi.c:1807
0x5bd973 dwarf2out_frame_debug
../../gnu-mirror-gcc-949e0ad/gcc/dwarf2cfi.c:2187
0x5bd973 scan_insn_after
../../gnu-mirror-gcc-949e0ad/gcc/dwarf2cfi.c:2547
0x5be251 scan_trace
../../gnu-mirror-gcc-949e0ad/gcc/dwarf2cfi.c:2714
0x5beab2 create_cfi_notes
../../gnu-mirror-gcc-949e0ad/gcc/dwarf2cfi.c:2753
0x5beab2 execute_dwarf2_frame
../../gnu-mirror-gcc-949e0ad/gcc/dwarf2cfi.c:3122
0x5beab2 execute
../../gnu-mirror-gcc-949e0ad/gcc/dwarf2cfi.c:3610
Please submit a full bug report,
with preprocessed source if appropriate.
Please include the complete backtrace with any bug report.
See <https://gcc.gnu.org/bugs/> for instructions.
```

Author: Chris Johns 2020-09-24T00:52:11.000Z

Original author: sebastian.huber

Has a bug report been raised with gcc?

Author: Trac Migrate 2020-09-24T04:23:26.000Z

Original author: sebastian.huber

No, and this is not on my high priority list. Writing good ICE reports is a bit of work.

Author: Kinsey Moore 2025-01-31T16:18:30.837Z

The lm32 architecture has been obsoleted.

Author: Kinsey Moore 2025-01-31T16:18:31.367Z

changed the description

3.9.1.55 4086 - libbsd: v850 architecture build is broken

Id	4086
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2020-09-23T05:44:37.000Z
Closed	2025-01-31T16:18:09.437Z
Updated	2025-09-19T01:06:51.770Z
Milestone	6.1
Labels	arch:v850, old-indefinite, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4086
Merges	0

Original author: sebastian.huber

```
/build/rtems/6/lib/gcc/v850-rtems6/10.2.1/../../../../v850-rtems6/bin/ld: ./
↪libbsd.a(route.c.11.o):/ramdisk/git-rtems-libbsd/build/v850-rtems6-v850sim-
↪default/../../freebsd/usr.bin/netstat/route.c:329: more undefined references to␣
↪`err' follow
/build/rtems/6/lib/gcc/v850-rtems6/10.2.1/../../../../v850-rtems6/bin/ld: ./
↪libbsd.a(getprotoent.c.11.o): in function `setprotoent':
/ramdisk/git-rtems-libbsd/build/v850-rtems6-v850sim-default/../../freebsd/lib/
↪libc/net/getprotoent.c:522: undefined reference to `nsdispatch'
/build/rtems/6/lib/gcc/v850-rtems6/10.2.1/../../../../v850-rtems6/bin/ld: ./
↪libbsd.a(getprotoent.c.11.o): in function `endprotoent':
/ramdisk/git-rtems-libbsd/build/v850-rtems6-v850sim-default/../../freebsd/lib/
↪libc/net/getprotoent.c:543: undefined reference to `nsdispatch'
/build/rtems/6/lib/gcc/v850-rtems6/10.2.1/../../../../v850-rtems6/bin/ld: ./
↪libbsd.a(getprotoent.c.11.o): in function `getprotoent_r':
/ramdisk/git-rtems-libbsd/build/v850-rtems6-v850sim-default/../../freebsd/lib/
↪libc/net/getprotoent.c:495: undefined reference to `nsdispatch'
/build/rtems/6/lib/gcc/v850-rtems6/10.2.1/../../../../v850-rtems6/bin/ld: ./
↪libbsd.a(if.c.11.o): in function `bsd_netstat_intpr':
/ramdisk/git-rtems-libbsd/build/v850-rtems6-v850sim-default/../../freebsd/usr.bin/
↪netstat/if.c:297: undefined reference to `err'
/build/rtems/6/lib/gcc/v850-rtems6/10.2.1/../../../../v850-rtems6/bin/ld: /
↪ramdisk/git-rtems-libbsd/build/v850-rtems6-v850sim-default/../../freebsd/usr.
↪bin/netstat/if.c:295: undefined reference to `err'
/build/rtems/6/lib/gcc/v850-rtems6/10.2.1/../../../../v850-rtems6/bin/ld: ./
↪libbsd.a(getprotoname.c.11.o): in function `getprotobyname_r':
/ramdisk/git-rtems-libbsd/build/v850-rtems6-v850sim-default/../../freebsd/lib/
↪libc/net/getprotoname.c:133: undefined reference to `nsdispatch'
```

Author: Kinsey Moore 2025-01-31T16:18:09.010Z

The v850 architecture has been obsoleted.

Author: Kinsey Moore 2025-01-31T16:18:09.578Z

changed the description

3.9.1.56 4062 - waf configure fails on Ubuntu 20.04 with python error.

Id	4062
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-08-25T08:25:56.000Z
Updated	2025-09-19T01:06:51.547Z
Milestone	6.1
Labels	priority::normal, resolution::wontfix, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4062
Merges	0

Original author: kgardas

In an attempt to get waf running on Ubuntu 20.04 I've hit following error:

```
ubuntu@ubuntu20lxc:~/git/rtems/rtems-docs$ ./waf configure --pdf
Setting top to                           : /home/ubuntu/git/rtems/rtems-docs
Setting out to                           : /home/ubuntu/git/rtems/rtems-docs/build
Checking for program 'git'               : /usr/bin/git
Checking for program 'sphinx-build'      : /usr/bin/sphinx-build
Checking for program 'aspell'            : not found
Checking if Sphinx is at least 1.3       : yes (1.8)
Checking Sphinx Options                  : none
Checking Sphinx Nit-Pick mode            : no
Checking for 'sphinx.ext.autodoc'        : found
Checking for 'sphinx.ext.coverage'       : found
Checking for 'sphinx.ext.doctest'        : found
Checking for 'sphinx.ext.graphviz'       : found
Checking for 'sphinx.ext.intersphinx'    : found
Checking for 'sphinx.ext.mathjax'        : found
Checking for 'sphinxcontrib.bibtex'      : found
Checking for program 'tex'               : /usr/bin/tex
Checking for program 'latex'             : /usr/bin/latex
Checking for program 'pdflatex'          : /usr/bin/pdflatex
Checking for program 'xelatex'           : not found
Checking for program 'bibtex'            : /usr/bin/bibtex
Checking for program 'dvips'             : /usr/bin/dvips
Checking for program 'dvipdf'            : /usr/bin/dvipdf
Checking for program 'ps2pdf'            : /usr/bin/ps2pdf
Checking for program 'makeindex'         : /usr/bin/makeindex
Checking for program 'pdf2ps'            : /usr/bin/pdf2ps
Checking for program 'makeglossaries'    : /usr/bin/makeglossaries
```

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```
Traceback (most recent call last):
File "/home/ubuntu/git/rtems/rtems-docs/.waf3-2.0.19-
↪1f3c580272b15a03d2566843c5fe872a/waflib/Scripting.py", line 119, in waf_entry_
↪point
run_commands()
File "/home/ubuntu/git/rtems/rtems-docs/.waf3-2.0.19-
↪1f3c580272b15a03d2566843c5fe872a/waflib/Scripting.py", line 182, in run_commands
ctx=run_command(cmd_name)
File "/home/ubuntu/git/rtems/rtems-docs/.waf3-2.0.19-
↪1f3c580272b15a03d2566843c5fe872a/waflib/Scripting.py", line 173, in run_command
ctx.execute()
File "/home/ubuntu/git/rtems/rtems-docs/.waf3-2.0.19-
↪1f3c580272b15a03d2566843c5fe872a/waflib/Configure.py", line 85, in execute
super(ConfigurationContext,self).execute()
File "/home/ubuntu/git/rtems/rtems-docs/.waf3-2.0.19-
↪1f3c580272b15a03d2566843c5fe872a/waflib/Context.py", line 92, in execute
self.recurse([os.path.dirname(g_module.root_path)])
File "/home/ubuntu/git/rtems/rtems-docs/.waf3-2.0.19-
↪1f3c580272b15a03d2566843c5fe872a/waflib/Context.py", line 133, in recurse
user_function(self)
File "/home/ubuntu/git/rtems/rtems-docs/wscript", line 49, in configure
conf.recurse(b)
File "/home/ubuntu/git/rtems/rtems-docs/.waf3-2.0.19-
↪1f3c580272b15a03d2566843c5fe872a/waflib/Context.py", line 133, in recurse
user_function(self)
File "/home/ubuntu/git/rtems/rtems-docs/common/waf.py", line 264, in cmd_configure
latex.configure_tests(ctx)
File "/home/ubuntu/git/rtems/rtems-docs/common/latex.py", line 122, in configure_
↪tests
local_packs = local_packages()
File "/home/ubuntu/git/rtems/rtems-docs/common/latex.py", line 94, in local_
↪packages
host, version = host_name()
File "/home/ubuntu/git/rtems/rtems-docs/common/latex.py", line 85, in host_name
distro = platform.dist()
AttributeError: module 'platform' has no attribute 'dist'
ubuntu@ubuntu20lxc:~/git/rtems/rtems-docs$ python --version
Python 3.8.2
```

Author: Chris Johns 2020-08-25T22:42:47.000Z

Original author: kgardas

I cannot repeat the error. I have installed `Python 3.8.5` on FreeBSD 12 and successfully run:

```
python3.8 -m venv sphinx38
. ./sphinx38/bin/activate
pip install --upgrade pip
```

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```
pip install Sphinx
pip install sphinxcontrib-bibtex
cd rtems-docs.git
./waf distclean configure
```

The pip configuration is:

```
(sphinx38) ruru rtems-docs.git $ pip list
Package                       Version
----------------------------- ---------
alabaster                     0.7.12
Babel                         2.8.0
certifi                       2020.6.20
chardet                       3.0.4
docutils                      0.16
idna                          2.10
imagesize                     1.2.0
Jinja2                        2.11.2
latexcodec                    2.0.1
MarkupSafe                    1.1.1
oset                          0.1.3
packaging                     20.4
pip                           20.2.2
pybtex                        0.22.2
pybtex-docutils               0.2.2
Pygments                      2.6.1
pyparsing                     2.4.7
pytz                          2020.1
PyYAML                        5.3.1
requests                      2.24.0
setuptools                    47.1.0
six                           1.15.0
snowballstemmer               2.0.0
Sphinx                        3.2.1
sphinxcontrib-applehelp       1.0.2
sphinxcontrib-bibtex          1.0.0
sphinxcontrib-devhelp         1.0.2
sphinxcontrib-htmlhelp        1.0.3
sphinxcontrib-jsmath          1.0.1
sphinxcontrib-qthelp          1.0.3
sphinxcontrib-serializinghtml 1.1.4
urllib3                       1.25.10
```

Author: Trac Migrate 2023-07-10T08:29:50.000Z

Original author: kgardas

With the suggested way of using it:

```
python3.8 -m venv sphinx38
. ./sphinx38/bin/activate
pip install --upgrade pip
pip install Sphinx
pip install sphinxcontrib-bibtex
cd rtems-docs.git
./waf distclean configure
```

this runs fine. But when I try to add `--pdf` into waf I get following error:

```
(sphinx38) rtems@silence:~/git/rtems/rtems-docs$ ./waf distclean␣
↪configure --pdf
'distclean' finished successfully (0.003s)
Setting top to                           : /export/home/rtems/git/rtems/
↪rtems-docs
Setting out to                           : /export/home/rtems/git/rtems/
↪rtems-docs/build
Checking for program 'git'               : /usr/bin/git
Checking for program 'sphinx-build'      : /export/home/rtems/sphinx38/
↪bin/sphinx-build
Checking for program 'aspell'            : /usr/bin/aspell
Checking if Sphinx is at least 1.3       : yes (7.0)
Checking Sphinx Options                  : none
Checking Sphinx Nit-Pick mode            : no
Checking for 'sphinx.ext.autodoc'        : found
Checking for 'sphinx.ext.coverage'       : found
Checking for 'sphinx.ext.doctest'        : found
Checking for 'sphinx.ext.graphviz'       : found
Checking for 'sphinx.ext.intersphinx'    : found
Checking for 'sphinx.ext.mathjax'        : found
Checking for 'sphinxcontrib.bibtex'      : found
Checking for program 'tex'               : /usr/bin/tex
Checking for program 'latex'             : /usr/bin/latex
Checking for program 'pdflatex'          : /usr/bin/pdflatex
Checking for program 'xelatex'           : /usr/bin/xelatex
Checking for program 'bibtex'            : /usr/bin/bibtex
Checking for program 'dvips'             : /usr/bin/dvips
Checking for program 'dvipdf'            : /usr/bin/dvipdf
Checking for program 'ps2pdf'            : /usr/bin/ps2pdf
Checking for program 'makeindex'         : /usr/bin/makeindex
Checking for program 'pdf2ps'            : /usr/bin/pdf2ps
Checking for program 'makeglossaries'    : /usr/bin/makeglossaries
Traceback (most recent call last):
File "/export/home/rtems/git/rtems/rtems-docs/common/latex.py", line 85,
↪ in host_name
from distro import linux_distribution
ModuleNotFoundError: No module named 'distro'

During handling of the above exception, another exception occurred:

```

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```
Traceback (most recent call last):
File "/export/home/rtems/git/rtems/rtems-docs/.waf3-2.0.25-
↪767522112be77f8585812fcfaa08e805/waflib/Scripting.py", line 119, in␣
↪waf_entry_point
run_commands()
File "/export/home/rtems/git/rtems/rtems-docs/.waf3-2.0.25-
↪767522112be77f8585812fcfaa08e805/waflib/Scripting.py", line 182, in␣
↪run_commands
ctx=run_command(cmd_name)
File "/export/home/rtems/git/rtems/rtems-docs/.waf3-2.0.25-
↪767522112be77f8585812fcfaa08e805/waflib/Scripting.py", line 173, in␣
↪run_command
ctx.execute()
File "/export/home/rtems/git/rtems/rtems-docs/.waf3-2.0.25-
↪767522112be77f8585812fcfaa08e805/waflib/Configure.py", line 85, in␣
↪execute
super(ConfigurationContext,self).execute()
File "/export/home/rtems/git/rtems/rtems-docs/.waf3-2.0.25-
↪767522112be77f8585812fcfaa08e805/waflib/Context.py", line 92, in␣
↪execute
self.recurse([os.path.dirname(g_module.root_path)])
File "/export/home/rtems/git/rtems/rtems-docs/.waf3-2.0.25-
↪767522112be77f8585812fcfaa08e805/waflib/Context.py", line 133, in␣
↪recurse
user_function(self)
File "/export/home/rtems/git/rtems/rtems-docs/wscript", line 48, in␣
↪configure
conf.recurse(b)
File "/export/home/rtems/git/rtems/rtems-docs/.waf3-2.0.25-
↪767522112be77f8585812fcfaa08e805/waflib/Context.py", line 133, in␣
↪recurse
user_function(self)
File "/export/home/rtems/git/rtems/rtems-docs/common/waf.py", line 269,␣
↪in cmd_configure
latex.configure_tests(ctx)
File "/export/home/rtems/git/rtems/rtems-docs/common/latex.py", line␣
↪125, in configure_tests
local_packs = local_packages()
File "/export/home/rtems/git/rtems/rtems-docs/common/latex.py", line 97,
↪ in local_packages
host, version = host_name()
File "/export/home/rtems/git/rtems/rtems-docs/common/latex.py", line 87,
↪ in host_name
from platform import linux_distribution
ImportError: cannot import name 'linux_distribution' from 'platform' (/
↪usr/lib/python3.8/platform.py)
```

Anyway, the workaround for this exists and this is using python3 directly:

```
rtems@silence:~/git/rtems/rtems-docs$ python3 ./waf distclean configure --pdf
'distclean' finished successfully (0.001s)
Setting top to                           : /export/home/rtems/git/rtems/rtems-docs
Setting out to                           : /export/home/rtems/git/rtems/rtems-docs/build
Checking for program 'git'               : /usr/bin/git
Checking for program 'sphinx-build'      : /usr/bin/sphinx-build
Checking for program 'aspell'            : /usr/bin/aspell
Checking if Sphinx is at least 1.3       : yes (3.3)
Checking Sphinx Options                  : none
Checking Sphinx Nit-Pick mode            : no
Checking for 'sphinx.ext.autodoc'        : found
Checking for 'sphinx.ext.coverage'       : found
Checking for 'sphinx.ext.doctest'        : found
Checking for 'sphinx.ext.graphviz'       : found
Checking for 'sphinx.ext.intersphinx'    : found
Checking for 'sphinx.ext.mathjax'        : found
Checking for 'sphinxcontrib.bibtex'      : found
Checking for program 'tex'               : /usr/bin/tex
Checking for program 'latex'             : /usr/bin/latex
Checking for program 'pdflatex'          : /usr/bin/pdflatex
Checking for program 'xelatex'           : /usr/bin/xelatex
Checking for program 'bibtex'            : /usr/bin/bibtex
Checking for program 'dvips'             : /usr/bin/dvips
Checking for program 'dvipdf'            : /usr/bin/dvipdf
Checking for program 'ps2pdf'            : /usr/bin/ps2pdf
Checking for program 'makeindex'         : /usr/bin/makeindex
Checking for program 'pdf2ps'            : /usr/bin/pdf2ps
Checking for program 'makeglossaries'    : /usr/bin/makeglossaries
Checking for program 'pygmentize'        : /usr/bin/pygmentize
Checking for Tex package 'Bjarne'        : ok
Checking for Tex package 'alltt'         : ok
Checking for Tex package 'amsmath'       : ok
Checking for Tex package 'amssymb'       : ok
Checking for Tex package 'amstext'       : ok
Checking for Tex package 'anyfontsize'   : ok
Checking for Tex package 'array'         : ok
Checking for Tex package 'atbegshi'      : ok
Checking for Tex package 'babel'         : ok
Checking for Tex package 'calc'          : ok
Checking for Tex package 'capt-of'       : ok
Checking for Tex package 'charter'       : ok
Checking for Tex package 'cmap'          : ok
Checking for Tex package 'color'         : ok
Checking for Tex package 'enumitem'      : ok
Checking for Tex package 'eqparbox'      : ok
Checking for Tex package 'etoolbox'      : ok
Checking for Tex package 'fancybox'      : ok
```

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```
Checking for Tex package 'fancyhdr'      : ok
Checking for Tex package 'fancyvrb'      : ok
Checking for Tex package 'float'         : ok
Checking for Tex package 'fncychap'      : ok
Checking for Tex package 'fontenc'       : ok
Checking for Tex package 'footnote'      : ok
Checking for Tex package 'framed'        : ok
Checking for Tex package 'graphicx'      : ok
Checking for Tex package 'hypcap'        : ok
Checking for Tex package 'hyperref'      : ok
Checking for Tex package 'ifplatform'    : ok
Checking for Tex package 'ifthen'        : ok
Checking for Tex package 'inputenc'      : ok
Checking for Tex package 'keyval'        : ok
Checking for Tex package 'kvoptions'     : ok
Checking for Tex package 'lineno'        : ok
Checking for Tex package 'longtable'     : ok
Checking for Tex package 'makeidx'       : ok
Checking for Tex package 'multirow'      : ok
Checking for Tex package 'parskip'       : ok
Checking for Tex package 'pdftexcmds'    : ok
Checking for Tex package 'textcomp'      : ok
Checking for Tex package 'threeparttable' : ok
Checking for Tex package 'times'          : ok
Checking for Tex package 'titlesec'       : ok
Checking for Tex package 'upquote'        : ok
Checking for Tex package 'utf8'           : ok
Checking for Tex package 'wrapfig'        : ok
Checking for Tex package 'xcolor'         : ok
Checking for Tex package 'xstring'        : ok
Checking for Tex package 'inconsolata'    : ok
Checking for Tex package 'lato'           : ok
'configure' finished successfully (16.862s)
rtems@silence:~/git/rtems/rtems-docs$
```

Author: Trac Migrate 2023-07-10T08:31:08.000Z

Original author: kgardas

- **Resolution** set to ~"wontfix"
- **Status** changed from *new* to *closed*

Closing this since I'm original reporter and workaround for issue exists.

Author: Chris Johns 2025-09-19T01:06:51.640Z

changed the description

3.9.1.57 4050 - Change verson details to be version.revision

Id	4050
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Joel Sherrill
Created	2020-08-13T03:12:13.000Z
Closed	2025-09-19T00:06:16.105Z
Updated	2025-09-19T01:06:51.431Z
Milestone	6.1
Labels	priority::high, rtems::build, tickettype::defect, version::6, version::7
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4050
Merges	0

The RTEMS version code expects `major.minor.revision` to support `__RTEMS_MAJOR__`, `__RTEMS_MINOR__`, and `__RTEMS_REVISION__`. These labels are now misleading as they do not match the version numbering we have. RTEMS's version number is `version.revision`.

Author: Joel Sherrill 2021-12-21T15:12:41.000Z

What specifically is "RTEMS version code" and where is it all? What needs fixing?

Author: Chris Johns 2022-11-29T23:08:40.000Z

- **Milestone** changed from %"6.1" to %"7.1"
- **Version** changed from ~"6" to ~"7"

Across the RTEMS code base and ecosystem we need to make the versioning consistent. At the moment is it not.

Do we keep `major.minor.revision` with `revision` always `0` and the leave things as they are or do we change it? There needs to be a policy established first.

Is this better handled in 7?

Author: Joel Sherrill 2025-09-19T00:06:00.860Z

changed the description

Author: Joel Sherrill 2025-09-19T00:06:00.903Z

unassigned @tracmigrate

Author: Joel Sherrill 2025-09-19T00:06:16.127Z

set status to **Done**

3.9.1.58 4042 - dosfs: Memory leak on failed mount attempts (cloned)

Id	4042
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-08-04T06:22:47.000Z
Updated	2025-09-19T01:06:51.143Z
Milestone	6.1
Labels	filesystem::fat, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4042
Merges	0

Original author: Christian Mauderer

Cloned from #4041:

If the mount for a dosfs (FAT) fails, the `converter` that is used to encode and decode the file names is not destroyed. That will lead to memory leaks.

Note that there are two cases:

1. User doesn't provide a converter. In this case a default converter is created implicitly.
2. User does provide a converter.

Both have to be handled slightly different.

Author: Trac Migrate 2020-08-04T06:25:51.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"87fdb206fa018bd1366434a5535e608eb7f45137/rtems" 87fdb20/rtems]:

```
dosfs: Fix memory leak on failed mounts.

Currently if mount fails, a converter isn't destroyed. We have to take
care of two cases:

1. The user doesn't provide a converter.

In this case mounting a dosfs creates a default converter. This patch
makes sure that the converter is destroyed again if mount failes for
this case.

```

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```
2. The user provides a converter.

In this case it's not sure that the dosfs specific routines are reached
because mount can fail before that. Therefore the user has to destroy
the converter himself again. This patch adds a documentation for that
and implements it in the media server.

Closes #4042.
```

Author: Chris Johns 2025-09-19T01:06:51.231Z

changed the description

3.9.1.59 4041 - dosfs: Memory leak on failed mount attempts

Id	4041
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-08-04T06:22:21.000Z
Updated	2025-09-19T01:06:50.920Z
Milestone	6.1
Labels	filesystem::fat, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4041
Merges	1

Original author: Christian Mauderer

If the mount for a dosfs (FAT) fails, the `converter` that is used to encode and decode the file names is not destroyed. That will lead to memory leaks.

Note that there are two cases:

1. User doesn't provide a converter. In this case a default converter is created implicitly.
2. User does provide a converter.

Both have to be handled slightly different.

Author: Trac Migrate 2020-08-04T06:27:45.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"4a2ac5ef8d7e8bac4c63b26420d0df08ce82aa09/rtems" 4a2ac5e/rtems]:

```
dosfs: Fix memory leak on failed mounts.

Currently if mount fails, a converter isn't destroyed. We have to take
care of two cases:

1. The user doesn't provide a converter.

In this case mounting a dosfs creates a default converter. This patch
makes sure that the converter is destroyed again if mount failes for
this case.

2. The user provides a converter.

In this case it's not sure that the dosfs specific routines are reached
because mount can fail before that. Therefore the user has to destroy
the converter himself again. This patch adds a documentation for that
and implements it in the media server.

Closes #4041.
```

Author: Chris Johns 2025-09-19T01:06:51.010Z

changed the description

Author: Chris Johns 2025-09-19T01:06:51.338Z

mentioned in issue #4042

3.9.1.60 4035 - Reserved identifier “time” re-used in rtems_clock_get_tod_timeval()

Id	4035
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-07-31T10:17:10.000Z
Updated	2025-09-19T01:06:50.803Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4035
Merges	0

Original author: JSchweikhardt

The ISO C identifier “time” from time.h is re-used in the prototype and definition of the rtems_clock_get_tod_timeval() function (and maybe elsewhere too). In certain cases this could lead to undefined behavior. It certainly upsets our lint (Gimpel FlexeLint).

It's good software hygiene to avoid shadowing ISO C identifiers. Desired change: in cpukit/rtems/src/clockgettodtimeval.c use an unreserved identifier.

- x.diff

Author: Trac Migrate 2020-07-31T13:58:47.000Z

Original author: JSchweikhardt

The header should also be fixed, cpukit/include/rtems/rtems/clock.h

Author: Joel Sherrill 2020-07-31T14:31:47.000Z

Original author: JSchweikhardt

Could you please provide a patch for this? It seems like a reasonable and mostly benign change but will ripple to Doxygen and documentation. If you fix the code to make your Flexelint happy, then we can be sure it is really fixed.

Author: Trac Migrate 2020-08-01T08:38:16.000Z

Original author: JSchweikhardt

- **Attachment** x.diff added

time-is-reserved

Author: Trac Migrate 2020-08-01T08:45:40.000Z

Original author: JSchweikhardt

I've attached a patch renaming time to the_time, also in doxygen comments. I'm new to git and followed the instructions for patch creation but ran into a wall with git format-patch (no output anywhere I could find). So I used git diff. The commit message could be

> Rename the reserved identifier "time" to "the_time" to not invade ISO C name space.

Author: Trac Migrate 2021-09-30T05:27:48.000Z

Original author: JSchweikhardt

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"dde74af944553de87c18fe1f4973e4899193dd3b/rtems" dde74af/rtems]:

```
rtems: Adjust parameter names

Adjust parameter names to match with the declaration.  This avoid using
a name reserved by the C standard: "time".

Close #4035.
```

Author: Amar Takhar 2024-04-25T20:48:17.777Z

changed the description

3.9.1.61 4000 - Unexpected test failures the arm/xilinx-zynq BSPs

Id	4000
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-06-05T04:28:42.000Z
Updated	2025-09-19T01:06:50.704Z
Milestone	6.1
Labels	arch:arm, old-indefinite, priority::normal, resolution::wontfix, ticket-type::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4000
Merges	0

Original author: sebastian.huber

There are unexpected test failures on this BSP family:

- ttest01
- spconsole01
- spcpucounter01

Author: Chris Johns 2022-11-29T22:12:01.000Z

Original author: sebastian.huber

- **Milestone** changed from %"6.1" to %"Indefinite"
- **Version** ~"5" deleted

Author: Chris Johns 2022-11-29T22:12:41.000Z

Original author: sebastian.huber

- **Resolution** set to ~"wontfix"
- **Status** changed from *assigned* to *closed*

If the test cases are still open please reopen.

Author: Amar Takhar 2025-09-05T02:57:43.017Z

changed the description

3.9.1.62 3999 - Unexpected test failures on arm/beagleboneblack

Id	3999
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-06-05T04:26:30.000Z
Updated	2025-09-19T01:06:50.610Z
Milestone	6.1
Labels	arch:arm, old-indefinite, priority::normal, resolution::wontfix, ticket-type::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3999
Merges	0

Original author: sebastian.huber

There are unexpected test failures on this BSP:

- i2c01
- spcache01
- spintrcritical05
- spintrcritical10
- spintrcritical20
- spintrcritical21
- spsysinit01
- tmcontext01
- tmtimer01

Author: Chris Johns 2022-11-29T22:11:33.000Z

Original author: sebastian.huber

- **Milestone** changed from %”6.1” to %”Indefinite”
- **Version** ~”5” deleted

Author: Chris Johns 2022-11-29T22:13:01.000Z

Original author: sebastian.huber

- **Resolution** set to ~"wontfix"
- **Status** changed from *assigned* to *closed*

If the test cases are still open please reopen.

Author: Amar Takhar 2025-09-05T02:57:42.810Z

changed the description

3.9.1.63 3965 - Doxygen Wiki Page Has Content Not in Software Engineering Guide

Id	3965
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-04-30T22:16:13.000Z
Updated	2025-09-19T01:06:50.509Z
Milestone	6.1
Labels	gsoc::small, priority::normal, resolution::duplicate, ticket-type::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3965
Merges	0

https://devel.rtems.org/wiki/Developer/Coding/Doxygen needs further review against the Doxygen Guidelines at https://docs.rtems.org/branches/master/eng/coding-doxygen.html#.

Some appears to be merged. Other parts are clearly missing.

Author: Joel Sherrill 2020-05-01T13:06:45.000Z

- **Resolution** set to ~"duplicate"
- **Status** changed from *new* to *closed*

Dupe of #2986

Author: Amar Takhar 2024-04-25T20:48:07.536Z

changed the description

3.9.1.64 3950 - Just trying something

Id	3950
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-04-14T02:38:09.000Z
Updated	2025-09-19T01:06:50.423Z
Milestone	6.1
Labels	old-indefinite, priority::normal, resolution::invalid, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3950
Merges	0

Original author: ezeob002

Automation testing for Dr Bloom's project

Author: Chris Johns 2020-04-14T04:20:25.000Z

Original author: ezeob002

- **Milestone** changed from %"5.2" to %"Indefinite"
- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*
- **Version** ~"5" deleted

Please do not play with the ticketing system. If you have a question please ask on the lists. Thanks.

Author: Amar Takhar 2025-09-05T02:57:41.984Z

changed the description

3.9.1.65 3922 - [rtems-docs] user/rsb: Typos in multiple files

Id	3922
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-04-02T08:03:38.000Z
Updated	2025-09-19T01:06:50.332Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, ticket-type::enhancement, tool::rtems-source-builder, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3922
Merges	0

Original author: mritunjay394

This ticket wants to highlight the typos in https://git.rtems.org/rtems-docs/tree/user/rsb. I have worked on the PATCH to fix it and will be sending it to close this.

- 0001-Fix-typos-in-master-rtems-docs-user-rsb.patch

Author: Trac Migrate 2020-04-02T08:20:19.000Z

Original author: mritunjay394

- **Attachment** 0001-Fix-typos-in-master-rtems-docs-user-rsb.patch added

PATCH to Close #3922

Author: Trac Migrate 2020-04-02T09:26:45.000Z

Original author: mritunjay394

- **Owner** set to Mritunjay <mritunjaysharma394@gmail.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"f68298442927ebc74d5f60789e0c569e2a10869b/rtems-docs" f682984/rtems-docs]:

```
user/rsb: Fix typos (#3922)

Closes #3922
```

Author: Amar Takhar 2024-04-25T20:47:58.261Z

changed the description

3.9.1.66 3920 - Update POSIX compliance guide

Id	3920
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Closed by	Joel Sherrill
Created	2020-03-27T19:02:17.000Z
Closed	2024-06-14T17:05:36.106Z
Updated	2025-09-19T01:06:50.241Z
Milestone	6.1
Labels	old-indefinite, priority::low, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3920
Merges	0

Original author: eshandhawan51

Some headers and methods have been implemented in Newlib/RTEMS/RTEMS libbsd but there supported status still needs to be updated in the compliance guide

wcsncasecmp_l () of wchar.h has implementation in libc/string pselect() of select.h has been implemented in RTEMS libbsd

There might be other methods that might have been missed out can be reported here.

Compliance guide: https://docs.rtems.org/branches/master/posix-compliance/index.html

Author: Trac Migrate 2020-03-27T19:06:50.000Z

Original author: eshandhawan51

There are also a few functions that are also not present in the guide

these are the methods I couldn't find in the compliance guide.

sys/stat.h: int utimensat sys/stat.h: int _fstat sys/_default_fcntl.h: extern int futimesat sys/time.h: int futimesat

The list of these methods was made taking reference from https://lists.rtems.org/pipermail/devel/2019-March/053149.html

Author: Joel Sherrill 2024-06-14T17:05:36.232Z

moved to rtems/docs/rtems-docs#13

Author: Amar Takhar 2025-09-05T02:55:30.051Z

changed the description

3.9.1.67 3915 - File or Fix an RTEMS Ticket for a Coverity Scan Issue

Id	3915
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Closed by	Gedare Bloom
Created	2020-03-22T15:54:08.000Z
Closed	2025-01-18T01:59:57.419Z
Updated	2025-09-19T01:06:50.149Z
Milestone	6.1
Labels	project::small, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3915
Merges	0

See https://devel.rtems.org/wiki/GCI/Coding/CoverityIssues for more details and a list of open Coverity identified issues.

Author: Amar Takhar 2024-04-25T20:47:57.039Z

changed the description

Author: Gedare Bloom 2025-01-18T01:59:57.182Z

Closing this GCI task ticket.

3.9.1.68 3913 - Review wiki references in rtems-docs for removal

Id	3913
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Closed by	Gedare Bloom
Created	2020-03-20T16:40:43.000Z
Closed	2025-01-18T02:01:07.090Z
Updated	2025-09-19T01:06:50.057Z
Milestone	6.1
Labels	gsoc::small, priority::normal, project::small, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3913
Merges	0

This task asks you to check the development manuals from https://docs.rtems.org/ for links to this wiki (devel.rtems.org) and to identify whether the linked content has been moved to the manuals, or whether it should be moved to the manuals. It it has been moved, the reference in the manual should be to where it is in the manual. If the wiki content should be moved, determine how to move it and submit a patch to move the linked content. Once you identify

the linked content is in the docs, update the link to reference to the location of the content in the docs.

Long term, there is much content in the wiki that needs to find a new home in rtems-docs so it can be version controlled and packaged in sync with releases. Or it needs to be removed. The analysis of each wiki link may result in converting content to .rst and deleting the Wiki page, correcting links within the .rst documentation on previously converted documentation, or something else. Figure out what you think is the best place for the content given that we want as much as possible in rtems-docs for better version control and access. Make a recommendation, follow up with patches, lists of places to change references that you can't, etc.

There are similar tasks to review and convert specific categories of wiki pages. This may cross over with that task but this list is from the rtems-docs perspective.

To get the list:

```
cd ...../rtems-docs
grep -r "http:.*wiki"
```

There are a few categories of this on first review:

- Wiki pages converted to .rst content for the Software Engineering Guide. These are denoted by a comment with the Wiki URL in the text as a comment. Review the SW Eng version and verify it correctly represents the Wiki content. Fix any references to wiki pages remaining in the converted text and submit a patch. The end result of this should be to delete the original wiki page and identify where this page was referenced so those can be updated.
- References to BSP wiki pages. Hopefully all the BSP wiki pages can be reviewed and either deleted as obsolete or of marginal value or converted to content in the Users Guide.
- References to other Wiki pages. These may be correct or incorrect. The content of the Wiki page may need to be merged into somewhere in rtems-docs. The analysis will determine what the best thing to do is.

Author: Gedare Bloom 2020-03-20T18:37:30.000Z

- **Description** changed

```
+ This task asks you to check the [development manuals from https://
↪docs.rtems.org/](https://docs.rtems.org/) for links to this wiki␣
↪(devel.rtems.org) and to identify whether the linked content has been␣
↪moved to the manuals, or whether it should be moved to the manuals.␣
↪If it should be moved, determine how to move it and submit a patch to␣
↪move the linked content. Once you identify the linked content is in␣
↪the docs, update the link to reference to the location of the content␣
↪in the docs.
+
Long term, there is much content in the wiki that needs to find a new␣
↪home in rtems-docs so it can be version controlled and packaged in␣
↪sync with releases. Or it needs to be removed. The analysis of each␣
↪wiki link may result in converting content to .rst and deleting the␣
↪Wiki page, correcting links within the .rst documentation on␣
```

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```
previously converted documentation, or something else. Figure out what you think is the best place for the content given that we want as much as possible in rtems-docs for better version control and access. Make a recommendation, follow up with patches, lists of places to change references that you can't, etc.

There are similar tasks to review and convert specific categories of wiki pages. This may cross over with that task but this list is from the rtems-docs perspective.

To get the list:

{{{
cd ...../rtems-docs
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}}}

There are a few categories of this on first review:

* Wiki pages converted to .rst content for the Software Engineering Guide. These are denoted by a comment with the Wiki URL in the text as a comment. Review the SW Eng version and verify it correctly represents the Wiki content. Fix any references to wiki pages remaining in the converted text and submit a patch. The end result of this should be to delete the original wiki page and identify where this page was referenced so those can be updated.

* References to BSP wiki pages. Hopefully all the BSP wiki pages can be reviewed and either deleted as obsolete or of marginal value or converted to content in the Users Guide.

* References to other Wiki pages. These may be correct or incorrect. The content of the Wiki page may need to be merged into somewhere in rtems-docs. The analysis will determine what the best thing to do is.
```

Author: Joel Sherrill 2020-03-20T19:40:49.000Z

- **Description** changed

```
- This task asks you to check the [development manuals from https://docs.rtems.org/](https://docs.rtems.org/) for links to this wiki (devel.rtems.org) and to identify whether the linked content has been moved to the manuals, or whether it should be moved to the manuals. If it should be moved, determine how to move it and submit a patch to move the linked content. Once you identify the linked content is in the docs, update the link to reference to the location of the content in the docs.
?
```

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```
↪                                                                          ␣
↪                                                                          ␣
↪                                                                ^^^^^^^^^^^
↪            ^^^^^^^^^^^^ ^^^^^^^^^^^^^^^^^^ ^^^^^

+ This task asks you to check the [development manuals from https://
↪docs.rtems.org/](https://docs.rtems.org/) for links to this wiki␣
↪(devel.rtems.org) and to identify whether the linked content has been␣
↪moved to the manuals, or whether it should be moved to the manuals.␣
↪It it has been moved, the reference in the manual should be to where␣
↪it is in the manual. If the wiki content should be moved, determine␣
↪how to move it and submit a patch to move the linked content. Once␣
↪you identify the linked content is in the docs, update the link to␣
↪reference to the location of the content in the docs.
?                                                                          ␣
↪                                                                          ␣
↪                                                                          ␣
↪                                                                ^^^^^^^^  ␣
↪++        ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^ ^^^^^^^^^^^^^^^^^^
↪^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^ ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
↪^^^^^^^^^^^^


Long term, there is much content in the wiki that needs to find a new␣
↪home in rtems-docs so it can be version controlled and packaged in␣
↪sync with releases. Or it needs to be removed. The analysis of each␣
↪wiki link may result in converting content to .rst and deleting the␣
↪Wiki page, correcting links within the .rst documentation on␣
↪previously converted documentation, or something else. Figure out␣
↪what you think is the best place for the content given that we want␣
↪as much as possible in rtems-docs for better version control and␣
↪access. Make a recommendation, follow up with patches, lists of␣
↪places to change references that you can't, etc.

There are similar tasks to review and convert specific categories of␣
↪wiki pages. This may cross over with that task but this list is from␣
↪the rtems-docs perspective.

To get the list:

{{{
cd ...../rtems-docs
grep -r "http:.*wiki"
}}}

There are a few categories of this on first review:

* Wiki pages converted to .rst content for the Software Engineering␣
↪Guide. These are denoted by a comment with the Wiki URL in the text␣
```

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```
↪as a comment. Review the SW Eng version and verify it correctly␣
↪represents the Wiki content. Fix any references to wiki pages␣
↪remaining in the converted text and submit a patch. The end result of␣
↪this should be to delete the original wiki page and identify where␣
↪this page was referenced so those can be updated.

* References to BSP wiki pages. Hopefully all the BSP wiki pages can be␣
↪reviewed and either deleted as obsolete or of marginal value or␣
↪converted to content in the Users Guide.

* References to other Wiki pages. These may be correct or incorrect.␣
↪The content of the Wiki page may need to be merged into somewhere in␣
↪rtems-docs. The analysis will determine what the best thing to do is.
```

Author: Amar Takhar 2024-04-25T20:47:56.626Z

changed the description

Author: Gedare Bloom 2024-11-09T18:40:08.900Z

mentioned in issue #5147

Author: Gedare Bloom 2025-01-18T02:01:06.827Z

This is no longer valid.

3.9.1.69 3906 - Clean Up User Manual Wiki Pages

Id	3906
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Closed by	Gedare Bloom
Created	2020-03-15T18:57:24.000Z
Closed	2025-01-18T02:02:28.222Z
Updated	2025-09-19T01:06:49.964Z
Milestone	6.1
Labels	gsoc::small, project::small, tickettype::enhancement, tickettype::task
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3906
Merges	0

There is still a significant amount of content listed under https://devel.rtems.org/wiki/TBR/UserManual in the Wiki which needs to find a new home in some manual in the rtems-docs repository or be removed entirely.

This ticket can be closed when all Wiki pages under UserManual are removed.

Author: Amar Takhar 2024-04-25T20:47:54.828Z

changed the description

Author: Gedare Bloom 2025-01-18T02:02:27.976Z

This is no longer relevant.

3.9.1.70 3905 - Clean Up BSP Wiki Pages

Id	3905
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Closed by	Amar Takhar
Created	2020-03-15T18:52:01.000Z
Closed	2024-11-22T00:54:37.988Z
Updated	2025-09-19T01:06:49.873Z
Milestone	6.1
Labels	gsoc::small, old-indefinite, priority::normal, tickettype::enhancement, tickettype::task
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3905
Merges	0

This has already been posted and discussed a bit on the development list (https://lists.rtems.org/pipermail/devel/2020-March/058220.html). The goal of this series of tasks is to eliminate all BSP Wiki pages and merge useful content into the Users Guide.

Start by picking a BSP from the list at https://devel.rtems.org/wiki/TBR/Website/Board_Support_Packages. Look at the BSP specific wiki page.

Is the BSP still in the source tree? If not, post to devel@ and recommend the page be removed. This requires admin privileges in the Wiki.

If the BSP is still in the source tree, convert the text and merge it into the appropriate place in the Users Guide (hosted in rtems-docs repo). Make sure all the links are still active. This may require pointing some to archive.org. If you have doubt about the quality or value of the information on the Wiki page, please ask on devel@ before spending time on the conversion.

This ticket can be closed when all BSP Wiki pages are removed.

Author: Joel Sherrill 2020-03-15T18:52:33.000Z

- **Description** changed

```
This has already been posted and discussed a bit on the development␣
↪list (https://lists.rtems.org/pipermail/devel/2020-March/058220.html).
↪ The goal of this series of tasks is to eliminate all BSP Wiki pages␣
```

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(continued from previous page)

```
 ↪and merge useful content into the Users Guide.
2
3 Start by picking a BSP from the list at https://devel.rtems.org/wiki/
 ↪TBR/Website/Board_Support_Packages. Look at the BSP specific wiki␣
 ↪page.
4
5 Is the BSP still in the source tree? If not, post to devel@ and␣
 ↪recommend the page be removed. This requires admin privileges in the␣
 ↪Wiki.
6
7 - If the BSP is still in the source tree, convert the text and merge it␣
 ↪into the appropriate place in the Users Guide (hosted in rtems-docs␣
 ↪repo). Make sure all the links are still active. This may require␣
 ↪pointing some to archive.org. If you have doubt about the quality or␣
 ↪value of the information on the Wiki page, please ask on devel@␣
 ↪before spending time on the conversion
8 + If the BSP is still in the source tree, convert the text and merge it␣
 ↪into the appropriate place in the Users Guide (hosted in rtems-docs␣
 ↪repo). Make sure all the links are still active. This may require␣
 ↪pointing some to archive.org. If you have doubt about the quality or␣
 ↪value of the information on the Wiki page, please ask on devel@␣
 ↪before spending time on the conversion.
9 ?                                                                    ␣
 ↪                                                                    ␣
 ↪                                                                    ␣
 ↪                                                                    ␣
 ↪                                                                    ␣
 ↪                          +
```

Author: Joel Sherrill 2020-03-15T18:56:34.000Z

- **Description** changed

```
1 This has already been posted and discussed a bit on the development␣
 ↪list (https://lists.rtems.org/pipermail/devel/2020-March/058220.html).
 ↪ The goal of this series of tasks is to eliminate all BSP Wiki pages␣
 ↪and merge useful content into the Users Guide.
2
3 Start by picking a BSP from the list at https://devel.rtems.org/wiki/
 ↪TBR/Website/Board_Support_Packages. Look at the BSP specific wiki␣
 ↪page.
4
5 Is the BSP still in the source tree? If not, post to devel@ and␣
 ↪recommend the page be removed. This requires admin privileges in the␣
 ↪Wiki.
6
7 If the BSP is still in the source tree, convert the text and merge it␣
 ↪into the appropriate place in the Users Guide (hosted in rtems-docs␣
```

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```
↪repo). Make sure all the links are still active. This may require␣
↪pointing some to archive.org. If you have doubt about the quality or␣
↪value of the information on the Wiki page, please ask on devel@␣
↪before spending time on the conversion.
+
+ This ticket can be closed when all BSP Wiki pages are removed.
```

Author: Trac Migrate 2020-04-02T21:52:30.000Z

In [changeset:"edfc90253b449641e3c1e1ab1948015ca90c47c7/rtems-docs" edfc902/rtems-docs]:

```
doc: Moving M68K BSP Content to User Manual (#3905)

Fixed trailing spaces.
```

Author: Amar Takhar 2024-04-25T20:47:54.405Z

changed the description

3.9.1.71 3892 - RTEMS Python Standardisation – Pure Python project.

Id	3892
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Amar Takhar
Created	2020-02-29T01:30:06.000Z
Updated	2025-09-19T01:06:49.781Z
Milestone	6.1
Labels	gsoc::large, old-indefinite, priority::normal, resolution::invalid, rtems::testing, tickettype::project, tool
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3892
Merges	0

[Contents, inline)]

Mentors

Amar Takhar

Status =

GSoC project or looking for funding.

Introduction

A qualified developer for this project does not need to know anything about RTEMS or an RTOS in general. It is also not required to know C, C++ or any other programming language outside of Python.

Project

RTEMS currently has several Python tools that need to be brought under the same ecosystem and several tools that are missing that need to be written.

This task also includes the creation of a beginners tutorial with ASCII screen-capture on using the new tools created for testing code on real hardware.

3.9.1.71.4.1 Goal

- Runs under Python 2.x and 3.x.
- A general RTEMS tool library with a standard API to handle common tasks.
- All utilities callable as a function within the API with the tool itself being a thin layer.
- Testing on all API commands under both Python 2.x and 3.x.
- In-source documentation.
- Tutorial using new Python utility for running code on hardware.

3.9.1.71.4.2 What you will learn

- How to properly test Python software.
- Using code coverage tools.
- Using performance tools.
- Writing technical documentation both in and out of source.,
- Writing a beginner tutorial from a technical perspective.
- Library/API design and consumption.
- Using modern documentation tools.

3.9.1.71.4.3 Prerequisite

- Medium knowledge of Python.
- Knowledge of how to write well-written Python following PEPs,
- Understanding of how libraries and APIs work.
- A Beaglebone Black with an FTDI cable.
- Basic knowledge of UNIX commandline and Git.

3.9.1.71.4.4 Good to have

None of these are required but having them will strengthen a candidates chances of being accepted.

- Cross-platform programming experience.
- Knowledge of debugging and profiling Python code
- Experience with writing documents.

3.9.1.71.4.5 Current tools

The following tools are among the programs that current exist that need to be worked on.

- rtems-run
- rtems-test
- tftp proxy
- rtems-source-builder

3.9.1.71.4.6 New tools

Currently, low-level tools exist that help with running binaries on real hardware. However RTEMS lacks a high level management utility for configuring `tftp-proxy`, `rtems-test`, `rtems-run` and `ser2net`.

Further to this there are other tasks that need to be completed such as creating a usable `u-boot` image with the correct `FDT` files. `mkimage` must be used over test binaries to create a flashable image to be sent to the hardware for execution.

3.9.1.71.4.7 Tutorial

RTEMS lacks a general tutorial for new users to the project. Part of writing a new tool for handling running code on real hardware is to lower the burden of new users to test RTEMS for their requirements.

A new tutorial describing this process and the usage of the new tool is required for successful completion.

3.9.1.71.4.8 Testing

The entire API will need to be tested using `pytest`. This will include running under Python 2.x and 3.x for compatibility purposes on our main platforms. `FreeBSD`, `Linux`, `Windows`, and `OS X`.

Code coverage should be at or near 100% upon the completion of this project.

Author: Amar Takhar 2020-02-29T05:58:45.000Z

- **Description** changed

```
[[Contents, inline)](../wikis/PageOutline(1-5,)]

= Mentors =
```

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```
Amar Takhar

= Status =

GSoC project or looking for funding.

= Introduction =

A qualified developer for this project does not need to know anything about RTEMS or an RTOS in general.

+ ----

= Project =

RTEMS currently has several Python tools that need to be brought under the same ecosystem and several tools that are missing that need to be written.

This task also includes the creation of a beginners tutorial with ASCII screen-capture on using the new tools created for testing code on real hardware.


== Goal ==

* Runs under Python 2.x and 3.x.
* A general RTEMS tool library with a standard API to handle common tasks.
* All utilities callable as a function within the API with the tool itself being a thin layer.
* Testing on all API commands under both Python 2.x and 3.x.
* In-source documentation.
* Tutorial using new Python utility for running code on hardware.

+ === What you will learn ===
+
+  * How to properly test Python software.
+  * Using code coverage tools.
+  * Using performance tools.
+  * Writing technical documentation both in and out of source.,
+  * Writing a beginner tutorial from a technical perspective.
+  * Library/API design and consumption.
+  * Using modern documentation tools.
+


== Prerequisite ==

* Medium knowledge of Python.
```

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```
* Knowledge of how to write well-written Python following PEPs,
* Understanding of how libraries and APis work.
* A Beaglebone Black with an FTDI cable.


- == Good to Have ==
?            ^

+ == Good to have ==
?            ^


None of these are required but having them will strengthen a candidates␣
↪chances of being accepted.

* Cross-platform programming experience.
* Knowledge of debugging and profiling Python code
* Experience with writing documents.


- == Current Tools ==
?            ^

+ == Current tools ==
?            ^

+
+ The following tools are among the programs that current exist that␣
↪need to be worked on.
+
+   * [rtems-run](https://git.rtems.org/rtems-tools/)
+   * [rtems-test](https://git.rtems.org/rtems-tools/)
+   * [tftp proxy](https://git.rtems.org/rtems-tools/)
+   * [rtems-source-builder](https://git.rtems.org/rtems-source-builder/
↪)


+
- == New Tools ==
?        ^

+ == New tools ==
?        ^


Currently, low-level tools exist that help with running binaries on␣
↪real hardware.  However RTEMS lacks a high level management utility␣
↪for configuring `tftp-proxy`, `rtems-test`, `rtems-run` and `ser2net`.

```

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```
Further to this there are other tasks that need to be completed such as creating a usable `u-boot` image with the correct `FDT` files.  `mkimage` must be used over test binaries to create a flashable image to be sent to the hardware for execution.


== Tutorial ==

RTEMS lacks a general tutorial for new users to the project.  Part of writing a new tool for handling running code on real hardware is to lower the burden of new users to test RTEMS for their requirements.

A new tutorial describing this process and the usage of the new tool is required for successful completion.


== Testing ==

The entire API will need to be tested using `pytest`.  This will include running under Python 2.x and 3.x for compatibility purposes on our main platforms.  `FreeBSD`, `Linux`, `Windows`, and `OS X`.

Code coverage should be at or near 100% upon the completion of this project.
```

Finish project, some current tools may be missing.

Author: Amar Takhar 2020-02-29T06:02:33.000Z

- **Description** changed

```
[[Contents, inline)](../wikis/PageOutline(1-5,)]

= Mentors =
Amar Takhar

= Status =

GSoC project or looking for funding.

= Introduction =

- A qualified developer for this project does not need to know anything about RTEMS or an RTOS in general.
+ A qualified developer for this project does not need to know anything about RTEMS or an RTOS in general.  It is also not required to know C, C++ or any other programming language outside of Python.

----
```

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```
16
17 = Project =
18
19 RTEMS currently has several Python tools that need to be brought under␣
   ↪the same ecosystem and several tools that are missing that need to be␣
   ↪written.
20
21 This task also includes the creation of a beginners tutorial with ASCII␣
   ↪screen-capture on using the new tools created for testing code on␣
   ↪real hardware.
22
23
24 == Goal ==
25
26 * Runs under Python 2.x and 3.x.
27 * A general RTEMS tool library with a standard API to handle common␣
   ↪tasks.
28 * All utilities callable as a function within the API with the tool␣
   ↪itself being a thin layer.
29 * Testing on all API commands under both Python 2.x and 3.x.
30 * In-source documentation.
31 * Tutorial using new Python utility for running code on hardware.
32
33 === What you will learn ===
34
35 * How to properly test Python software.
36 * Using code coverage tools.
37 * Using performance tools.
38 * Writing technical documentation both in and out of source.,
39 * Writing a beginner tutorial from a technical perspective.
40 * Library/API design and consumption.
41 * Using modern documentation tools.
42
43
44 == Prerequisite ==
45
46 * Medium knowledge of Python.
47 * Knowledge of how to write well-written Python following PEPs,
48 * Understanding of how libraries and APis work.
49 * A Beaglebone Black with an FTDI cable.
50 +  * Basic knowledge of UNIX commandline and Git.
51
52
53 == Good to have ==
54
55 None of these are required but having them will strengthen a candidates␣
   ↪chances of being accepted.
56
57 * Cross-platform programming experience.
```

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```
* Knowledge of debugging and profiling Python code
* Experience with writing documents.


== Current tools ==

The following tools are among the programs that current exist that need to be worked on.

* [https://git.rtems.org/rtems-tools/ rtems-run]
* [https://git.rtems.org/rtems-tools/ rtems-test]
* [https://git.rtems.org/rtems-tools/ tftp proxy]
* [https://git.rtems.org/rtems-source-builder/ rtems-source-builder]



== New tools ==

Currently, low-level tools exist that help with running binaries on real hardware.  However RTEMS lacks a high level management utility for configuring `tftp-proxy`, `rtems-test`, `rtems-run` and `ser2net`.

Further to this there are other tasks that need to be completed such as creating a usable `u-boot` image with the correct `FDT` files.  `mkimage` must be used over test binaries to create a flashable image to be sent to the hardware for execution.


== Tutorial ==

RTEMS lacks a general tutorial for new users to the project.  Part of writing a new tool for handling running code on real hardware is to lower the burden of new users to test RTEMS for their requirements.

A new tutorial describing this process and the usage of the new tool is required for successful completion.


== Testing ==

The entire API will need to be tested using `pytest`.  This will include running under Python 2.x and 3.x for compatibility purposes on our main platforms.  `FreeBSD`, `Linux`, `Windows`, and `OS X`.

Code coverage should be at or near 100% upon the completion of this project.
```

- **Summary** changed from *RTEMS Python Standardisation* to *RTEMS Python Standardisation – Pure Python project.*

Note that this is a pure python project in the title to help it stand out for Python-only students.

Also note that only Python is required in the introduction and add a note about knowing basic UNIX CLI and Git.

Author: Trac Migrate 2021-12-26T12:01:17.000Z

I would like to contribute for this project as a GSoC 2022 student. I'm quite comfortable with python.

Author: Amar Takhar 2023-01-19T17:27:54.000Z

- **Resolution** set to ~"invalid"
- **Status** changed from *assigned* to *closed*

No longer relevant maybe in the future.

Author: Amar Takhar 2024-04-25T20:47:51.790Z

changed the description

3.9.1.72 3880 - Update sphinx_rtd_theme to 68a19ca / 0.4.3.dev0.

Id	3880
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Trac Migrate
Created	2020-02-23T01:37:16.000Z
Updated	2025-09-19T01:06:49.686Z
Milestone	6.1
Labels	doc::sphinx, priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3880
Merges	0

I've been running this version for a while now. It should fix any issues we're having I tested it and it works fine.

This should fix the search issues we've been having.

- 0001-Update-sphinx_rtd_theme.patch

Author: Amar Takhar 2020-02-23T01:39:14.000Z

- **Attachment** 0001-Update-sphinx_rtd_theme.patch added

Patch for update.

Author: Amar Takhar 2020-02-25T04:24:41.000Z

- **Cc** added @@chrisj

Does this look okay to commit?

Author: Trac Migrate 2020-02-26T05:10:06.000Z

- **Owner** set to Amar Takhar <amar@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"98451835274168ccfeb04b82d6e65dfebcec8fb6/rtems-docs" 9845183/rtems-docs]:

```
Update sphinx_rtd_theme to https://github.com/readthedocs/sphinx_rtd_
↪theme/
68a19ca / 0.4.3.dev0. I have been using this one for a while without
issues.

This should fix the search issues.

closes #3880
```

Author: Amar Takhar 2024-04-25T20:47:47.856Z

changed the description

3.9.1.73 3879 - Coverity reports out of bounds access in bsps/shared/irq/irq-server.c

Id	3879
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-02-21T14:12:19.000Z
Updated	2025-09-19T01:06:49.520Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3879
Merges	0

Original author: suyashsingh234

Issue at line 519

Possible reason- Instances is assigned array memory correctly but it is given pointer with size 1 (bsp_interrupt_server_instance)

Author: Joel Sherrill 2022-02-09T14:54:42.000Z

Original author: suyashsingh234

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*
- **Summary** changed from *Coverity reports out of bounds access in /home/joel/rtems-work/rtems/bsps/shared/irq/irq-server.c* to *Coverity reports out of bounds access in bsps/shared/irq/irq-server.c*

Coverity is no longer reporting this. Closing.

Author: Chris Johns 2025-09-19T01:06:49.577Z

changed the description

3.9.1.74 3869 - Add i.MX6UL/ULL support to imx BSP

Id	3869
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-02-10T09:25:25.000Z
Updated	2025-09-19T01:06:49.342Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3869
Merges	0

Original author: Christian Mauderer

Author: Trac Migrate 2020-02-11T08:20:32.000Z

Original author: Christian Mauderer

In [changeset:"8854a2b54be7f9fd74589605d19cae823827eb1b/rtems" 8854a2b5/rtems]:

```
bsp/imx: Avoid hard-coded GIC base address

Update #3869.
```

Author: Trac Migrate 2020-02-11T08:20:36.000Z

Original author: Christian Mauderer

In [changeset:"c561bf4c9a92d22fda053f37340e2645899c8b88/rtems" c561bf4c/rtems]:

```
bsp/imx: Allow GIC in different device tree node.

Update #3869.
```

Author: Trac Migrate 2020-02-11T08:20:39.000Z

Original author: Christian Mauderer

In [changeset:"65e51e9f7683f5fef1b9397ef520746778d57c6a/rtems" 65e51e9f/rtems]:

```
bsp/imx: Increase device memory area

The new area is used by the i.MX 6UltraLite for example.

Update #3869.
```

Author: Trac Migrate 2020-02-11T08:20:42.000Z

Original author: Christian Mauderer

In [changeset:"9c7bffb5415313acb87224048c42bb18614bb532/rtems" 9c7bffb/rtems]:

```
bsp/imx: Use muxed mode for serials.

Update #3869.
```

Author: Trac Migrate 2020-02-11T08:20:45.000Z

Original author: Christian Mauderer

In [changeset:"d00d690557a1e31dd7f0ac371974796df5a43c3f/rtems" d00d690/rtems]:

```
bsp/imx: Allow gapless SPI transfers.

This uses the tx-threshold to reduce gaps in SPI transmissions.

Update #3869.
```

Author: Trac Migrate 2020-02-11T08:20:48.000Z

Original author: Christian Mauderer

In [changeset:"b58f994492261a18444e45b4dadc3989d0b20d98/rtems" b58f994/rtems]:

```
bsp/imx: Support imx6ul iomux.

Update #3869.
```

Author: Trac Migrate 2020-02-11T08:20:52.000Z

Original author: Christian Mauderer

In [changeset:"adf7e7538f3815db5ee5944daee82bb7053baf90/rtems" adf7e753/rtems]:

```
bsp/imx: Parse fdt pinctrl values and setup iomux

Update #3869.
```

Author: Trac Migrate 2020-04-15T15:10:01.000Z

Original author: Christian Mauderer

In [changeset:"01219541289e8081054d4a57924ee169339f1eaf/rtems" 01219541/rtems]:

```
bsp/imx: Add an extra ecspi clock.

Some imx chips or boards don't use the same frequency for ECSPI and IPG.

Update #3869
```

Author: Trac Migrate 2020-04-15T15:14:31.000Z

Original author: Christian Mauderer

In [changeset:"01b1f479a3c13ca64bd07d0e8b43eb06a43c0591/rtems-docs" 01b1f47/rtems-docs]:

```
user/imx: Add i.MX6UL/ULL.

Update #3869
```

Author: Trac Migrate 2021-01-21T09:26:58.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"7b99d7619ec3ff1143db003a541505367f8004d5/rtems" 7b99d76/rtems]:

```
bsp/imx: Fix system counter init for imx6

For i.MX7 U-Boot initializes the system counter. On i.MX6 Barebox is
often used which doesn't initialize the counter. With this patch, we try
to auto-detect whether the counter is initialized or not and do the
initialization ourself if necessary.

Closes #3869
```

Author: Trac Migrate 2021-09-02T06:44:37.000Z

Original author: Christian Mauderer

In [changeset:"d36d545d162cc9ca1273f6eb11ed7ee1b74a1566/rtems-libbsd" d36d545/rtems-libbsd]:

```
imx: Remove ccm functions alredy defined in RTEMS

The imx_ccm_*_hz are all defined in RTEMS. So don't duplicate them in
libbsd. Otherwise some applications get linker errors.

Update #3869
```

Author: Trac Migrate 2021-09-02T07:42:47.000Z

Original author: Christian Mauderer

In [changeset:"b7c51ac44996a93fa386fd1d3022afdebde59e54/rtems-libbsd" b7c51ac/rtems-libbsd]:

```
imx: Remove ccm functions alredy defined in RTEMS

The imx_ccm_*_hz are all defined in RTEMS. So don't duplicate them in
libbsd. Otherwise some applications get linker errors.

Update #3869
```

Author: Chris Johns 2025-09-19T01:06:49.405Z

changed the description

3.9.1.75 3827 - make fail following quickstart guide

Id	3827
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-11-28T22:37:44.000Z
Updated	2025-09-19T01:06:49.131Z
Milestone	6.1
Labels	arch:riscv, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3827
Merges	0

Original author: md403

I am attempting to follow the quickstart guide.

Host: Macbook Pro 2.3 GHz Quad-Core Intel Core i5 16 GB 2133 MHz LPDDR3 MacOS 10.15.1 Catalina

Target: RISC-V rv32i

I am in step 2.6 of the quickstart (Build a BSP). Everything up to and including creating the Makefile appears to have gone fine.

I build the Makefile with the following command, modified from the quickstart guide:

```
cd $HOME/projects/rtems_root/build/b-rv32i
export PATH=$HOME/projects/rtems_root/rtems/5/bin:$PATH
$HOME/projects/rtems_root/src/rtems/configure \\
--prefix=$HOME/projects/rtems_root/rtems/5 \\
--enable-maintainer-mode \\
--target=riscv-rtems5 \\
--enable-rtemsbsp=rv32i \\
--enable-tests
```

I type

```
make
```

and it proceeds just fine for a while and then I get the following:

```
rtems-ld -r /Users/michaeldodson/projects/rtems_root/build/b-rv32i/riscv-rtems5/c/
↪rv32i \\
-C riscv-rtems5-gcc -c "-march=rv32i -mabi=ilp32" \\
-O rap -b dl06.pre -e rtems_main -s \\
-o dl06.rap dl06-o1.o dl06-o2.o -lm
error: rap::object: Section index '0' not found: dl06-o1.o
make[5]: *** [dl06.rap] Error 10
```

I submit this with some trepidation, as a) I'm brand new, and b) I see there's one ticket with a similar complaint (though no description) which is about a year old...

Author: Trac Migrate 2019-11-29T11:31:54.000Z

Original author: md403

NB. The ticket I referenced is #3400

Author: Trac Migrate 2019-11-29T12:34:28.000Z

Original author: md403

- **Owner** set to Hesham Almatary <Hesham.Almatary@cl.cam.ac.uk>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"f0c30c5e5fcd3159fc943acb1e7c5fd79ecc8d72/rtems-source-builder" f0c30c5/rtems-source-builder]:

```
5: Update rtems-tools

Fixes #3827
```

Author: Trac Migrate 2019-11-29T13:34:50.000Z

Original author: md403

In [changeset:"a1dcc3ceaeadbfbab818c6a442fa7c601cf64fbc/rtems-source-builder" a1dcc3c/rtems-source-builder]:

```
5: Update the hash for the new rtems-tools revision

Fixes #3827
```

Author: Chris Johns 2025-09-19T01:06:49.202Z

changed the description

3.9.1.76 3816 - Windows / MSYS2 build error for Sparc/SIS - missing sys/socket.h

Id	3816
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-11-05T15:32:12.000Z
Updated	2025-09-19T01:06:48.926Z
Milestone	6.1
Labels	arch:sparc, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3816
Merges	0

Original author: jeff.mayes

Looking at winsock2.h it appears some POSIX'ish methods are available for sockets, so it may not be hard to support MingWin.

RTEMS Tools Project - Source Builder Error Report Build: error: building s2xwm1

Command Line: ../source-builder/sb-set-builder –prefix=C:/msys64/home/mayes/dev/rtems/5 5/rtems-sparc

Python: 2.7.16 (default, Aug 15 2019, 17:51:40) [GCC 9.2.0 64 bit (AMD64)]

git://git.rtems.org/rtems-source-builder.git/origin/9a1cf9a2d940a4f79cd822f05c8fb13a4c0ec3bb

Windows

. . .

. . .

x86_64-w64-mingw32-gcc -DHAVE_CONFIG_H -I. -DFAST_UART -O2 -g -pipe -I/c/msys64/home/mayes/dev/rtems/rsb/rtems/build/tmp/sb-mayes/5s/c/msys64/home/mayes/dev/rtems/5/include -MT func.o -MD -MP -MF .deps/func.Tpo -c -o func.o func.c

func.c:26:10: fatal error: sys/socket.h: No such file or directory 26 | #include <sys/socket.h> | ^~~~~~~~~~~~~~~ compilation terminated.

make[1]: * **[Makefile:380: func.o] Error 1 make[1]:** * Waiting for unfinished jobs.... mv -f .deps/leon3.Tpo .deps/leon3.Po make[1]: Leaving directory '/c/msys64/home/mayes/dev/rtems/rsb/rtems/build/s2xwm1/sis-2.18' make: *** [Makefile:260: all] Error 2 shell cmd failed: sh -ex /c/msys64/home/mayes/dev/rtems/rsb/rtems/build/s2xwm1/do-build error: building s2xwm1

Author: Trac Migrate 2019-11-05T21:22:33.000Z

Original author: jeff.mayes

I can make sis compile under mingw but only without the gdb interface. The windows socket API is slightly different from unix, and I am not a windows user. . .

I can see two short-term fixes: disable the gdb interface in sis when building for mingw (WIN32) or disable building sis altogether when building RSB on a WIN32 host.

note: if you are on windows 10, you could always install WSL with an ubuntu 18.04 image and build RSB there . . .

Author: Joel Sherrill 2019-11-05T21:28:44.000Z

Original author: jeff.mayes

Everyone doesn't have the option to install WSL. How about temporarily disabling the gdb interface and update this ticket with that commit. Hopefully someone who knows winsock can fix it.

Author: Chris Johns 2019-11-05T23:38:20.000Z

Original author: jeff.mayes

I have implemented Windows socket support before . . .

https://sourceforge.net/p/bdm/code/ci/master/tree/m68k/gdbserver/remote-utils.c

If I get time I will look at adding the support.

Author: Trac Migrate 2019-11-07T21:06:44.000Z

Original author: jeff.mayes

Can I assume that we talk about mingw-w64 support only, and not the original 32-bit mingw? It would simplify things . . .

Author: Chris Johns 2019-11-08T00:44:41.000Z

Original author: jeff.mayes

Replying to Jiri Gaisler:

> Can I assume that we talk about mingw-w64 support only, and not the original 32-bit mingw? It would simplify things . . .
>
> I was thinking about native Windows winsock calls so I am not sure if this makes a difference. Is there an issue I am not aware of?

Author: Trac Migrate 2019-11-08T07:57:00.000Z

Original author: jeff.mayes

Replying to Chris Johns:

> Replying to Jiri Gaisler:
>
> > Can I assume that we talk about mingw-w64 support only, and not the original 32-bit mingw? It would simplify things ...
>
> I was thinking about native Windows winsock calls so I am not sure if this makes a difference. Is there an issue I am not aware of?
>
> It is not so much winsock, but terminal handling. Windows and mingw/msys does not support termios, thus no readline or linenoise. And reverting to fgets() feels a bit primitive. However, the newer mingw-w64/msys2 has a port of readline which is also used by gdb et al. So going with msys2 would make the porting easier as only the winsock needs to be addressed ...

Author: Chris Johns 2019-11-08T23:41:30.000Z

Original author: jeff.mayes

Replying to Jiri Gaisler:

> Replying to Chris Johns:
>
> > Replying to Jiri Gaisler:
> >
> > > Can I assume that we talk about mingw-w64 support only, and not the original 32-bit mingw? It would simplify things ...
> >
> > I was thinking about native Windows winsock calls so I am not sure if this makes a difference. Is there an issue I am not aware of?
>
> It is not so much winsock, but terminal handling.
>
> Ah yes this is a problem on Windows.
>
> > Windows and mingw/msys does not support termios, thus no readline or linenoise. And reverting to fgets() feels a bit primitive. However, the newer mingw-w64/msys2 has a port of readline which is also used by gdb et al.
> >
> > Is this a mingw package of readline? We cannot use msys2 packages.
> >
> > > So going with msys2 would make the porting easier as only the winsock needs to be addressed ...
> >
> > I am fine with a probe for readline and if not present the interface is very basic. I have tended to use `sis` with `gdb` and so I have not used used the command line.

Author: Trac Migrate 2019-11-09T14:44:16.000Z

Original author: jeff.mayes

In [changeset:"35a4a0c0e072c6bf3aaf653009789996318a0b0d/rtems-source-builder" 35a4a0c/rtems-source-builder]:

```
Update sis simulator to v2.19

* Improve gdb watchpoint handling/reporting
* Support building on Mingw-W64
* Stop flushing sparc reg windows on gdb break
* updates #3816
```

Author: Trac Migrate 2019-11-09T14:52:47.000Z

Original author: jeff.mayes

I updated sis and RSB with a patch that should solve the build problems on mingw-w64. Make sure you have mingw-gdb installed, it will pull in the mingw-readline dll. I also made sis compile with winsock in mingw - let me know if there are any socket problems with the gdb interface...

Author: Trac Migrate 2019-11-13T16:33:56.000Z

Original author: jeff.mayes

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Looks to be fixed on my end. Thanks Jiri!

Author: Chris Johns 2025-09-19T01:06:49.015Z

changed the description

3.9.1.77 3807 - Windows / MSYS2 build error for Sparc/SIS

Id	3807
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-10-31T20:03:47.000Z
Updated	2025-09-19T01:06:48.680Z
Milestone	6.1
Labels	arch:sparc, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3807
Merges	0

Original author: jeff.mayes

TEMS Tools Project - Source Builder Error Report

Build: error: building s2xwm1 Command Line: ../source-builder/sb-set-builder –prefix=C:/msys64/home/mayes/dev/rtems/5 5/rtems-sparc Python: 2.7.16 (default, Aug 15 2019, 17:51:40) [GCC 9.2.0 64 bit (AMD64)] git://git.rtems.org/rtems-source-builder.git/origin/5ecf0181b494db3c93a5d88cc9e91a663ff47583 Windows

. . .

. . .

x86_64-w64-mingw32-gcc -DHAVE_CONFIG_H -I. -DFAST_UART -O2 -g -pipe -I/c/msys64/home/mayes/dev/rtems/rsb/rtems/b1uild/tmp/sb-mayes/5s/c/msys64/home/mayes/dev/rtems/5/include -MT leon3.o -MD -MP -MF .deps/leon3.Tpo -c -o leon3.o leon3.c leon3.c:145:8: error: unknown type name ‘uint’ 145 | static uint xcpu; | ^~~~ mv -f .deps/grlib.Tpo .deps/grlib.Po make[1]: * **[Makefile:381: leon3.o] Error 1 make[1]:** * Waiting for unfinished jobs.... make[1]: Leaving directory ‘/c/msys64/home/mayes/dev/rtems/rsb/rtems/build/s2xwm1/sis-2.17’ make: *** [Makefile:260: all] Error 2 shell cmd failed: sh -ex /c/msys64/home/mayes/dev/rtems/rsb/rtems/build/s2xwm1/do-build

error: building s2xwm1

Author: Trac Migrate 2019-11-02T16:27:21.000Z

Original author: jeff.mayes

This is a typo, it should say ‘static int xcpu’. I will make a patch and push it.

Maybe we should not build sis by default when building the sparc and riscv toolchains, but only manually like we do for other simulators (qemu, spike . . .)?

Author: Trac Migrate 2019-11-02T18:56:14.000Z

Original author: jeff.mayes

- **Resolution** set to ~”fixed”
- **Status** changed from *assigned* to *closed*

In [changeset:”720db6445561c49cc87a846dc8ef616d3b6b4579/rtems-source-builder” 720db64/rtems-source-builder]:

```
Update sis to v2.18

* Support for gdb watchpoints
* Fix build problems on cygwin (closes #3807)
```

Author: Chris Johns 2019-11-03T00:33:57.000Z

Original author: jeff.mayes

Replying to Jiri Gaisler:

> Maybe we should not build sis by default when building the sparc and riscv tool-chains, but only manually like we do for other simulators (qemu, spike . . .)?
>
> We have documented for a number of years building sparc and using the erc32 BSP as a starting point to play with RTEMS. This evolved because the SIS has always been available and it has always worked. Changing this would mean we would need to review the docmentation.

Author: Trac Migrate 2019-11-03T10:09:29.000Z

Original author: jeff.mayes

Replying to Chris Johns:

> Replying to Jiri Gaisler:
>
> > Maybe we should not build sis by default when building the sparc and riscv tool-chains, but only manually like we do for other simulators (qemu, spike . . .)?
>
> We have documented for a number of years building sparc and using the erc32 BSP as a starting point to play with RTEMS. This evolved because the SIS has always been available and it has always worked. Changing this would mean we would need to review the docmentation.
>
> Makes sense. I just don't want to break someones RSB build because I made some less-than-brilliant fix . . . :-)

Author: Joel Sherrill 2019-11-03T15:53:46.000Z

Original author: jeff.mayes

I am strongly opposed to turning off SIS. Chris is right that it is the RTEMS on-ramp platform. I appreciate your concern but sis is important.

Author: Chris Johns 2025-09-19T01:06:48.797Z

changed the description

3.9.1.78 3799 - confdefs.h declares an array with zero elements, that's invalid C

Id	3799
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-10-02T14:59:41.000Z
Updated	2025-09-19T01:06:48.463Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3799
Merges	0

Original author: JSchweikhardt

I'm looking at rtems/cpukit/include/rtems/confdefs.h

```
1189        #ifdef CONFIGURE_INIT
1190          RTEMS_DEFINE_GLOBAL_SYMBOL(
1191            _ISR_Stack_size,
1192            CONFIGURE_INTERRUPT_STACK_SIZE
1193          );
1194
1195          char _ISR_Stack_area_begin[
1196            _CONFIGURE_MAXIMUM_PROCESSORS * CONFIGURE_INTERRUPT_STACK_SIZE
1197          ] RTEMS_ALIGNED( CPU_INTERRUPT_STACK_ALIGNMENT )
1198          RTEMS_SECTION( ".rtemsstack.interrupt.begin" );
1199
1200          const char _ISR_Stack_area_end[ 0 ]
1201            RTEMS_SECTION( ".rtemsstack.interrupt.end" ) = { };
1202        #endif
```

Note line 1200: `const char _ISR_Stack_area_end[ 0 ]` This crashes (yes, it goes boom) one of our Static Analyzer tools (Mathworks Polyspace if you must know).

According to the ISO C11 Standard,

> **6.7.6.2 Array declarators Constraints** 1 In addition to optional type qualifiers and the keyword `static`, the `[` and `]` may delimit an expression or `*`. If they delimit an expression (which specifies the size of an array), the expression shall have an integer type. **If the expression is a constant expression, it shall have a value greater than zero.**
>
> Could this either be fixed to declare a one element array, or, if you must use 0 for some reason, be a macro that I can override for Polyspace?

Author: Trac Migrate 2019-10-04T13:36:37.000Z

Original author: JSchweikhardt

See:

https://lists.rtems.org/pipermail/devel/2019-October/055804.html

I would write a bug report for the Mathworks Polyspace as well.

Author: Trac Migrate 2019-10-07T05:07:53.000Z

Original author: JSchweikhardt

Please test this patch set and check if it fixes the Mathworks Polyspace issue.

Author: Trac Migrate 2019-10-07T07:16:55.000Z

Original author: JSchweikhardt

It's difficult for me to apply the patch set since we use the RTEMS 5.x as shipped by Cobham/Gaisler Research for their RCC 1.3-rc6-gcc. This differs enough from current RTEMS to make this a bit involved. However, I've locally patched it simply by changing `[0]` to `[1]` and Polyspace R2013a no longer crashes. I fully trust your patch set to fix this as well, so go ahead and close this as fixed. Thanks a lot for your work, Sebastian!

Author: Joel Sherrill 2019-10-09T14:38:45.000Z

Original author: JSchweikhardt

Do you have any instructions or guidance for using Polyspace on RTEMS that could be place in the documentation?

Author: Trac Migrate 2019-10-22T09:52:09.000Z

Original author: JSchweikhardt

In general, Polyspace needs to see the same code the compiler sees. This requires that Polyspace needs to be told the compiler's predefined macros. With gcc or clang that's easy. To do that, ask for the predefined macros with `$(CC) -E -dM -x c /dev/null` and turn that into `-D` options for Polyspace.

In addition, you might want to fix/work around various language extensions Polyspace does not understand. I use

```
-D __extension__=
-D __builtin_va_list=void*
-D __builtin_offsetof(t,m)=0
-D _Noreturn=
-D __restrict=
```

but this might need to be tweaked for your particular compiler and Polyspace release.

Author: Trac Migrate 2019-10-28T09:01:58.000Z

Original author: JSchweikhardt

In [changeset:"795b167545ac074509f4b7c5fd7ed1c0da717460/rtems" 795b167/rtems]:

```
score: Add RTEMS_DEFINE_GLOBAL_SYMBOL_IN_SECTION()

Update #3799.
```

Author: Trac Migrate 2019-10-28T09:02:01.000Z

Original author: JSchweikhardt

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"a7c86ccb25da3254fbe554bc8d47626554bfd3b9/rtems" a7c86cc/rtems]:

```
config: Avoid zero-length array

Use RTEMS_DEFINE_GLOBAL_SYMBOL_IN_SECTION() instead.

Close #3799.
```

Author: Trac Migrate 2020-04-03T13:49:13.000Z

Original author: JSchweikhardt

In [changeset:"8e80876bdd54e36fb668eee655eec1dd588daf13/rtems" 8e80876/rtems]:

```
score: Fix _ISR_Stack_area_end

The _ISR_Stack_area_begin and _ISR_Stack_area_end symbols are in
different sections.  They must have the same alignment, otherwise the
following linker directive could separate them:

*(SORT_BY_ALIGNMENT (SORT_BY_NAME (.rtemsstack*)))

Update #3799.
```

Author: Trac Migrate 2020-04-08T17:23:02.000Z

Original author: JSchweikhardt

In [changeset:"3a882e5bc36aef25f67923190162a45ed36459b9/rtems" 3a882e5/rtems]:

```
score: Add and use RTEMS_SYMBOL_NAME()

Update #3799.
```

Author: Trac Migrate 2020-04-08T17:23:06.000Z

Original author: JSchweikhardt

In [changeset:"099ab00d160be82952d59de6ad7ef18896adb420/rtems" 099ab00/rtems]:

```
config: Fix _ISR_Stack_area_end

In the previous implementation, the _ISR_Stack_area_begin and
_ISR_Stack_area_end symbols were in different sections. If they do not
have the same alignment, then the following linker directive could
separate them:

*(SORT_BY_ALIGNMENT (SORT_BY_NAME (.rtemsstack*)))

Do not use different sections and instead define _ISR_Stack_area_end
directly.

Update #3799.
```

Author: Trac Migrate 2020-04-08T17:23:09.000Z

Original author: JSchweikhardt

In [changeset:"840f21ddc753a8f13bea92d7f0596911d6e28764/rtems" 840f21d/rtems]:

```
score: Delete RTEMS_DECLARE_GLOBAL_SYMBOL()

Delete unused RTEMS_DECLARE_GLOBAL_SYMBOL().

Update #3799.
```

Author: Chris Johns 2025-09-19T01:06:48.547Z

changed the description

3.9.1.79 3787 - bsps/arm/shared: Add GICv3 Implementation

Id	3787
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Created	2019-08-16T19:14:21.000Z
Updated	2025-09-19T01:06:48.294Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3787
Merges	0

Add a driver to use with ARM GICv3 implementations that do not support legacy mode for memory-mapped GICC access.

See devel@ for patch.

Author: Kinsey Moore 2020-03-02T16:02:51.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

This change has been committed.

Author: Chris Johns 2025-09-19T01:06:48.348Z

changed the description

3.9.1.80 3786 - Add JSON report generation capability to rtems-tools tester

Id	3786
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Created	2019-08-16T14:49:21.000Z
Updated	2025-09-19T01:06:48.099Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, ticket-type::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3786
Merges	0

This adds optional generation of a JSON log file suitable for automated consumption or test report generation.

See devel@ for patch.

Author: Kinsey Moore 2019-09-04T17:34:56.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Author: Chris Johns 2025-09-19T01:06:48.168Z

changed the description

3.9.1.81 3782 - Beagle Bone Black BSP / libbsd: Some pinmux settings are initialized twice

Id	3782
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-08-11T15:09:20.000Z
Updated	2025-09-19T01:06:47.981Z
Milestone	6.1
Labels	bsp, library::libbsd, old-indefinite, priority::normal, resolution::fixed, tickettype::defect, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3782
Merges	0

Original author: Christian Mauderer

With the commit

https://git.rtems.org/rtems-libbsd/commit/?id=59ce99a357d7e283b2f463d3e22189e88b2ed412

some settings of the pin multiplexer are initialized twice (like I2C pins which are already initialized by the I2C driver). Ideally that should be replaced with one clean (maybe device tree based) initialization during BSP startup.

This could be part of a GSoC project (#3791).

Author: Trac Migrate 2019-08-15T18:09:09.000Z

Original author: Christian Mauderer

- **Owner** set to Christian Mauderer
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2019-08-15T18:42:49.000Z

Original author: Christian Mauderer

Original author: Christian Mauderer

- **Description** changed

```
With the commit

https://git.rtems.org/rtems-libbsd/commit/?
↪id=59ce99a357d7e283b2f463d3e22189e88b2ed412

some settings of the pin multiplexer are initialized twice (like I2C␣
↪pins which are already initialized by the I2C driver). Ideally that␣
↪should be replaced with one clean (maybe device tree based)␣
↪initialization during BSP startup.

- This could be part of a GSoC project.
+ This could be part of a GSoC project (#3791).
?                                    ++++++++
```

Author: Trac Migrate 2021-03-26T12:45:16.000Z

Original author: Christian Mauderer

Fixed with https://git.rtems.org/rtems/commit/?id=56074644a733ecc984722da2a1b61736275270c0 and https://git.rtems.org/rtems-libbsd/commit/?id=3cdf2894241d87795f0840b9ce281a89404e361b

Author: Trac Migrate 2021-03-26T12:45:50.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*
- **Version** changed from ~"5" to ~"6"

Author: Amar Takhar 2024-04-25T20:47:24.636Z

changed the description

Author: Amar Takhar 2024-04-26T01:34:52.113Z

mentioned in issue rtems/programs/gsoc#45

3.9.1.82 3780 - Beagle Bone Black BSP: Missing nocache section

Id	3780
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-08-07T18:37:42.000Z
Updated	2025-09-19T01:06:47.840Z
Milestone	6.1
Labels	bsp, old-indefinite, priority::normal, resolution::fixed, ticket-type::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3780
Merges	0

Original author: Christian Mauderer

The Beagle Bone Black BSP doesn't have a nocache memory section that is used for example by some libbsd drivers.

Author: Trac Migrate 2019-08-07T18:40:29.000Z

Original author: Christian Mauderer

- **Owner** set to Vijay Kumar Banerjee <vijaykumar9597@gmail.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"886956afd2dc10e2d8b6ec3aa9dc72976b6f58c9/rtems" 886956a/rtems]:

```
bsp/beagle: Add nocache section

Closes #3780
```

Author: Amar Takhar 2025-09-05T03:01:15.641Z

changed the description

3.9.1.83 3779 - arm_switch_reg undeclared when building libdebugger/rtems-debugger-arm

Id	3779
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2019-08-06T15:12:47.000Z
Updated	2025-09-19T01:06:47.576Z
Milestone	6.1
Labels	cpukit::debugger, priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3779
Merges	0

Original author: Andrei Chichak

host is MacOS 10.14.6

target is stm32f4

configure string is: $HOME/quick-start/src/rtems/configure –prefix=$HOME/quick-start/rtems/5 –target=arm-rtems5 –enable-rtemsbsp=stm32f4 –enable-tests –disable-networking –enable-posix

I am building off of a head pull of the tools and RTOS source as of Monday August 5, late evening GMT-7.

I believe the important error message is: /Users/andreichichak/quick-start/src/rtems/c/src/../../cpukit/libdebugger/rtems-debugger-arm.c:1308:53: error: ‘arm_switch_reg’ undeclared (first use in this function)

define EXCEPTION_ENTRY_EXC() (void) arm_switch_reg

^ /Users/andreichichak/quick-start/src/rtems/c/src/../../cpukit/libdebugger/rtems-debugger-arm.c:1324:3: note: in expansion of macro ‘EXCEPTION_ENTRY_EXC’ EXCEPTION_ENTRY_EXC(); ^~~~~~~~~~~~~~~~~~~~ /Users/andreichichak/quick-start/src/rtems/c/src/../../cpukit/libdebugger/rtems-debugger-arm.c:1308:53: note: each undeclared identifier is reported only once for each function it appears in

define EXCEPTION_ENTRY_EXC() (void) arm_switch_reg

^ /Users/andreichichak/quick-start/src/rtems/c/src/../../cpukit/libdebugger/rtems-debugger-arm.c:1324:3: note: in expansion of macro ‘EXCEPTION_ENTRY_EXC’ EXCEPTION_ENTRY_EXC(); ^~~~~~~~~~~~~~~~~~~~

Author: Trac Migrate 2019-10-01T12:13:53.000Z

Original author: Andrei Chichak

I’m new to rtems. I also encountered this problem. I dig into source code, in commit:8798372261ed1:cpukit/libdebugger/rtems-debugger-arm.c:83-95:

```
#if !ARM_THUMB_ONLY && defined(__thumb__)
#define ARM_SWITCH_REG       uint32_t arm_switch_reg
#define ARM_SWITCH_REG_ASM   [arm_switch_reg] "=&r" (arm_switch_reg)
#define ARM_SWITCH_REG_ASM_L ARM_SWITCH_REG_ASM,
#define ASM_ARM_MODE         ".align 2\\nbx pc\\n.arm\\n"
#define ASM_THUMB_MODE       "add %[arm_switch_reg], pc, #1\\nbx %[arm_
↪switch_reg]\\n.thumb\\n"
#else
#define ARM_SWITCH_REG
#define ARM_SWITCH_REG_ASM
#define ARM_SWITCH_REG_ASM_L
#define ASM_ARM_MODE
#define ASM_THUMB_MODE
#endif
```

here, code for stm32f4 is compiled with flag -mpu cortex-m4, which is ARM_THUMB_ONLY, __ARM_ARCH_7M__, so above defines will result ARM_SWITCH_REG to empty.

in line 1592, 1593,

it is defined as

```
#elif defined(ARM_MULTILIB_ARCH_V7M)
#define EXCEPTION_ENTRY_EXC()              (void) arm_switch_reg
```

when compiled, it will report undeclared identifier arm_switch_reg

Author: Trac Migrate 2019-10-01T13:06:20.000Z

Original author: Andrei Chichak

I think if there is no need for arm_switch_reg, how about I void exception_entry_exc()?

```
From 46c1bd458196ff694ce04e74f68695fc620a7a65 Mon Sep 17 00:00:00 2001
From: YANG HONGBO <sprhawk@gmail.com>
Date: Tue, 1 Oct 2019 20:51:03 +0800
Subject: [PATCH] try to fix failure building for STM32F4

---
cpukit/libdebugger/rtems-debugger-arm.c | 9 ++++++++--
1 file changed, 7 insertions(+), 2 deletions(-)

diff --git a/cpukit/libdebugger/rtems-debugger-arm.c b/cpukit/
↪libdebugger/rtems-debugger-arm.c
index 3d5dea0ab7..eefc83eed5 100644
--- a/cpukit/libdebugger/rtems-debugger-arm.c
+++ b/cpukit/libdebugger/rtems-debugger-arm.c
@@ -1590,10 +1590,15 @@ target_exception(CPU_Exception_frame* frame)
#define EXCEPTION_EXIT_THREAD(_frame)       EXCEPTION_EXIT_THREAD_V4(_
```

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```
↪frame)
#define EXCEPTION_EXIT_EXC()                EXCEPTION_EXIT_EXC_V4()
#elif defined(ARM_MULTILIB_ARCH_V7M)
- #define EXCEPTION_ENTRY_EXC()                (void) arm_switch_reg
+ #if ARM_THUMB_ONLY
+  #define EXCEPTION_ENTRY_EXC()                (void)NULL
+  #define EXCEPTION_EXIT_EXC()                 (void)NULL
+ #else
+  #define EXCEPTION_ENTRY_EXC()                (void) arm_switch_reg
+  #define EXCEPTION_EXIT_EXC()                 (void) arm_switch_reg
+ #endif
#define EXCEPTION_ENTRY_THREAD(_frame)      (_frame) = NULL
#define EXCEPTION_EXIT_THREAD(_frame)       (_frame) = NULL
- #define EXCEPTION_EXIT_EXC()                 (void) arm_switch_reg
#else
#error ARM architecture is not supported.
#endif
--
2.20.1
```

Author: Chris Johns 2019-10-01T23:40:23.000Z

Original author: Andrei Chichak

Replying to sprhawk:

> I think if there is no need for arm_switch_reg, how about I void exception_entry_exc()?
>
> I am not so sure.
>
> > {{{
> >
> > From 46c1bd458196ff694ce04e74f68695fc620a7a65 Mon Sep 17 00:00:00 2001 From: YANG HONGBO <sprhawk@gmail.com> Date: Tue, 1 Oct 2019 20:51:03 +0800 Subject: [PATCH] try to fix failure building for STM32F4 — cpukit/libdebugger/rtems-debugger-arm.c | 9 ++++++++– 1 file changed, 7 insertions(+), 2 deletions(-) diff –git a/cpukit/libdebugger/rtems-debugger-arm.c b/cpukit/libdebugger/rtems-debugger-arm.c index 3d5dea0ab7..eefc83eed5 100644 — a/cpukit/libdebugger/rtems-debugger-arm.c +++ b/cpukit/libdebugger/rtems-debugger-arm.c @@ -1590,10 +1590,15 @@ target_exception(CPU_Exception_frame* frame)
> >
> > -
> > - #if ARM_THUMB_ONLY
> > - #define EXCEPTION_ENTRY_EXC() (void)NULL

- #define EXCEPTION_EXIT_EXC() (void)NULL

}}} I do not think this would work. It means `NULL` is being loaded as the address. I am not familiar with the specifics of this model. Is ARM mode active when entering an exception? If so we need to switch to thumb mode and to do this we need a valid `arm_switch_reg`.

What is your configure command line for RTEMS and I will see what is broken in the build?

Author: Trac Migrate 2019-10-02T00:03:27.000Z

Original author: Andrei Chichak

Replying to Chris Johns:

> Replying to sprhawk:
>
> > I think if there is no need for arm_switch_reg, how about I void exception_entry_exc()?
>
> I am not so sure.

```
1  #!patch
2  From 46c1bd458196ff694ce04e74f68695fc620a7a65 Mon Sep 17 00:00:00 2001
3  From: YANG HONGBO <sprhawk@gmail.com>
4  Date: Tue, 1 Oct 2019 20:51:03 +0800
5  Subject: [PATCH] try to fix failure building for STM32F4
6  ---
7  cpukit/libdebugger/rtems-debugger-arm.c | 9 +++++++--
8  1 file changed, 7 insertions(+), 2 deletions(-)
9  diff --git a/cpukit/libdebugger/rtems-debugger-arm.c b/cpukit/libdebugger/rtems-debugger-arm.c
10 index 3d5dea0ab7..eefc83eed5 100644
11 --- a/cpukit/libdebugger/rtems-debugger-arm.c
12 +++ b/cpukit/libdebugger/rtems-debugger-arm.c
13 @@ -1590,10 +1590,15 @@ target_exception(CPU_Exception_frame* frame)
14 #define EXCEPTION_EXIT_THREAD(_frame)      EXCEPTION_EXIT_THREAD_V4(_frame)
15 #define EXCEPTION_EXIT_EXC()               EXCEPTION_EXIT_EXC_V4()
16 #elif defined(ARM_MULTILIB_ARCH_V7M)
17 - #define EXCEPTION_ENTRY_EXC()             (void) arm_switch_reg
18 + #if ARM_THUMB_ONLY
19 +  #define EXCEPTION_ENTRY_EXC()              (void)NULL
20 +  #define EXCEPTION_EXIT_EXC()
```

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```
↪(void)NULL
  }}}


I do not think this would work. It means `NULL` is␣
↪being loaded as the address. I am not familiar␣
↪with the specifics of this model. Is ARM mode␣
↪active when entering an exception? If so we need␣
↪to switch to thumb mode and to do this we need a␣
↪valid `arm_switch_reg`.

The STM32F4 has a core of cortex-m4, which is␣
↪ARMv7M instruction set, which is thumb only,




  What is your configure command line for RTEMS and␣
↪I will see what is broken in the build?

  I used command similar as the ticket reported:
  {{{
  ../rtems_5/configure --prefix=$RTEMS_ROOT_DIR --
↪target=arm-rtems5 --enable-rtemsbsp=stm32f4 --
↪disable-networking --enable-posix --disable-cxx --
↪enable-tests=samples --disable-smp --disable-
↪multiprocessing; make
```

Author: Trac Migrate 2019-10-02T00:30:49.000Z

Original author: Andrei Chichak

Replying to Chris Johns:

> Replying to sprhawk:
>
> > I think if there is no need for arm_switch_reg, how about I void exception_entry_exc()?
>
> I am not so sure.

```
  #!patch
  From 46c1bd458196ff694ce04e74f68695fc620a7a65 Mon␣
↪Sep 17 00:00:00 2001
  From: YANG HONGBO <sprhawk@gmail.com>
  Date: Tue, 1 Oct 2019 20:51:03 +0800
  Subject: [PATCH] try to fix failure building for␣
↪STM32F4
  ---
  cpukit/libdebugger/rtems-debugger-arm.c | 9␣
↪+++++++--
```

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```
 1 file changed, 7 insertions(+), 2 deletions(-)
 diff --git a/cpukit/libdebugger/rtems-debugger-arm.c b/cpukit/libdebugger/rtems-debugger-arm.c
 index 3d5dea0ab7..eefc83eed5 100644
 --- a/cpukit/libdebugger/rtems-debugger-arm.c
 +++ b/cpukit/libdebugger/rtems-debugger-arm.c
 @@ -1590,10 +1590,15 @@ target_exception(CPU_Exception_frame* frame)
 #define EXCEPTION_EXIT_THREAD(_frame)      EXCEPTION_EXIT_THREAD_V4(_frame)
 #define EXCEPTION_EXIT_EXC()               EXCEPTION_EXIT_EXC_V4()
 #elif defined(ARM_MULTILIB_ARCH_V7M)
 - #define EXCEPTION_ENTRY_EXC()              (void) arm_switch_reg
 + #if ARM_THUMB_ONLY
 +  #define EXCEPTION_ENTRY_EXC()              (void)NULL
 +  #define EXCEPTION_EXIT_EXC()               (void)NULL
 }}}


I do not think this would work. It means `NULL` is being loaded as the address. I am not familiar with the specifics of this model. Is ARM mode active when entering an exception? If so we need to switch to thumb mode and to do this we need a valid `arm_switch_reg`.
What is your configure command line for RTEMS and I will see what is broken in the build?


I think you are right, I should simply put it empty instead?
{{{
#!patch
From c3caf01a5674bc4da2b926d118bf5df5baa1fe4f Mon Sep 17 00:00:00 2001
From: YANG HONGBO <yanghongbo@iotpi.io>
Date: Wed, 2 Oct 2019 08:12:41 +0800
Subject: [PATCH] empty EXCEPTION_ENTRY_EXC when cpu is ARM_THUMB_ONLY

---
cpukit/libdebugger/rtems-debugger-arm.c | 15 +++++++++++----
1 file changed, 11 insertions(+), 4 deletions(-)

```

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```
diff --git a/cpukit/libdebugger/rtems-debugger-arm.c b/cpukit/libdebugger/rtems-debugger-arm.c
index 3d5dea0ab7..92b3b586b4 100644
--- a/cpukit/libdebugger/rtems-debugger-arm.c
+++ b/cpukit/libdebugger/rtems-debugger-arm.c
@@ -1590,10 +1590,17 @@ target_exception(CPU_Exception_frame* frame)
 #define EXCEPTION_EXIT_THREAD(_frame)      EXCEPTION_EXIT_THREAD_V4(_frame)
 #define EXCEPTION_EXIT_EXC()               EXCEPTION_EXIT_EXC_V4()
 #elif defined(ARM_MULTILIB_ARCH_V7M)
- #define EXCEPTION_ENTRY_EXC()              (void) arm_switch_reg
- #define EXCEPTION_ENTRY_THREAD(_frame)      (_frame) = NULL
- #define EXCEPTION_EXIT_THREAD(_frame)       (_frame) = NULL
- #define EXCEPTION_EXIT_EXC()               (void) arm_switch_reg
+ #if ARM_THUMB_ONLY
+  #define EXCEPTION_ENTRY_EXC()
+  #define EXCEPTION_ENTRY_THREAD(_frame)      (_frame) = NULL
+  #define EXCEPTION_EXIT_THREAD(_frame)       (_frame) = NULL
+  #define EXCEPTION_EXIT_EXC()
+ #else
+  #define EXCEPTION_ENTRY_EXC()              (void) arm_switch_reg
+  #define EXCEPTION_ENTRY_THREAD(_frame)      (_frame) = NULL
+  #define EXCEPTION_EXIT_THREAD(_frame)       (_frame) = NULL
+  #define EXCEPTION_EXIT_EXC()               (void) arm_switch_reg
+ #endif
 #else
 #error ARM architecture is not supported.
 #endif
--
2.20.1
```

Author: Chris Johns 2019-10-02T01:07:36.000Z

Original author: Andrei Chichak

Replying to sprhawk:

> Replying to Chris Johns:

> > I do not think this would work. It means `NULL` is being loaded as the address. I am not familiar with the specifics of this model. Is ARM mode active when entering an exception? If so we need to switch to thumb mode and to do this we need a valid `arm_switch_reg`. What is your configure command line for RTEMS and I will see what is broken in the build?
>
> I think you are right, I should simply put it empty instead?
>
> I am not sure. If the ARM to thumb code is being used then a variable is needed.
>
> What is your configure command line?

Author: Trac Migrate 2019-10-02T01:18:24.000Z

Original author: Andrei Chichak

Replying to Chris Johns:

> What is your configure command line?
>
> It was

```
../rtems_5/configure --prefix=$RTEMS_ROOT_DIR --target=arm-
↪rtems5 --enable-rtemsbsp=stm32f4 --disable-networking --
↪enable-posix --disable-cxx --enable-tests=samples --disable-
↪smp --disable-multiprocessing; make
```

> If cortex-m4 is thumb only, I think it should not have the operation to switch from ARM to thumb due to it lacks of ARM instructions

Author: Chris Johns 2019-10-02T01:59:49.000Z

Original author: Andrei Chichak

Replying to sprhawk:

> Replying to Chris Johns:
>
> > What is your configure command line?
>
> It was {{{ ../rtems_5/configure –prefix=$RTEMS_ROOT_DIR –target=arm-rtems5 –enable-rtemsbsp=stm32f4 –disable-networking –enable-posix –disable-cxx –enable-tests=samples –disable-smp –disable-multiprocessing; make }}}
>
> Thanks.
>
> > If cortex-m4 is thumb only, I think it should not have the operation to switch from ARM to thumb due to it lacks of ARM instructions
> >
> > Ah ok, this would make sense. I would need to check over the code to make sure it is clean. Maybe the change is around

the defines for the switching near the top. If they are blank there is no switch and no issue?

Author: Chris Johns 2022-10-25T03:10:29.000Z

Original author: Andrei Chichak

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Author: Chris Johns 2025-09-19T01:06:47.677Z

changed the description

3.9.1.84 3772 - missaligned pointer dereference in cpukit/libnetworking/libc/res_query.c:131

Id	3772
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2019-07-24T21:54:50.000Z
Closed	2025-01-31T18:28:28.064Z
Updated	2025-09-19T01:06:47.247Z
Milestone	6.1
Labels	libbsd, network::legacy, priority::normal, tickettype::defect, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3772
Merges	0

Original author: johill

nios2-rtems4.11-gcc (GCC) 4.9.3 20150626 (RTEMS 4.11, RSB no-repo, Newlib 2.2.0.20150423)

configure –target=nios2-rtems4.11 –prefix=/ade/rtems/install/rtems-4-11 –disable-itron –disable-tests –enable-posix –enable-cxx –enable-rtemsbsp=altera-sys-config-S43X-TDAQ-dev –enable-networking

This is occurring in 4.11.1.99.

I don't suggest that this fix is a great design, but its what we are currently using here to get our regression tests to pass w/o causing a misaligned pointer exception. This change probably requires at least gcc 4.6 to properly align a char buffer on the stack this way.

```
1 git diff /ade/rtems/release/rtems-4-11/c/src/../../cpukit/libnetworking/libc/res_
  ↪query.c
2 diff --git a/cpukit/libnetworking/libc/res_query.c b/cpukit/libnetworking/libc/
  ↪res_query.c
3 index b742c30..e06f70f 100644
```

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```
--- a/cpukit/libnetworking/libc/res_query.c
+++ b/cpukit/libnetworking/libc/res_query.c
@@ -113,7 +113,7 @@ res_query(
u_char *answer,         /* buffer to put answer */
int anslen)             /* size of answer buffer */
{
-       u_char buf[MAXPACKET];
+       u_char buf[MAXPACKET] __attribute ((aligned(4)));
HEADER *hp = (HEADER *) answer;
int n;
```

```
#0  _Thread_Do_dispatch (cpu_self=<optimized out>, level=<optimized out>,
↪level@entry=1) at /ade/rtems/release/rtems-4-11/c/src/../../cpukit/score/src/
↪threaddispatch.c:132
#1  0x0807a6d4 in _Thread_Dispatch_enable (cpu_self=<optimized out>) at ../../
↪cpukit/../../../altera-sys-config-llrf-fcm-diacrode/lib/include/rtems/score/
↪threaddispatch.h:313
#2  _Thread_Enable_dispatch_body () at ../../cpukit/../../../altera-sys-config-
↪llrf-fcm-diacrode/lib/include/rtems/score/threaddispatch.h:343
#3  _Thread_Enable_dispatch () at /ade/rtems/release/rtems-4-11/c/src/../../
↪cpukit/score/src/threadenabledispatch.c:30
#4  0x08075f3c in _Objects_Put (the_object=<optimized out>) at ../../cpukit/../../
↪../altera-sys-config-llrf-fcm-diacrode/lib/include/rtems/score/objectimpl.h:975
#5  rtems_task_suspend (id=id@entry=0) at /ade/rtems/release/rtems-4-11/c/src/../.
↪./cpukit/rtems/src/tasksuspend.c:37
#6  0x0813d808 in _Nios2_CPU_exception_handler_last_resort (pefr=0x81d498c, ctx=
↪<optimized out>) at /ade/rtems/release/rtems-4-11/c/src/lib/libcpu/nios2/shared/
↪except/except-last-resort.c:64
#7  0x0809d9ac in _Nios2_Exception_handler_high_level (pefr=0x81d498c) at /ade/
↪rtems/release/rtems-4-11/c/src/../../cpukit/score/cpu/nios2/nios2-except.c:119
#8  0x0809d86c in _Nios2_Exception_handler () at /ade/rtems/release/rtems-4-11/c/
↪src/../../cpukit/score/cpu/nios2/nios2-except-low-level.S:96
#9  0x08085980 in CPU_swap_u16 (value=10412) at ../../cpukit/../../../altera-sys-
↪config-llrf-fcm-diacrode/lib/include/rtems/score/cpu.h:402
#10 htons (_x=10412) at ../../cpukit/../../../altera-sys-config-llrf-fcm-diacrode/
↪lib/include/rtems/endian.h:83
#11 __res_mkquery (op=op@entry=0, dname=dname@entry=0x81d4aa8 "localhost.lcs.net",
↪ class=class@entry=1, type=type@entry=1, data=data@entry=0x0,
↪datalen=datalen@entry=0, newrr_in=newrr_in@entry=0x0, buf=buf@entry-11/c/src/../
↪../cpukit/libnetworking/libc/res_mkquery.c:122
#12 0x08058bcc in __res_query (anslen=<optimized out>, answer=0x81d5318
↪"stupwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefg
↪ class=1, name=0x81d4aa8 "localhost.lcs.net") at /ade/rtems/release/rtems-4-11/
↪c/src/../../cpukit/libnetworking/libc/res_query.c:131
#13 __res_querydomain (name=name@entry=0x81d576c "localhost", domain=<optimized
↪out>, class=class@entry=1, type=type@entry=1, answer=answer@entry=0x81d5318
↪"stupwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstmnopqrstuvwxyzabcdefghijklmnopqrstuvwxy
↪"..., anslen=anslen@entry=1024) at /ade/rtems/release/rtems-4-11/c/src/../../
↪cpukit/libnetworking/libc/res_query.c:368
```

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```
#14 0x080590e0 in __res_search (name=0x81d576c "localhost", class=1, type=1,␣
↪answer=0x81d5318
↪"stupwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefg
↪"..., anslen=1024) at /ade/rtems/release/rtems-4-11/c/src/../../cpukit/
↪libnetworking/libc/res_query.c:242
#15 0x080808b8 in _gethostbydnsname (name=name@entry=0x81d576c "localhost",␣
↪af=af@entry=2) at /ade/rtems/release/rtems-4-11/c/src/../../cpukit/
↪libnetworking/libc/gethostbydns.c:588
#16 0x08056c58 in gethostbyname2 (type=2, name=0x81d576c "localhost") at /ade/
↪rtems/release/rtems-4-11/c/src/../../cpukit/libnetworking/libc/gethostnamadr.
↪c:153
#17 gethostbyname (name=name@entry=0x81d576c "localhost") at /ade/rtems/release/
↪rtems-4-11/c/src/../../cpukit/libnetworking/libc/gethostnamadr.c:133
#18 0x08045198 in hostToIPAddr (pHostName=pHostName@entry=0x81d576c "localhost",␣
↪pIPA=pIPA@entry=0x81d5984) at /ade/epics/supTop/base/DAR3.15.1.1/src/libCom/osi/
↪os/posix/osdSock.c:170
#19 0x0803990c in aToIPAddr (pAddrString=pAddrString@entry=0x81d59b0 "localhost",␣
↪defaultPort=defaultPort@entry=0, pIP=pIP@entry=0x81d5a30) at /ade/epics/supTop/
↪base/DAR3.15.1.1/src/libCom/misc/aToIPAddr.c:168
#20 0x0804ed80 in envGetInetAddrConfigParam (pParam=pParam@entry=0x81a723c <EPICS_
↪IOC_LOG_INET>, pAddr=pAddr@entry=0x81d5a50) at /ade/epics/supTop/base/DAR3.15.1.
↪1/src/libCom/env/envSubr.c:258
#21 0x08036b2c in getConfig (pserver_port=<synthetic pointer>, pserver_
↪addr=0x81d5a50) at /ade/epics/supTop/base/DAR3.15.1.1/src/libCom/log/iocLog.c:57
#22 iocLogClientInit () at /ade/epics/supTop/base/DAR3.15.1.1/src/libCom/log/
↪iocLog.c:88
#23 iocLogInit () at /ade/epics/supTop/base/DAR3.15.1.1/src/libCom/log/iocLog.
↪c:116
#24 0x08008d60 in testLogPrefix () at /ade/epics/supTop/base/DAR3.15.1.1/src/
↪libCom/test/epicsErrlogTest.c:402
#25 epicsErrlogTest () at /ade/epics/supTop/base/DAR3.15.1.1/src/libCom/test/
↪epicsErrlogTest.c:324
#26 0x0803c51c in runTestFunc (name=name@entry=0x8189cf4 "epicsErrlogTest",␣
↪func=0x80085e4 <epicsErrlogTest>) at /ade/epics/supTop/base/DAR3.15.1.1/src/
↪libCom/misc/epicsUnitTest.c:262
#27 0x08018b74 in epicsRunLibComTests () at /ade/epics/supTop/base/DAR3.15.1.1/
↪src/libCom/test/epicsRunLibComTests.c:66
#28 0x0802854c in main (argc=<optimized out>, argv=<optimized out>) at /ade/epics/
↪supTop/base/DAR3.15.1.1/src/libCom/test/rtemsTestHarness.c:16
(
```

```
(gdb) print &buf
$9 = (u_char (*)[1024]) 0x81d4ea9
(gdb) list -
116             u_char buf[MAXPACKET];
117             HEADER *hp = (HEADER *) answer;
118             int n;
119
120             hp->rcode = NOERROR;    /* default */
```

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```
121
122             if ((_res.options & RES_INIT) == 0 && res_init() == -1) {
123                     h_errno = NETDB_INTERNAL;
124                     return (-1);
125             }
```

```
(gdb) print &hp->id
$3 = (unsigned int *) 0x81d4ea9
(gdb) print &hp
$4 = (HEADER **) 0x81d4aa0
(gdb) print *hp
$5 = {id = 0, rd = 0, tc = 0, aa = 0, opcode = 0, qr = 0, rcode = 0, cd = 0, ad =␣
↪0, unused = 0, ra = 0, qdcount = 0, ancount = 0, nscount = 0, arcount = 0}
(gdb) print &hp->id
$6 = (unsigned int *) 0x81d4ea9
(gdb) print hp
$7 = (HEADER *) 0x81d4ea9
(gdb) list
117              */
118             if ((buf == NULL) || (buflen < HFIXEDSZ))
119                     return (-1);
120             memset(buf, 0, HFIXEDSZ);
121             hp = (HEADER *) buf;
122             hp->id = htons(++_res.id);
123             hp->opcode = op;
124             hp->rd = (_res.options & RES_RECURSE) != 0;
125             hp->rcode = NOERROR;
```

Author: Joel Sherrill 2019-07-24T22:00:11.000Z

Original author: johill

Are you compiling with any type of strict alignment flags?

Is the stack itself properly aligned initially?

I agree that it's an ugly solution but it is clear that you can't assume proper alignment of a byte buffer without either a union, compiler magic, or an attribute. A union requires more modification of the software I think. RTEMS has this macro to help avoid compiler dependencies. I am almost OK with using it and the CPU_ALIGNMENT constant as the alignment. Are we sure 4 is a portable answer. What's the first field of HEADER?

include/rtems/score/basedefs.h: #define RTEMS_ALIGNED(_alignment) __attribute__((__aligned__(_alignment)))

Author: Trac Migrate 2019-07-25T00:13:25.000Z

Original author: johill

Are you compiling with any type of strict alignment flags?

Not that I know of, this is what we are using, and probably nothing additional relevant in the specs file.

-O3 -ggdb -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -MT serial/libserialio_a-mc68681.o -MD -MP -MF

A union requires more modification of the software I think.

That would be more portable. The cplusplus 11 has alignment features but C doesn't yet at this time probably?

Are we sure 4 is a portable answer.

The particular alignment issue causing the failure is probably a two byte one, based only on use of htons in that place in the code, but I definitely haven't looked around in this code to find the worst case alignment issue. Furthermore, I suspect there are additional instances of these char aligned buffers getting casted alarmingly into random data types therein . . .

Is the stack itself properly aligned initially?

I suppose that we _are_ an unusual BSP/ARCH, so there could be some suspicion there. I am looking at the _CPU_Context_Initialize we are using, which probably is mostly unmodified from stock RTEMS. The comment about the broken stack allocate functionality is concerning. I don't recall noticing it before. Nevertheless, wouldn't we see some fireworks if the stack pointer wasn't initially native word aligned?

```
1  void _CPU_Context_Initialize(
2  Context_Control *context,
3  void *stack_area_begin,
4  size_t stack_area_size,
5  uint32_t new_level,
6  void (*entry_point)( void ),
7  bool is_fp,
8  void *tls_area
9  )
10 {
11 const Nios2_MPU_Configuration *mpu_
   ↪config = _Nios2_MPU_Get_
   ↪configuration();
12 uint32_t stack = (uint32_t) stack_
   ↪area_begin + stack_area_size - 4;
```

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```
13
14 memset(context, 0,␣
   ↪sizeof(*context));
15
16 context->fp = stack;
17 context->sp = stack;
18 context->ra = (uint32_t) entry_
   ↪point;
19 /*
20 * must init status field in the␣
   ↪context before
21 * calling _NIOS2_CPU_context_isr_
   ↪set_level
22 */
23 context->status = NIOS2_STATUS_PIE;
24 _NIOS2_CPU_context_isr_set_level (␣
   ↪context, new_level );
25
26 if ( mpu_config != NULL ) {
27 Nios2_MPU_Region_descriptor desc = {
28 .index = mpu_config->data_index_for_
   ↪stack_protection,
29 /* FIXME: Brocken stack allocator */
30 .base = (void *) ((int) stack_area_
   ↪begin & ~((1 << mpu_config->data_
   ↪region_size_log2) - 1)),
31 .end = (char *) stack_area_begin +␣
   ↪stack_area_size,
32 .perm = NIOS2_MPU_DATA_PERM_SVR_
   ↪READWRITE_USER_NONE,
33 .data = true,
34 .cacheable = mpu_config->enable_
   ↪data_cache_for_stack,
35 .read = false,
36 .write = true
37 };
38 bool ok = _Nios2_MPU_Setup_region_
   ↪registers(
39 mpu_config,
40 &desc,
41 &context->stack_mpubase,
42 &context->stack_mpuacc
43 );
44
45 if ( !ok ) {
46 /* The task stack allocator must␣
   ↪ensure that the stack area is␣
   ↪valid */
47 _Terminate( INTERNAL_ERROR_CORE,␣
```

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```
↪false, 0xdeadbeef );
}
}
}
```

Author: Trac Migrate 2019-07-25T00:27:27.000Z

Original author: johill

I suppose that if 4 bytes _is_ the correct alignment then buf could be array of native words, as a less unsightly fix.

The harvard risc nios2 is passing parameters in registers so perhaps gcc has less stringent stack alignment constraints?

Author: Joel Sherrill 2019-07-25T20:00:43.000Z

Original author: johill

Per https://www.intel.com/content/dam/www/programmable/us/en/pdfs/literature/hb/nios2/n2cpu_nii51016.pdf it looks like the stack only requires 32-bit alignment. If RTEMS meets that, then the only solution is to somehow properly align the buffer.

Author: Gedare Bloom 2019-07-31T19:32:12.000Z

Original author: johill

Probably the 'buf' should be aligned to the structure alignment since it gets cast to HEADER struct. You can at least use CPU_STRUCTURE_ALIGNMENT macro, or else create a union, something like this might work

```
union {
struct {
HEADER header;
u_char payload[RTEMS_ZERO_LENGTH_ARRAY];
};
u_char buffer[MAXPACKET];
} x;
u_char *buf = x.buffer;
```

Author: Kinsey Moore 2025-01-31T18:28:28.556Z

moved to rtems/pkg/rtems-net-legacy#21

Author: Chris Johns 2025-09-19T01:06:47.421Z

changed the description

3.9.1.85 3764 - Beagle BSP: I2C driver has problems with certain sequences

Id	3764
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-06-29T07:34:49.000Z
Updated	2025-09-19T01:06:47.040Z
Milestone	6.1
Labels	bsp, priority::low, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3764
Merges	0

Original author: Christian Mauderer

The current Beagle I2C driver is quite specific to reading EEPROMs. A lot of other cases won't work.

Author: Trac Migrate 2019-06-29T07:38:44.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"b89d6cc5e4eb29d54d9b64b9374c4cb3208d0d66/rtems" b89d6cc/rtems]:

```
bsp/beagle: Partial re-write of I2C driver.

The old driver worked well for EEPROMS with the RTEMS EEPROM driver. But
it had problems with a lot of other situations. Although it's not a
direct port, the new driver is heavily modeled after the FreeBSD ti_i2c
driver.

Closes #3764.
```

Author: Chris Johns 2025-09-19T01:06:47.122Z

changed the description

3.9.1.86 3761 - RTEMS Object creation failed when using RTEMS with LEON3 BSP.

Id	3761
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-06-24T11:05:36.000Z
Updated	2025-09-19T01:06:46.838Z
Milestone	6.1
Labels	priority::normal, resolution::invalid, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3761
Merges	0

Original author: ashrithams

I am building dual core using LEON3 IP cores provided with GRLIB library in Cobham Gaisler website. The RTEMS 5 version is also provided in the same website. I have instantiated 2 LEON3 IP cores. Enabled SMP. Created a simple rtems C program of creating a task. But task creation is failing with Statius code - RTEMS_INVALID_ADDRESS In my makefile I have used -qbsp=leon3_smp switch.

Author: Joel Sherrill 2019-06-24T11:26:21.000Z

Original author: ashrithams

You will have to provide your task create call. But this error is documented as meaning the I'd parameter is NULL.https://docs.rtems.org/releases/rtemsdocs-4.6.2/share/rtems/html/c_user/c_user00065.html

Author: Trac Migrate 2019-06-25T03:50:29.000Z

Original author: ashrithams

Thank You for the reply. I have gone through the link you have provided and I am aware of it from C User documentation of RTEMS. However in what case does ID parameter be NULL, When I am very much declaring it? I have taken the code from the example application(1.37) provided in the RTEMS C User Documentation. Its as follows :

rtems_task Init(rtems_task_argument ignored) { rtems_id id;

status = rtems_task_create(rtems_build_name('T', 'A', ch, ' '), 1, RTEMS_MINIMUM_STACK_SIZE, RTEMS_NO_PREEMPT, RTEMS_FLOATING_POINT, &id); if (status!=RTEMS_SUCCESSFUL) { if (status = RTEMS_INVALID_ADDRESS) printf("TASK CREATION : RTEMS_INVALID_ADDRESS ERROR n"); }

}

Author: Trac Migrate 2019-06-27T07:14:08.000Z

Original author: ashrithams

Replying to Ashritha: [...]

> if (status = RTEMS_INVALID_ADDRESS) printf("TASK CREATION : RTEMS_INVALID_ADDRESS ERROR n"); [...]
>
> You should turn on and pay attention to compiler warnings to avoid bugs like this. Here you assign the value RTEMS_INVALID_ADDRESS to status.

Author: Trac Migrate 2019-07-06T09:25:55.000Z

Original author: ashrithams

Thank You for bringing out the mistake in the program. However after I set it correct, task creation is still failing. But now it is showing RTEMS_UNSATISFIED error.

Does it mean the stack size defined by RTEMS_MINIMUM_STACK_SIZE is not available really or should we based on the application redefine the MINIMUM_STACK_SIZE ?

Author: Joel Sherrill 2019-07-06T13:54:52.000Z

Original author: ashrithams

If that's your entire configuration, you forgot to configure any application tasks. Look at any of the examples.

Author: Trac Migrate 2019-07-08T05:38:46.000Z

Original author: ashrithams

Please have a look at the API documentation:

https://docs.rtems.org/branches/master/c-user/task_manager.html#rtems-task-create

RTEMS_UNSATISFIED non-preemption mode not supported on SMP system

You should update to the latest RTEMS master, if you want to use the SMP support.

Author: Trac Migrate 2019-07-08T05:39:57.000Z

Original author: ashrithams

- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*

The right error status is returned for this application error.

Author: Chris Johns 2025-09-19T01:06:46.909Z

changed the description

3.9.1.87 3749 - Rtems-libbsd build faiure in SMP configuration

Id	3749
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-05-14T19:48:33.000Z
Updated	2025-09-19T01:06:46.036Z
Milestone	6.1
Labels	libbsd, priority::high, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3749
Merges	0

Original author: jbrandmeyer-piq

rtems master df8d7bd76f501 introduced an API change to SMP_Multicast_action that changed the number and meaning of this function's arguments. However, RTEMS-libbsd was not updated to use the new API.

Since that time, rtems-libbsd fails to build against an SMP BSP, starting in rtems-kernel-epoch.c line 285 or so.

The RTEMS configuration tested below is based on xilinx-zynq configured with with –disable-networking –enable-cxx –enable-smp –target=arm-rtems5 –enable-posix –enable-rtemsbsp=xilinx_zynq_zedboard BSP_ZYNQ_RAM_LENGTH=1024M

Build failure looks like this:

~/workspace/rtems/rtems-libbsd-git$ python3 ./waf

Waf: Entering directory `/home/sara/workspace/rtems/rtems-libbsd-git/build/arm-rtems5-xilinx_zynq_zedboard-default'

[1591/1883] Compiling rtemsbsd/rtems/rtems-kernel-epoch.c

[1619/1883] Compiling freebsd/sys/dev/usb/serial/ugensa.c

../../rtemsbsd/rtems/rtems-kernel-epoch.c: In function 'epoch_block_handler_preempt':

../../rtemsbsd/rtems/rtems-kernel-epoch.c:285:3: error: too many arguments to function '_SMP_Multicast_action'

_SMP_Multicast_action(sizeof(set), &set, epoch_register_mutex,

^~~~~~~~~~~~~~~~~~~~~~

In file included from ../../rtemsbsd/rtems/rtems-kernel-epoch.c:44:0:

/opt/rtems_5/arm-rtems5/xilinx_zynq_zedboard/lib/include/rtems/score/smpimpl.h:265:6: note: declared here

void _SMP_Multicast_action(

^~~~~~~~~~~~~~~~~~~~~~~~

Waf: Leaving directory `/home/sara/workspace/rtems/rtems-libbsd-git/build/arm-rtems5-xilinx_zynq_zedboard-default'

Author: Trac Migrate 2019-05-14T21:04:12.000Z

Original author: jbrandmeyer-piq

- **Cc** added @shrbek@planetiq.com, @jbrandmeyer@planetiq.com

Author: Trac Migrate 2019-05-16T08:07:40.000Z

Original author: jbrandmeyer-piq

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Fixed by [16fa6a4651faaa77ef72c7e03d285c143d6e54fa/rtems-libbsd].

Author: Chris Johns 2025-09-19T01:06:46.204Z

changed the description

3.9.1.88 3730 - Adding PRU Support

Id	3730
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Gedare Bloom
Created	2019-04-02T16:15:28.000Z
Closed	2025-01-18T00:36:39.069Z
Updated	2025-09-19T01:06:45.891Z
Milestone	6.1
Labels	bsp, gsoc::large, priority::normal, project::large, tickettype::project
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3730
Merges	0

Original author: nilhoel

The Programmable Real-Time Unit (PRU) from Texas instruments is a dedicated i/o processeor on TIs Sitara Chips (e.g. Am35xx on the Beaglebone). Its main feature is that most of its i/o is accessible within one cycle of the PRU.

The driver needs to provide the following features: 1. Load Binaries on the PRU cores. 2. Control PRU Execution (start, stop, etc.). 3. Manage Resources (memory, interrupt mapping, etc.). 4. Provide a Method to send/receive messages for interacting with the PRU.

Linux loads Binaries to the PRU with remoteproc or UIO (userspace).

Communication can be provided via Interrupts (see https://elinux.org/Ti_AM33XX_PRUSSv2#Communication).

For detailed Information see: https://elinux.org/Ti_AM33XX_PRUSSv2 BeagleBoard Community PRU driver and Documentation: https://github.com/texane/pru_sdk

Author: Joel Sherrill 2019-04-02T17:08:31.000Z

Original author: nilhoel

Some odd basic questions.

- Is this the official source? https://github.com/beagleboard/am335x_pru_package
- Is the PRU still included in newer CPUs? What about the Octavo like in the PocketBeagle? I don't want to see you spend time on something that is at the end of its lifecycle.
- Is all software that will be included on the RTEMS target system and PRU appropriately licensed (e.g. not proprietary or GPL)?
- Will the RTEMS side of the PRU client library have RSB recipes? Answer should be yes. :)

Author: Trac Migrate 2019-04-02T17:57:57.000Z

Original author: nilhoel

Replying to Joel Sherrill:

> Some odd basic questions. * Is this the official source? https://github.com/beagleboard/am335x_pru_package These are Files Provided by TI and altered by the BeagleBoard community.
>
> - Is the PRU still included in newer CPUs? What about the Octavo like in the PocketBeagle? I don't want to see you spend time on something that is at the end of its lifecycle.
>
> Yes. The PRU is included in the whole Sitara line by TI. The Octava is just a System in Package using the same AM33xx as the Beagle-Bone Black. For a full view of the Sitara line see: https://www.ti.com/processors/sitara-arm/overview.html.
>
> - Is all software that will be included on the RTEMS target system and PRU appropriately licensed (e.g. not proprietary or GPL)?
>
> The TI compiler is proprietary. TI uses this license head on their open source files:

> https://github.com/beagleboard/am335x_pru_package/blob/master/pru_sw/utils/LICENCE.txt.
> I think it should be fine but please double check.
>
> - Will the RTEMS side of the PRU client library have RSB recipes? Answer should be yes. :)
>
> I haven't red into the RSB yet, could you provide me a link to a good starting point in the Documentation. Then I will try to add this to my GSoC Proposal.

Author: Chris Johns 2019-04-03T04:23:43.000Z

Original author: nilhoel

I see `pru_sdk` contains binaries. Is there source for these? Do the tools run on hosts other than Linux?

Author: Trac Migrate 2019-04-03T08:34:37.000Z

Original author: nilhoel

Replying to Chris Johns:

> I see `pru_sdk` contains binaries. Is there source for these? Do the tools run on hosts other than Linux? I am sorry I provided the wrong link there. The community PRU is @https://github.com/beagleboard/am335x_pru_package i will change that in the ticket. You will find the PRU Assembler sources there. TI provides SDKs for Windows and Linux with their Code Composer IDE. http://software-dl.ti.com/processor-sdk-linux/esd/AM335X/latest/index_FDS.html

Author: Chris Johns 2019-04-03T23:52:46.000Z

Original author: nilhoel

Thank you.

Author: Trac Migrate 2019-05-08T19:25:51.000Z

Original author: nilhoel

My GSoC 2019 Project concerning this Ticket has started. Please refer to its wiki page.

Author: Gedare Bloom 2022-02-25T18:19:52.000Z

Original author: nilhoel

- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*

Author: Amar Takhar 2024-04-25T20:47:19.486Z

changed the description

Author: Gedare Bloom 2025-01-18T00:36:38.763Z

Basically completed in 2019. https://nilshoel.home.blog/

3.9.1.89 3709 - rtems-libbsd build failure under Python 2

Id	3709
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2019-02-26T15:57:10.000Z
Closed	2025-01-31T18:27:53.646Z
Updated	2025-09-19T01:06:45.528Z
Milestone	6.1
Labels	priority::normal, rtems::build, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3709
Merges	0

Original author: jbrandmeyer-piq

Waf was unable to build rtems-libbsd using the default python. Executing it with Python 3 succeeded. Full reproduction details follow, but the summary is that running the build step with `./waf` fails immediately with the error `Could not create the directory ///h`. Running configuration and build with python 3 succeeds.

Host operating system is Debian Stretch /usr/bin/python is 2.7.13 /usr/bin/python3 is 3.5.5

Perhaps this is Unicode-specific? `locale` reports:

```
LANG=en_US.UTF-8
LANGUAGE=
LC_CTYPE="en_US.UTF-8"
LC_NUMERIC="en_US.UTF-8"
LC_TIME="en_US.UTF-8"
LC_COLLATE="en_US.UTF-8"
LC_MONETARY="en_US.UTF-8"
LC_MESSAGES="en_US.UTF-8"
LC_PAPER="en_US.UTF-8"
LC_NAME="en_US.UTF-8"
LC_ADDRESS="en_US.UTF-8"
```

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```
LC_TELEPHONE="en_US.UTF-8"
LC_MEASUREMENT="en_US.UTF-8"
LC_IDENTIFICATION="en_US.UTF-8"
LC_ALL=
```

Reproduction: Fresh git checkouts of rtems, rtems-libbsd, and rtems-source-builder, all under ~/src, all at master, with the following sha:

```
rtems-source-builder: 38241392a4f96da
rtems: 7abc497b6c763c
rtems-libbsd: 5432c6bed37fa26a
```

Build the rtems toolchain, from rtems-source-builder/rtems, executed:

```
../sb-set-builder --prefix=$HOME/Programs/rtems_5 --with-fortran --with-lto 5/
↪rtems-arm
```

Rebuild the rtems build scripts. With $HOME/Programs/rtems_5/bin in the PATH, in the cwd of ~/src/rtems:

```
./bootstrap -c
$HOME/src/rtems-source-builder/source-buildersb-bootstrap
```

Create a separate build directory ~/src/build-rtems-zynq, cd into it and build rtems with:

```
../rtems/configure --prefix=$HOME/Programs/rtems_5 --disable-networking --enable-
↪cxx --enable-smp --target=arm-rtems5 --enable-posix --enable-rtemsbsp=xilinx_
↪zynq_zedboard
make -j<many>
```

Configure rtems-libbsd. In a pwd of ~/src/rtems-libbsd:

```
git submodule init
git submodule update rtems_waf
./waf configure --prefix=$HOME/Programs/rtems_5 \\
--rtems-bsps=arm/xilinx_zynq_zedboard \\
--buildset=buildset/default.ini
./waf
```

Now the bug: Configuration appears to succeed. However, subsequent execution of waf all by itself immediately fails with the error “Could not create the directory ///h”.

The sequence:

```
python3 ./waf configure --prefix=$HOME/Programs/rtems_5 \\
--rtems-bsps=arm/xilinx_zynq_zedboard \\
--buildset=buildset/default.ini
python3 ./waf
```

succeeds.

Author: Trac Migrate 2019-02-26T16:30:26.000Z

Original author: jbrandmeyer-piq

Reader beware: two forward slashes together are interpreted by Trac as an italic formatting request. The error text is `Could not create the directory ///h` with three forward slashes (backticks work for literally quoting the machine-output text).

Author: Chris Johns 2019-02-27T23:45:53.000Z

Original author: jbrandmeyer-piq

- **Description** changed

```
Waf was unable to build rtems-libbsd using the default python. Executing it with Python 3 succeeded.  Full reproduction details follow, but the summary is that running the build step with `./waf` fails immediately with the error `Could not create the directory ///h`.  Running configuration and build with python 3 succeeds.


Host operating system is Debian Stretch
/usr/bin/python is 2.7.13
/usr/bin/python3 is 3.5.5

Perhaps this is Unicode-specific?  `locale` reports:
+ {{{
LANG=en_US.UTF-8
LANGUAGE=
LC_CTYPE="en_US.UTF-8"
LC_NUMERIC="en_US.UTF-8"
LC_TIME="en_US.UTF-8"
LC_COLLATE="en_US.UTF-8"
LC_MONETARY="en_US.UTF-8"
LC_MESSAGES="en_US.UTF-8"
LC_PAPER="en_US.UTF-8"
LC_NAME="en_US.UTF-8"
LC_ADDRESS="en_US.UTF-8"
LC_TELEPHONE="en_US.UTF-8"
LC_MEASUREMENT="en_US.UTF-8"
LC_IDENTIFICATION="en_US.UTF-8"
LC_ALL=
+ }}}

Reproduction:
- Fresh git checkouts of rtems, rtems-libbsd, and rtems-source-builder, all under ~/src, all at master, with the following sha:
+ Fresh git checkouts of rtems, rtems-libbsd, and rtems-source-builder, all under `~/src`, all at master, with the following sha:
?                                                                          +     +


-
```

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```
+ {{{
rtems-source-builder: 38241392a4f96da
rtems: 7abc497b6c763c
rtems-libbsd: 5432c6bed37fa26a
+ }}}


- Build the rtems toolchain, from rtems-source-builder/rtems, executed
+ Build the rtems toolchain, from `rtems-source-builder/rtems`, executed:
?                                  +                           +          +

+ {{{
../sb-set-builder --prefix=$HOME/Programs/rtems_5 --with-fortran --with-lto 5/rtems-arm
+ }}}

- Rebuild the rtems build scripts.  With $HOME/Programs/rtems_5/bin in the PATH, in the cwd of ~/src/rtems:
?                                    -

+ Rebuild the rtems build scripts. With `$HOME/Programs/rtems_5/bin` in the `PATH`, in the `cwd` of `~/src/rtems`:
?                                       +                           +    +     +    +         +   +    +           +

+ {{{
./bootstrap -c
$HOME/src/rtems-source-builder/source-buildersb-bootstrap
+ }}}

- Create a separate build directory ~/src/build-rtems-zynq, cd into it and build rtems with:
+ Create a separate build directory `~/src/build-rtems-zynq`, `cd` into it and build rtems with:
?                                    +                     +  +  +


-
+ {{{
../rtems/configure --prefix=$HOME/Programs/rtems_5 --disable-networking --enable-cxx --enable-smp --target=arm-rtems5 --enable-posix --enable-rtemsbsp=xilinx_zynq_zedboard
make -j<many>
+ }}}


-
- Configure rtems-libbsd.  In a pwd of ~/src/rtems-libbsd:
+ Configure rtems-libbsd.  In a `pwd` of `~/src/rtems-libbsd`:
```

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```
?                                +   +    +                   +

-
+ {{{
git submodule init
git submodule update rtems_waf
./waf configure --prefix=$HOME/Programs/rtems_5 \\
--rtems-bsps=arm/xilinx_zynq_zedboard \\
--buildset=buildset/default.ini
./waf
-
+ }}}
Now the bug: Configuration appears to succeed.  However, subsequent␣
↪execution of waf all by itself immediately fails with the error
↪"Could not create the directory ///h".

The sequence:
-
+ {{{
python3 ./waf configure --prefix=$HOME/Programs/rtems_5 \\
--rtems-bsps=arm/xilinx_zynq_zedboard \\
--buildset=buildset/default.ini
python3 ./waf
-
+ }}}
succeeds.
```

Thank you. I am still considering a way to reproduce this locally.

Author: Kinsey Moore 2025-01-31T18:27:53.893Z

moved to rtems/pkg/rtems-libbsd#30

Author: Chris Johns 2025-09-19T01:06:45.702Z

changed the description

3.9.1.90 3634 - Add getline() to Newlib

Id	3634
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2018-12-05T22:11:16.000Z
Updated	2025-09-19T01:06:45.371Z
Milestone	6.1
Labels	old-indefinite, priority::normal, resolution::duplicate, tickettype::defect, tool::newlib
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3634
Merges	0

getline() is not present in stdio.h.

See psxtests/Makefile.am when this is fixed. The getline() API compliance test is disabled.

Author: Joel Sherrill 2018-12-05T22:12:06.000Z

- **Resolution** set to ~"duplicate"
- **Status** changed from *assigned* to *closed*

Dupe of #3633

Author: Amar Takhar 2025-09-05T03:01:13.930Z

changed the description

3.9.1.91 3632 - [haunted D drive]Getting "d" Empty Folder when commiting in a rtems-docs OR rtems Repository

Id	3632
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-12-05T11:29:36.000Z
Updated	2025-09-19T01:06:45.119Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3632
Merges	0

Original author: Shashvat Jain

whenever i commit in my rtems or rtems-docs git repository i get to see a Empty folder inside the repository . I am using MSYS2 shell on Windows 10 and the repo. is in the D: drive . Even

after i delete this folder , it returns back with the next commit.

Is this a genuine problem of the repository and a side effect of D: drive ?

Author: Chris Johns 2018-12-06T04:28:47.000Z

Original author: Shashvat Jain

What is the folder?

Author: Trac Migrate 2019-08-07T18:33:41.000Z

Original author: Shashvat Jain

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Author: Chris Johns 2025-09-19T01:06:45.200Z

changed the description

3.9.1.92 3627 - powerpc/qoriq_e6500_64 rtems-syms unknown machine type

Id	3627
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2018-11-27T22:06:54.000Z
Updated	2025-09-19T01:06:44.985Z
Milestone	6.1
Labels	old-indefinite, priority::normal, resolution::wontfix, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3627
Merges	0

rtems-syms does not know 64-bit powerpc.

```
gmake[5]: Entering directory `/data/home/joel/rtems-work/rtems-testing/rtems/
↪build-powerpc-qoriq_e6500_64-rtems/powerpc-rtems5/c/qoriq_e6500_64/testsuites/
↪libtests'
rtems-syms -e -c "-mcpu=e6500 -m64 -fno-common -O2 -g -ffunction-sections -fdata-
↪sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-
↪prototypes -Wnested-externs" -o dl07-sym.o dl07.pre
error: machine-type: unknown machine type: 21
```

Author: Chris Johns 2018-11-28T04:17:02.000Z

I am not sure how clean `rtems-ld` is for 64bit. Adding the machine type is easy but it could masking hidden issues.

The `libelf` code is built for 32bit and not 64bit as at the time there was only 32bit arch's. I am not sure how this code goes handling 32bit archs when built for 64bit. Also `libdl` and `rtems-ld` would need changes to make sure it is 64bit clean.

Author: Chris Johns 2018-12-03T06:06:18.000Z

- **Milestone** changed from %"5.1" to %"Indefinite"
- **Status** changed from *assigned* to *new*

Author: Trac Migrate 2024-02-26T09:37:58.000Z

- **Resolution** set to ~"wontfix"
- **Status** changed from *new* to *closed*

Author: Amar Takhar 2025-09-05T02:57:40.063Z

changed the description

3.9.1.93 3623 - rtems-syms invoking m68k-rtemsundefined-gcc

Id	3623
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Chris Johns
Closed by	Joel Sherrill
Created	2018-11-26T23:40:15.000Z
Closed	2025-07-01T13:53:50.896Z
Updated	2025-09-19T01:06:44.856Z
Milestone	6.1
Labels	old-indefinite, priority::normal, tickettype::defect, tool, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3623
Merges	0

Testing m68k/mrm332. It builds ok with all tests enabled on Linux but on MSYS2, it fails with this from rtems-syms:

```
m68k-rtems5-gcc -mcpu=cpu32 -Os -g -fomit-frame-pointer -Wall -Wmissing-
↪prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs␣
↪   -mcpu=cpu32  -B./../../lib/libbsp/m68k/mrm332 -B/home/jrs007/rtems-work/
↪rtems/bsps/m68k/mrm332/start -specs bsp_specs -qrtems -L./../../cpukit -L/home/
↪jrs007/rtems-work/rtems/bsps/m68k/shared/start -Wl,--wrap=printf -Wl,--
↪wrap=puts -Wl,--wrap=putchar -o dl01.pre dl01/dl01-init.o dl01/dl01-dl-load.o␣
↪dl01-dl01-tar.o ../../lib/libbsp/m68k/mrm332/librtemsbsp.a ../../cpukit/
```

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```
↪librtemscpu.a
rtems-syms -e -c "-mcpu=cpu32 -Os -g -fomit-frame-pointer -Wall -Wmissing-
↪prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs
↪" -o dl01-sym.o dl01.pre
error: CreateProcess: execute: m68k-rtemsundefined-gcc

make[5]: *** [Makefile:7610: dl01-sym.o] Error 10
```

Author: Chris Johns 2020-04-28T01:51:53.000Z

- **Milestone** changed from %"5.1" to %"Indefinite"
- **Version** ~"5" deleted

Author: Joel Sherrill 2025-07-01T13:53:51.305Z

changed the description

Author: Joel Sherrill 2025-07-01T13:53:52.185Z

Closing. No longer occurs.

3.9.1.94 3616 - [patch] rtems-tools - elftoolchain native elf detection broken on x86_64 machines

Id	3616
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-11-23T16:15:17.000Z
Updated	2025-09-19T01:06:44.719Z
Milestone	6.1
Labels	old-indefinite, priority::high, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3616
Merges	0

Original author: spindel

The native elf detection script of rtems-tools (rtems-tools/rtemstoolkit/elftoolchain/common/native-elf-format) does not recognize the host string "x86_64" as EM_X86_64. It expects the string x86-64.

The attached patch fixes this issue that causes the rtems-source-builder build process to abort.

The issue was observed on ubuntu 16.04.5 and ubuntu 18.04.1 (both x86_64) when trying to build the _5/**rtems-arm**_ target of **rtems-source-builder** (master). Manually adding the patch to _rtems-**tools-5-1.cfg**_ recipe fixed the issue.

```
%patch add rtems-tools file://rtems-tools_fix-native-elf-detection-on-x86_64-
↪machines.patch
```

- rtems-tools_fix-native-elf-detection-on-x86_64-machines.patch

Author: Trac Migrate 2018-11-23T16:20:28.000Z

Original author: spindel

While trying to add the patch file, i got the the following trac error:

```
IndexError: pop from empty list
```

caused by the GET operation on `/attachment/ticket/3616/`

Author: Trac Migrate 2018-11-23T16:23:37.000Z

Original author: spindel

rtems-tools_fix-native-elf-detection-on-x86_64-machines.patch

{{{ #!diff From 6697c53638439a883097f7729746d9103c981a6a Mon Sep 17 00:00:00 2001 From: Christian Spindeldreier <spindeldreier@ims.uni-hannover.de> Date: Fri, 23 Nov 2018 16:29:31 +0100 Subject: [PATCH] fix native elf detection on x86_64 machines

— rtemstoolkit/elftoolchain/common/native-elf-format | 2 +- 1 file changed, 1 insertion(+), 1 deletion(-)

diff –git a/rtemstoolkit/elftoolchain/common/native-elf-format b/rtemstoolkit/elftoolchain/common/native-elf-format index 7ebaaa8..7a5ca5b 100755 — a/rtemstoolkit/elftoolchain/common/native-elf-format +++ b/rtemstoolkit/elftoolchain/common/native-elf-format @@ -39,7 +39,7 @@ $1 ~ “Machine:” { elfarch = “EM_386”; } else if (match($0, “MIPS”)) { elfarch = “EM_MIPS”; * } else if (match($0, “.*[xX]86-64”)) { + } else if (match($0, “.*[xX]86[-_]64”)) { elfarch = “EM_X86_64”; } else { elfarch = “unknown”; – 2.17.1

}}}

Author: Amar Takhar 2018-11-25T00:28:00.000Z

Original author: spindel

Hello, is your language set to English or another one? If it is not English please try setting it to that and re-submit it appears to be a bug within the template system in trac see #3617

Author: Chris Johns 2018-11-25T00:31:37.000Z

Original author: spindel

Can you please send the patch to the `elftoolchain` project as well?

https://sourceforge.net/p/elftoolchain/tickets/

Author: Trac Migrate 2018-11-25T10:27:10.000Z

Original author: spindel

- **Attachment** rtems-tools_fix-native-elf-detection-on-x86_64-machines.patch added

Author: Trac Migrate 2018-11-25T10:29:18.000Z

Original author: spindel

Replying to Amar Takhar:

> Hello, is your language set to English or another one? If it is not English please try setting it to that and re-submit it appears to be a bug within the template system in trac see #3617
>
> I changed my language to english and uploaded the patch file, thank you for the advice.

Author: Trac Migrate 2018-11-25T10:53:06.000Z

Original author: spindel

Replying to Chris Johns:

> Can you please send the patch to the `elftoolchain` project as well? https://sourceforge.net/p/elftoolchain/tickets/
>
> The patch is now submitted to the elftoolchain project https://sourceforge.net/p/elftoolchain/tickets/564/

Author: Trac Migrate 2018-11-27T06:02:51.000Z

Original author: spindel

- **Owner** set to Christian Spindeldreier <spindeldreier@ims.uni-hannover.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"97dc555efa44a6d5ae48d5a3f7cf2f08d5ed7e0c/rtems-tools" 97dc555/rtems-tools]:

```
fix native elf detection on x86_64 machines

Closes #3616
```

Author: Amar Takhar 2025-09-05T03:01:13.540Z

changed the description

3.9.1.95 3611 - qemu/glib fails to build with newer gcc

Id	3611
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-11-17T16:18:41.000Z
Updated	2025-09-19T01:06:44.419Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3611
Merges	0

Original author: arand

The rsb qemu build fails on Debian Stretch with the following error:

CC libglib_2_0_la-gdate.lo ../../glib-2.39.3/glib/gdate.c: In function ‘g_date_strftime’: ../../glib-2.39.3/glib/gdate.c:2497:7: error: format not a string literal, format string not checked [-Werror=format-nonliteral] tmplen = strftime (tmpbuf, tmpbufsize, locale_format, &tm); ^~~~~~

I experimented around a bit and if glib is updated to version 2.48.2 this seems to be solved, but then it instead fails due to a missing libpcre dependency.

I tried forcing the internal version of pcre instead, and that seemed to at least make the build go through.

The experimentation I did is attached as a patch.

I tested the build result qemu-system-or32 briefly, and I’m not sure it works properly in the end:

$ ~/utv/rtems-build/5/bin/qemu-system-or32

(process:18292): GLib-WARNING **: ../../glib-2.48.2/glib/gmem.c:483: custom memory allocation vtable not supported qemu: fatal: Trying to execute code outside RAM or ROM at 0x08000000

PC=08000000 R00=00000000 R01=00000000 R02=00000000 R03=00000000
R04=00000000 R05=00000000 R06=00000000 R07=00000000 R08=00000000
R09=00000000 R10=00000000 R11=00000000 R12=00000000 R13=00000000
R14=00000000 R15=00000000 R16=00000000 R17=00000000 R18=00000000
R19=00000000 R20=00000000 R21=00000000 R22=00000000 R23=00000000
R24=00000000 R25=00000000 R26=00000000 R27=00000000 R28=00000000
R29=00000000 R30=00000000 R31=00000000 Aborted

$ ~/utv/rtems-build/5/bin/qemu-system-or32 -serial mon:stdio -kernel ~/utv/rtems-build/bsp-generic_or1k-build/or1k-rtems5/c/generic_or1k/testsuites/samples/hello.exe

(process:5042): GLib-WARNING **: ../../glib-2.48.2/glib/gmem.c:483: custom memory allocation vtable not supported

(nothing more happens. . .)

- 0001-qemu-Update-glib-to-build-on-newer-gcc.patch

Author: Trac Migrate 2018-11-17T16:25:13.000Z

Original author: arand

- **Attachment** 0001-qemu-Update-glib-to-build-on-newer-gcc.patch added

Author: Trac Migrate 2020-03-20T13:35:33.000Z

Original author: arand

- **Owner** set to Joel Sherrill <joel@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"37e7cc5f4ce7ed46b5ea2de56d9066d121d851cb/rtems" 37e7cc5/rtems]:

```
gdbarmsim: Remove

Closes #3611.
```

Author: Trac Migrate 2020-03-20T14:23:10.000Z

Original author: arand

In [changeset:"87e49d4cf93924b5c855fbf9429cff2cdb212f8f/rtems-docs" 87e49d4/rtems-docs]:

```
gdbarmsim: Remove all references to this deleted BSP family

Updates #3611.
```

Author: Trac Migrate 2020-03-20T16:27:32.000Z

Original author: arand

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

I'm guessing this should be re-opened since the commit used the wrong close ticket id?

(I have not re-tested this on current versions of Debian though.)

Author: Joel Sherrill 2020-03-20T16:53:17.000Z

Original author: arand

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

I'm sorry. I misread #3611 instead of #3911.

I pushed this. Hopefully someone can test it but we know this has been broken for a while on newer OSes. With any luck, you didn't make it worse on older ones. :)

Author: Chris Johns 2025-09-19T01:06:44.543Z

changed the description

3.9.1.96 3608 - RISC-V Simulator Not in RSB Qemu Version

Id	3608
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2018-11-15T23:15:53.000Z
Updated	2025-09-19T01:06:44.263Z
Milestone	6.1
Labels	arch:riscv, old-indefinite, priority::normal, resolution::fixed, ticket-type::defect, tickettype::task, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3608
Merges	0

The Qemu version in the RSB does not have RISC-V support. Sebastian has been using a newer version from some project's git repository.

This is one of the two alternative simulators to run RISC-V executables. At the moment, neither Spike nor Qemu are usable for the RISC-V as present in the RSB.

Author: Trac Migrate 2018-11-16T06:27:22.000Z

- **Milestone** changed from %"5.1" to %"Indefinite"
- **Owner** set to Needs Funding

I would wait until the RISC-V is available in an upstream Qemu.

Author: Joel Sherrill 2022-02-17T14:06:13.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

I think this is OBE. We probably are always in need of a Qemu update in the RSB but not for this reason. At least not today.

Author: Amar Takhar 2025-09-05T02:57:39.878Z

changed the description

3.9.1.97 3581 - Structurally dead code in fifo.c (CID 1437649)

Id	3581
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-11-03T04:12:59.000Z
Updated	2025-09-19T01:06:44.104Z
Milestone	6.1
Labels	old-indefinite, priority::normal, resolution::fixed, scan::coverity, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3581
Merges	0

Original author: Shashvat Jain

As per coverity scan at [https://scan.coverity.com/projects/rtems] ,CID 1437649 , line 103 in fifo.c is unreachable and the code is called to be structurally dead. You will need an Coverity Scan account and permission to view RTEMS to see more details. all the “goto” statements are present , the problem could have arised due to syntax issue like “indentation” or due to a problem in upstream files.the code in question is: 100 c = ‘a’; 101 return 0; 102

CID 1437649 (#1 of 1): Structurally dead code (UNREACHABLE) unreachable: This code cannot be reached: rtems_barrier_delete(pipe->.... 103 rtems_barrier_delete(pipe->writeBarrier); 104err_wbar: 105 rtems_barrier_delete(pipe->readBarrier); 106err_rbar: 107 free(pipe->Buffer); 108err_buf: 109 free(pipe); 110 return err; 111}

Author: Joel Sherrill 2018-11-03T15:20:28.000Z

Original author: Shashvat Jain

Line 103 does indeed appear to be dead. It is in between a return 0 and a label. There is no way to get there.

Author: Trac Migrate 2018-11-22T15:59:41.000Z

Original author: Shashvat Jain

- **Owner** set to Joel Sherrill <joel@rtems.org>
- **Resolution** set to ~”fixed”
- **Status** changed from *new* to *closed*

In [changeset:"9dfb9a9879cd82f47604dfc007533f62b99bb392/rtems" 9dfb9a98/rtems]:

```
pipe/fifo.c: Remove dead code (CID 1437649)

Closes #3581.
```

Author: Amar Takhar 2024-04-25T20:46:35.192Z

changed the description

3.9.1.98 3575 - Typo in RTEMS docs, "cons void"

Id	3575
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-10-29T15:31:28.000Z
Updated	2025-09-19T01:06:43.824Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3575
Merges	0

Original author: JSchweikhardt

On https://docs.rtems.org/branches/master/c-user/message_manager.html#directives near 14.4.4. MESSAGE_QUEUE_SEND - Put message at rear of a queue the prototype says "cons void" which should be "const void".

Author: Trac Migrate 2018-10-29T22:31:23.000Z

Original author: JSchweikhardt

- **Owner** set to Joel Sherrill <joel@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"21fe48eb1a8d42f3822a971e310eeedacb006e14/rtems-docs" 21fe48e/rtems-docs]:

```
c-user/message_manager.rst: Change "cons void" to "const void"

Closes #3575.
```

Author: Chris Johns 2025-09-19T01:06:43.918Z

changed the description

3.9.1.99 3574 - DHCP request includes host name option even if hostname is zero length

Id	3574
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2018-10-27T19:57:18.000Z
Closed	2025-01-31T18:25:05.654Z
Updated	2025-09-19T01:06:43.503Z
Milestone	6.1
Labels	network::legacy, priority::normal, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3574
Merges	0

Original author: Sal

DHCP requests add the hostname option in dhcp_request_req() without checking its length, so the hostname can be of any length. This is a defect because the DHCP spec (https://tools.ietf.org/html/rfc2132) requires the hostname to have a minimum length of 1 char. This appears to trigger a bug in a specific Netgear router that causes it's DHCP process to lock up and could affect other things as well.

This bug can be solved applying the patch made by Aun-Ali Zaidi in the original ticket reporting this defect (https://devel.rtems.org/ticket/1405) that was never applied. I've been able to compile the code with the patch applied and it didn't raise any warnings.

Original ticket: https://devel.rtems.org/ticket/1405

- 0001-libnetworking-rtems_dhcp.c-Fix-improper-hostname-han.2-3.patch

Author: Trac Migrate 2018-11-13T22:52:26.000Z

Original author: Sal

- **Attachment** 0001-libnetworking-rtems_dhcp.c-Fix-improper-hostname-han.2-3.patch added

Patch to check the length of the hostname, therefore to solve the bug.

Author: Kinsey Moore 2025-01-31T18:25:06.140Z

moved to rtems/pkg/rtems-net-legacy#18

Author: Chris Johns 2025-09-19T01:06:43.631Z

changed the description

3.9.1.100 3573 - DHCP request includes host name option even if hostname is zero length

Id	3573
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2018-10-27T19:10:36.000Z
Closed	2025-01-31T18:25:25.097Z
Updated	2025-09-19T01:06:43.158Z
Milestone	6.1
Labels	network::legacy, priority::normal, tickettype::defect, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3573
Merges	0

Original author: Sal

DHCP requests add the hostname option in dhcp_request_req() without checking its length, so the hostname can be of any length. This is a defect because the DHCP spec (https://tools.ietf.org/html/rfc2132) requires the hostname to have a minimum length of 1 char. This appears to trigger a bug in a specific Netgear router that causes it's DHCP process to lock up and could affect other things as well.

This bug can be solved applying the patch made by Aun-Ali Zaidi in the original ticket reporting this defect (https://devel.rtems.org/ticket/1405) that was never applied. I've also attached the patch in this ticket. I've been able to compile the code with the patch applied and it didn't raise any warnings.

Original ticket: https://devel.rtems.org/ticket/1405

- 0001-libnetworking-rtems_dhcp.c-Fix-improper-hostname-han.2-2.patch

Author: Trac Migrate 2018-11-13T22:51:02.000Z

Original author: Sal

- **Attachment** 0001-libnetworking-rtems_dhcp.c-Fix-improper-hostname-han.2-2.patch added

Patch to check the length of the hostname, therefore to solve the bug.

Author: Kinsey Moore 2025-01-31T18:25:25.227Z

moved to rtems/pkg/rtems-net-legacy#19

Author: Chris Johns 2025-09-19T01:06:43.311Z

changed the description

3.9.1.101 3572 - DHCP request includes host name option even if hostname is zero length

Id	3572
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2018-10-27T19:07:43.000Z
Closed	2025-01-31T18:25:33.330Z
Updated	2025-09-19T01:06:42.762Z
Milestone	6.1
Labels	network::legacy, priority::normal, tickettype::defect, version::4.10
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3572
Merges	0

Original author: Sal

DHCP requests add the hostname option in _dhcp_request_req()_ without checking its length, so the hostname can be of any length. This is a defect because the DHCP spec (https://tools.ietf.org/html/rfc2132) requires the hostname to have a minimum length of 1 char. This appears to trigger a bug in a specific Netgear router that causes it's DHCP process to lock up and could affect other things as well.

This bug can be solved applying the patch made by Aun-Ali Zaidi in the original ticket reporting this defect (https://devel.rtems.org/ticket/1405) that was never applied. I've also attached the patch in this ticket. I've been able to compile the code with the patch applied and it didn't raise any warnings.

Original ticket: https://devel.rtems.org/ticket/1405

- 0001-libnetworking-rtems_dhcp.c-Fix-improper-hostname-han.2.2.patch
- 0001-libnetworking-rtems_dhcp.c-Fix-improper-hostname-han.2-1.patch

Author: Trac Migrate 2018-10-27T19:09:12.000Z

Original author: Sal

- **Attachment** 0001-libnetworking-rtems_dhcp.c-Fix-improper-hostname-han.2-1.patch added

Patch to checks the lenght of the hostname, therefore to solve to bug

Author: Trac Migrate 2018-11-13T22:54:10.000Z

Original author: Sal

- **Attachment** 0001-libnetworking-rtems_dhcp.c-Fix-improper-hostname-han.2.2.patch added

Patch to check the length of the hostname, therefore to solve the bug.

Author: Kinsey Moore 2025-01-31T18:25:33.448Z

moved to rtems/pkg/rtems-net-legacy#20

Author: Chris Johns 2025-09-19T01:06:42.910Z

changed the description

3.9.1.102 3567 - Convert SPARC Call Info Web Page to Rst

Id	3567
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2018-10-22T17:14:58.000Z
Updated	2025-09-19T01:06:42.588Z
Milestone	6.1
Labels	old-indefinite, priority::normal, resolution::fixed, ticket-type::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3567
Merges	0

We have permission from the author (Peter Magnusson) to convert this page:

https://web.archive.org/web/20120205014832/https://www.sics.se/~psm/sparcstack.html

to Rst and incorporate it into the SPARC CPU Supplement. The original website is no longer available and we have to reference archive.org. This information was quite useful to those who have dived into the details of the SPARC.

The conversion will need to be done by hand to ensure that the resulting Rst file is consistent with RTEMS Documentation Rst files. For the purposes of this ticket, assume the converted content will be placed as a new section at the end of the SPARC chapter in the CPU Supplement.

https://git.rtems.org/rtems-docs/tree/cpu-supplement/sparc.rst

For a first cut, the ASCII figures on the website can be ASCII figures in the Rst. As a second pass, they should be processed with DITAA into PNG files.

There is a starting point for the conversion in Joel's personal git repository on the sparcv8 branch. The content has had a very basic sanity check but there is more to do. Known issues with formatting are noted in the file. This repo can be browsed at https://git.rtems.org/joel/rtems-docs.git/. Please submit patches against the repo for the file cpu-supplement/sparc_v8_stacks_regwin.rst.

This ticket is to track that conversion.

Author: Joel Sherrill 2018-11-04T16:14:23.000Z

- **Description** changed

```
We have permission from the author (Peter Magnusson) to convert this page:

https://web.archive.org/web/20120205014832/https://www.sics.se/~psm/sparcstack.html

to Rst and incorporate it into the SPARC CPU Supplement. The original website is no longer available and we have to reference archive.org. This information was quite useful to those who have dived into the details of the SPARC.

+ The conversion will need to be done by hand to ensure that the resulting Rst file is consistent with RTEMS Documentation Rst files. For the purposes of this ticket, assume the converted content will be placed as a new section at the end of the SPARC chapter in the CPU Supplement.
+
+ https://git.rtems.org/rtems-docs/tree/cpu-supplement/sparc.rst
+
+ For a first cut, the ASCII figures on the website can be ASCII figures in the Rst. As a second pass, they should be processed with DITAA into PNG files.
+
This ticket is to track that conversion.
```

Author: Joel Sherrill 2018-11-09T22:34:42.000Z

- **Description** changed

```
We have permission from the author (Peter Magnusson) to convert this page:

https://web.archive.org/web/20120205014832/https://www.sics.se/~psm/sparcstack.html

to Rst and incorporate it into the SPARC CPU Supplement. The original website is no longer available and we have to reference archive.org. This information was quite useful to those who have dived into the details of the SPARC.

The conversion will need to be done by hand to ensure that the resulting Rst file is consistent with RTEMS Documentation Rst files. For the purposes of this ticket, assume the converted content will be placed as a new section at the end of the SPARC chapter in the CPU Supplement.

https://git.rtems.org/rtems-docs/tree/cpu-supplement/sparc.rst

For a first cut, the ASCII figures on the website can be ASCII figures
```

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```
↪in the Rst. As a second pass, they should be processed with DITAA␣
↪into PNG files.

+ There is a starting point for the conversion in Joel's personal git␣
↪repository on the sparcv8 branch. The content has had a very basic␣
↪sanity check but there is more to do. Known issues with formatting␣
↪are noted in the file. This repo can be browsed at https://git.rtems.
↪org/joel/rtems-docs.git/. Please submit patches against the repo for␣
↪the file cpu-supplement/sparc_v8_stacks_regwin.rst.
+
This ticket is to track that conversion.
```

Author: Trac Migrate 2018-11-19T19:12:32.000Z

- **Owner** set to Marçal Comajoan Cara <mcomajoancara@gmail.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"ae05a2783765b26f66d087bc8325f4a241260fd4/rtems-docs" ae05a27/rtems-docs]:

```
Improve SPARC Calling Overview Webpage conversion

Fixed tables, typos, redrawn images and converted ASCII art to ditaa
and PNG, and improved the overall format.

This work was part of GCI 2018.

Closes #3567.
```

Author: Amar Takhar 2025-09-05T03:01:12.650Z

changed the description

3.9.1.103 3565 - Or1k tools do not build.

Id	3565
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Trac Migrate
Created	2018-10-22T01:24:27.000Z
Updated	2025-09-19T01:06:42.170Z
Milestone	6.1
Labels	arch:or1k, priority::high, resolution::invalid, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3565
Merges	0

See attached log file.

The OS is FreeBSD 10.1-STABLE. All the other architectures built just fine.

- rsb-report-or1k-rtems5-gdb-7.11-x86_64-freebsd10.1-1.txt

Author: Amar Takhar 2018-10-22T01:24:41.000Z

- **Attachment** rsb-report-or1k-rtems5-gdb-7.11-x86_64-freebsd10.1-1.txt added

RSB log file.

Author: Amar Takhar 2018-10-22T01:28:49.000Z

- **Description** changed

```
See attached log file.
+
+ The OS is FreeBSD 10.1-STABLE.  All the other architectures built␣
↪just fine.
```

Author: Joel Sherrill 2018-10-22T14:25:54.000Z

or1k tools **COULD** be updated those from https://github.com/stffrdhrn?tab=repositories. Stafford Horne is working on addressing the last bits of code from the person who wouldn't sign the FSF assignment. I managed to build a toolchain from that using FSF binutils-gdb and his gcc. The downside is that it is tracking gcc master.

I am not convinced we should switch to this yet but when it is merged upstream to the FSF GCC, we should probably do it then.

Author: Amar Takhar 2018-10-22T15:22:22.000Z

The build is failing with the RSB it's not even attempting to build it. Same issue for Epiphany

Author: Amar Takhar 2023-01-19T16:36:18.000Z

- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*

Author: Chris Johns 2025-09-19T01:06:42.243Z

changed the description

3.9.1.104 3564 - Epiphany tools do not build.

Id	3564
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Trac Migrate
Created	2018-10-22T01:23:33.000Z
Updated	2025-09-19T01:06:41.952Z
Milestone	6.1
Labels	arch:epiphany, priority::high, resolution::invalid, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3564
Merges	0

Epiphany does not build see the attached log file for issues.

The OS is FreeBSD 10.1-STABLE. All the other architectures built just fine.

- rsb-report-epiphany-rtems5-gdb-7.8.1-x86_64-freebsd10.1-1.txt

Author: Amar Takhar 2018-10-22T01:23:46.000Z

- **Attachment** rsb-report-epiphany-rtems5-gdb-7.8.1-x86_64-freebsd10.1-1.txt added

RSB log file.

Author: Amar Takhar 2018-10-22T01:28:42.000Z

- **Description** changed

```
Epiphany does not build see the attached log file for issues.
+
+ The OS is FreeBSD 10.1-STABLE.  All the other architectures built␣
↪just fine.
```

Author: Amar Takhar 2023-01-19T16:36:08.000Z

- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*

Author: Chris Johns 2025-09-19T01:06:42.021Z

changed the description

3.9.1.105 3563 - Epiphany does not build.

Id	3563
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Trac Migrate
Created	2018-10-22T01:23:17.000Z
Updated	2025-09-19T01:06:41.730Z
Milestone	6.1
Labels	arch:epiphany, priority::high, resolution::invalid, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3563
Merges	0

Epiphany does not build see the attached log file for issues.

Author: Amar Takhar 2023-01-19T16:35:58.000Z

- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*

Author: Chris Johns 2025-09-19T01:06:41.804Z

changed the description

3.9.1.106 3509 - bootstrap -p option

Id	3509
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2018-08-29T22:59:03.000Z
Updated	2025-09-19T01:06:41.518Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::config, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3509
Merges	0

Original author: jeff.mayes

The -p option is gone, but it still shows up in the usage output.

$ ./bootstrap -p unknown option -p

usage: bootstrap [-c|-p|-h] [-q][-v]

Author: Trac Migrate 2018-08-29T22:59:40.000Z

Original author: jeff.mayes

- **Owner** set to @joel
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2018-08-30T13:41:40.000Z

Original author: jeff.mayes

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"7b1a711d3bcfc6d3a23b50960d85380fa38c0ee2/rtems" 7b1a711/rtems]:

```
bootstrap: Correct help message

closes #3509.
```

Author: Chris Johns 2025-09-19T01:06:41.587Z

changed the description

3.9.1.107 3493 - Documentation buglets in sparc.html

Id	3493
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-08-09T12:22:55.000Z
Updated	2025-09-19T01:06:41.296Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3493
Merges	0

Original author: JSchweikhardt

In https://docs.rtems.org/branches/master/cpu-supplement/sparc.html section 18.4.5 it says

> Interrupts are disabled or enabled by performing a system call to the Operating System reserved software traps 9 (SPARC_SWTRAP_IRQDIS) or 10 (SPARC_SWTRAP_IRQDIS).
>
> The trap 10 macro should probably be SPARC_SWTRAP_IRQEN instead of SPARC_SWTRAP_IRQDIS.

In section 18.4.6:

> it’s own worst case
>
> should be “its own. . . ”.

Author: Trac Migrate 2018-08-09T13:43:47.000Z

Original author: JSchweikhardt

- **Owner** set to Joel Sherrill <joel@rtems.org>
- **Resolution** set to ~”fixed”
- **Status** changed from *new* to *closed*

In [changeset:”135b90cb1be69a5dadb062b734e4c739bba385a2/rtems-docs” 135b90c/rtems-docs]:

```
Fix SPARC_SWTRAP_IRQDIS typo

close #3493.
```

Author: Trac Migrate 2018-08-09T13:47:17.000Z

Original author: JSchweikhardt

In [changeset:”99a84f904c9d85b1f50975765fec96123c542d32/rtems-docs” 99a84f9/rtems-docs]:

```
Fix SPARC_SWTRAP_IRQDIS typo

close #3493.
```

Author: Chris Johns 2025-09-19T01:06:41.372Z

changed the description

3.9.1.108 3487 - libbsd: IPSec support

Id	3487
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-08-06T13:23:22.000Z
Updated	2025-09-19T01:06:41.181Z
Milestone	6.1
Labels	libbsd, old-indefinite, priority::normal, resolution::fixed, ticket-type::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3487
Merges	0

Original author: Christian Mauderer

Add IPSec support to libbsd.

Author: Trac Migrate 2018-08-06T13:34:02.000Z

Original author: Christian Mauderer

Related commits:

- 9efc6500/rtems-libbsd crypto/sha2: Remove left over file.
- 9ea8664b/rtems-libbsd random: Implement read_random via getentropy.
- 879eaa7c/rtems-libbsd userspace-header-gen: Special case for Yacc / Lex.
- 01855a5a/rtems-libbsd waf: Allow to only generate lex and yacc.
- 09bbedcb/rtems-libbsd if_ipsec: Import from FreeBSD.
- 6215813e/rtems-libbsd if_ipsec: Port and add to everything-buildset.
- ff36f5e4/rtems-libbsd Import ipsec-tools 0.8.2.
- 8645c9d7/rtems-libbsd ipsec-tools: Apply patches from FreeBSD ports.
- b376ae13/rtems-libbsd ipsec-tools: Port libipsec, setkey and racoon.
- 5e139637/rtems-libbsd buildset/everything: Add some usefull comments.
- 1b467ad4/rtems-libbsd Add ipsec to rc.conf.
- c7eec93e/rtems-libbsd Add RTEMS_BSD_CONFIG_IPSEC.
- 028bf82f/rtems-libbsd rc.conf: Fix cloned interface setup.
- baffbf3e/rtems-libbsd testsuite/ipsec01: Add.
- afac48ae/rtems-libbsd libbsd.txt: Add ipsec.

Author: Trac Migrate 2018-08-06T13:34:22.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Author: Amar Takhar 2025-09-05T03:01:11.906Z

changed the description

3.9.1.109 3473 - Getting Started Wiki Page Redundant with Users Guide

Id	3473
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Closed by	Gedare Bloom
Created	2018-07-20T20:15:19.000Z
Closed	2025-02-12T16:23:38.668Z
Updated	2025-09-19T01:06:41.079Z
Milestone	6.1
Labels	old-indefinite, priority::normal, tickettype::task, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3473
Merges	0

https://devel.rtems.org/wiki/TBR/UserManual/Quick_Start seems to be redundant with https://docs.rtems.org/branches/master/user/start/index.html#quick-start

We need to review the Sphinx version for completeness versus the Wiki and eliminate the Wiki page including changing references to the Wiki page to point to the Users Guide.

That should allow the page to be deleted.

This may also apply to the 4.11 branch since we probably want to be consistent.

Author: Chris Johns 2018-10-14T01:03:17.000Z

- **Milestone** changed from %"5.1" to %"Indefinite"
- **Status** changed from *new* to *assigned*
- **Version** ~"5" deleted

Author: Gedare Bloom 2025-02-12T16:23:38.339Z

The wiki is dead, Jim.

Author: Gedare Bloom 2025-02-12T16:23:38.822Z

changed the description

3.9.1.110 3457 - rtems-tools has errors with waf-2.0.7 and later.

Id	3457
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2018-06-17T22:40:38.000Z
Updated	2025-09-19T01:06:40.879Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3457
Merges	0

The C check call does not handle `function_name` after waf-2.0.0 so we get:

```
Invalid argument 'function_name' in test
```

warnings.

Author: Chris Johns 2018-10-14T00:59:58.000Z

- **Milestone** %"5.1" deleted
- **Version** ~"5" deleted

Author: Chris Johns 2018-10-14T01:00:19.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Fixed.

Author: Chris Johns 2025-09-19T01:06:40.957Z

changed the description

3.9.1.111 3450 - Space character in path breaks rtems build on Linux

Id	3450
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Gedare Bloom
Created	2018-06-08T12:30:43.000Z
Closed	2025-01-31T15:44:03.903Z
Updated	2025-09-19T01:06:40.770Z
Milestone	6.1
Labels	old-indefinite, priority::normal, rtems::build, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3450
Merges	0

With RTEMS sometime after the bsp source reorganization, I now encounter errors when compiling RTEMS in a path that has a space in the name. This used to work. I will try to bisect to find the commit that makes it break. The current thought is that one of our custom automake scripts is not handling the path nicely.

make[4]: Entering directory '/media/gedare/Seagate Expansion Drive/work/rtems/builds/b-erc32-5/sparc-rtems5/c/erc32/lib/libbsp' Making all-am in . Making all-am in sparc make[5]: Entering directory '/media/gedare/Seagate Expansion Drive/work/rtems/builds/b-erc32-5/sparc-rtems5/c/erc32/lib/libbsp/sparc' make[5]: * **No rule to make target 'all-am'. Stop. make[5]: Leaving directory '/media/gedare/Seagate Expansion Drive/work/rtems/builds/b-erc32-5/sparc-rtems5/c/erc32/lib/libbsp/sparc' Makefile:656: recipe for target 'sparc' failed make[4]:** * [sparc] Error 2

Author: Joel Sherrill 2018-06-08T14:50:48.000Z

I duplicated this on Centos with the native filesystem.

sparc-rtems5-ranlib libscore.a gmake[5]: *** No rule to make target ``../../include/rtems/score/cpuopts.h', needed by ``all-am'. Stop.

My RTEMS source was under a directory with no spaces. But the build directory had a space in the final component. Based on Gedare's report, I think it doesn't matter where the space is in the path.

```
Build directory: /home/joel/rtems-work/test build
RTEMS Source:    /home/joel/rtems-work/rtems
```

Author: Joel Sherrill 2018-10-14T00:53:10.000Z

- **Milestone** changed from %"5.1" to %"Indefinite"
- **Version** ~"5" deleted

Author: Joel Sherrill 2018-11-14T15:25:08.000Z

This is the incredibly old GNU make issue https://savannah.gnu.org/bugs/?712 which was originally filed in 2002 and has **NOT** had an update since 2015.

I am recommending we mark this as Won't Fix and add a note to the Users Guide recommending that users not include a space (or other special characters) in their build or installation directories.

Author: Chris Johns 2018-11-14T22:58:41.000Z

Should we add a check to configure?

Author: Joel Sherrill 2018-11-14T23:16:58.000Z

Replying to Chris Johns:

> Should we add a check to configure?
>
> Which configure? There are so many places this could break. If we do anything, I would say add it to sb-check for work directory and sb-setbuilder for prefix. GCC, Binutils, GDB, Newlib, Qemu, etc. all use make to build. We can't change every configure on every program. RSB checking would probably catch users before they get too far down the path.

Author: Chris Johns 2018-11-14T23:53:05.000Z

From the ticket I assumed the break has happened with `rtems.git` so I am asking if the top level `configure` does a check?

Author: Gedare Bloom 2025-01-31T15:44:04.121Z

changed the description

3.9.1.112 3427 - Improvements to barectf

Id	3427
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-05-09T04:41:29.000Z
Updated	2025-09-19T01:06:40.588Z
Milestone	6.1
Labels	priority::normal, resolution::wontfix, tickettype::project, tickettype::task, tool
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3427
Merges	0

Original author: VidushiVashishth

barectf is a command line generator of C tracers which outputs CTF packets natively. Barectf suffers through the following limitations:

1) Lacks support for compound data types such as array and structs
2) Depends on stdint.h header file which is in the new C99. If this is not supported by standard C library on the users machine then a new library defining all the relevant datatypes can be created.

This task involves overcoming the aforementioned drawbacks of barectf and is a part of the project

Author: Trac Migrate 2018-05-09T06:03:25.000Z

Original author: VidushiVashishth

I don't understand the problem with a stdint.h dependency.

Author: Trac Migrate 2018-05-09T06:10:44.000Z

Original author: VidushiVashishth

The barectf generated C code needs the stdint.h header file because of the use of datatypes int8_t, int16_t etc. This header file is supported by the new C99. If the standard C file on the user machine does not have this header then it needs to be created according to the architecture of the user machine.

Author: Trac Migrate 2018-05-09T06:15:30.000Z

Original author: VidushiVashishth

What is a user machine? Which user machines lack support for C99? If a user machine is an RTEMS target, then you can assume C11.

Author: Trac Migrate 2018-05-09T06:38:59.000Z

Original author: VidushiVashishth

Yes by user machine I mean RTEMS target. I will update the ticket description.

Author: Trac Migrate 2018-05-09T06:41:13.000Z

Original author: VidushiVashishth

The use of stdint.h is not a problem in RTEMS.

Author: Trac Migrate 2018-05-09T06:55:53.000Z

Original author: VidushiVashishth

I am not too sure if the host machine too should have support for stdint.h. I will try running a few barectf example codes and then update the ticket likewise.

Author: Trac Migrate 2018-05-09T07:00:08.000Z

Original author: VidushiVashishth

I don't think that a stdint.h dependency is a problem for a host machine.

Author: Trac Migrate 2019-02-20T10:10:30.000Z

Original author: VidushiVashishth

- **Resolution** set to ~"wontfix"
- **Status** changed from *assigned* to *closed*

According to the barectf documentation as of 2019-02-20 there is still no support for CTF compound types. At the moment this is not an RTEMS issue.

Author: Chris Johns 2025-09-19T01:06:40.652Z

changed the description

3.9.1.113 5071 - rmdir does not handle dot-dot as specified by POSIX

Id	5071
State	closed
Type	ISSUE
Author	Loris Nardo
Closed by	Joel Sherrill
Created	2024-07-19T03:49:30.069Z
Closed	2024-08-02T21:04:24.929Z
Updated	2025-09-19T01:04:02.406Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5071
Merges	1

Summary

`rmdir` should fail with either `ENOTEMPTY` or `EEXIST` (the first one is preferred) when the last component of the supplied path is dot-dot.

Author: Amar Takhar 2024-07-19T03:51:42.487Z

If you don't mind you can link these to your MRs by referring to the issue # .. I have done the other two for you previously you can also mention the mr using an exclamation point and number: !80 – this has now linked the issue so you can use this in your description, too.

Author: Loris Nardo 2024-07-19T04:09:19.181Z

mentioned in merge request !80

Author: Loris Nardo 2024-07-28T05:39:03.122Z

This issue has been created because the testcase fstest/fsrmdirparent fails.

I've checked better what happens: in the testcase the `rmdir` fails with `EBUSY`, this is because in the testcase it is trying to remove the current working directory; however if I change the testcase to remove a different dot-dot folder, the testcase passes.

The different error is just because the condition for `EBUSY` is checked before. The dot-dot path is treated as valid and then fails inside `rmnod_h` with the correct error code.

If it is fine I can fix the testcase

Author: Amar Takhar 2024-07-28T05:39:15.488Z

Sounds like the test is bad submit an MR and in the commit message put "Closes #5071" .. so that way this will be closed and referenced thank you! – without the quotes. :)

Author: Loris Nardo 2024-07-28T06:08:22.704Z

mentioned in merge request !137

Author: Loris Nardo 2024-10-22T19:59:59.856Z

mentioned in commit hongran86/rtems-rh@bd7e02d96b5e22487656f95cfad8c078ce20c7c5

3.9.1.114 5069 - rfs: Does not check for names too long

Id	5069
State	closed
Type	ISSUE
Author	Loris Nardo
Closed by	Chris Johns
Created	2024-07-18T08:50:55.228Z
Closed	2025-06-05T00:31:20.901Z
Updated	2025-09-19T01:04:02.299Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5069
Merges	0

Summary

RFS file system does not honor `NAME_MAX`, in addition it does not check whether the file name is longer than the maximum allowed for its configuration causing the allocation of all remaining free blocks

Steps to reproduce

1. Configure a RFS mounted partition
2. Rename a file to a name longer than the block size, the rename operation fails with `ENOSPC`

Author: Amar Takhar 2024-07-18T18:47:43.053Z

mentioned in merge request !80

Author: Loris Nardo 2024-08-07T19:15:20.827Z

changed the description

Author: Chris Johns 2025-06-05T00:31:20.307Z

The Open Group rename call says about the `ENAMETOOLONG` :

> The length of a component of a pathname is longer than {NAME_MAX}.
>
> The `libio` rtems_filesystem_rename_t handler passes in to the file system only the component and it provides the length. The standard also says all components must be less than the `NAME_MAX` size and FreeBSD also adds the path length should be less than 1023 characters. The RFS cannot check the path as `libio` provides a LOC for the path.
>
> I will not fix this in the RFS and it is a `libio` bug. The `expected-fail` on the RFS is false and should be removed.

Author: Amar Takhar 2025-06-05T02:01:10.400Z

@chris The corresponding MR was merged are you saying it should be reverted? Partially reverted?

Author: Chris Johns 2025-06-05T02:01:10.400Z

No lets not bother. The ticket number in the `spec` points here and I have created #5257 to track the actual change needed. Reverting the change would make the test count again and it is still broken.

Author: Amar Takhar 2025-06-05T02:01:10.400Z

Okay thanks I linked the other issue as `Related to`.

Author: Amar Takhar 2025-06-05T02:00:23.315Z

marked this issue as related to #5257

3.9.1.115 5068 - Asynchronous I/O Interface does not generate notification at request completion

Id	5068
State	closed
Type	ISSUE
Author	Alessandro Nardin
Closed by	Joel Sherrill
Created	2024-07-16T09:12:46.307Z
Closed	2024-07-24T14:22:18.989Z
Updated	2025-09-19T01:04:02.205Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5068
Merges	1

Summary

The current implementation of the AIO interface does not use the `aio_sigevent` field in the `aiocb` struct to generate a notification upon request completion.

Author: Alessandro Nardin 2024-07-16T09:16:13.329Z

mentioned in merge request !118

3.9.1.116 5061 - waf creation of compile_commands.json

Id	5061
State	closed
Type	ISSUE
Author	Michael Frandsen
Assignee(s)	Amar Takhar
Closed by	Michael Frandsen
Created	2024-07-06T07:38:50.824Z
Closed	2024-07-07T06:44:25.912Z
Updated	2025-09-19T01:04:02.111Z
Milestone	6.1
Labels	tool::waf
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5061
Merges	0

Summary

When working in editors like vi, vim, and neovim it is helpful to have compile_commands.json. WAF extras do have this, but it is not included in the library produced/fetched by the waf binary in .waf3-2.0.19xxxxx. Currently the json can be created by other external tools, but having this out of the box in waf seems more appropriate.

Steps to reproduce

create a hello project and use the instructions of the quick start. Add a line containing 'conf.load('clang_compilation_database')' in the def configure(conf) function.

Author: Amar Takhar 2024-07-06T22:09:31.480Z

I looked into this and with the way the build system is written for RTEMS I don't see how we'll be supporting this easily.

Honestly I'm not even sure if we'd ever want to support it there is a lot of complexity between architectures that can't be distilled down to a simple set of commandline arguments.

Having said that: waf is already incredibly fast and accurate. The advantages of taking the commands out of the build system into the IDE or editor are to speed up compiling single files but I don't think using waf you would get any perceptible speedup at all.

You're way better off running "waf" as your run command and "waf configure" if you edit `config.ini`.

Author: Amar Takhar 2024-07-06T22:10:45.292Z

For anyone else who has interest here are the two relevant pages you may want to read:

- https://clang.llvm.org/docs/JSONCompilationDatabase.html
- https://gitlab.com/ita1024/waf/-/blob/master/waflib/extras/clang_compilation_database.py

Author: Michael Frandsen 2024-07-07T06:46:21.532Z

I closed this since it will likely never be implemented and I am not creating the json for speed issues in compilation. I will use "bear – ./waf" to create the file.

Author: Amar Takhar 2024-07-07T06:48:33.694Z

assigned to @amar

Author: Amar Takhar 2024-07-07T06:48:45.353Z

Assigning to myself since I may re-visit this in the future.

Author: Amar Takhar 2024-07-07T06:59:39.266Z

To be clear I did try this out it created an empty json file.

3.9.1.117 5056 - Add SPI support to Raspberry Pi 4B BSP

Id	5056
State	closed
Type	ISSUE
Author	Ning Yang
Closed by	Amar Takhar
Created	2024-06-30T05:59:06.545Z
Closed	2024-08-05T22:58:55.240Z
Updated	2025-09-19T01:04:02.000Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5056
Merges	1

Author: Ning Yang 2024-06-30T06:07:32.942Z

mentioned in merge request !103

Author: Ning Yang 2024-06-30T06:20:38.614Z

Use ssd1306 to display a RTEMS logo https://www.youtube.com/watch?v=DFtzoiYVMiQ

Author: Ning Yang 2024-06-30T06:20:06.195Z

SSD1306 driver https://github.com/yangn0/RTEMS_app/blob/main/test/test.c

Author: Ning Yang 2024-06-30T06:22:42.733Z

Author: Ning Yang 2024-10-22T19:59:59.746Z

mentioned in commit hongran86/rtems-rh@8f0c0bc37957fd8fee3c8dd17b9a4a8544d473e6

3.9.1.118 5055 - Self-contained object: Add timeout and try wait function for counting semaphore

Id	5055
State	closed
Type	ISSUE
Author	xiaojun zheng
Closed by	Amar Takhar
Created	2024-06-28T07:32:10.218Z
Closed	2024-07-02T01:49:25.662Z
Updated	2025-09-19T01:04:01.889Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5055
Merges	1

Summary

Self-contained object counting semaphore do not have timeout function and try_wait function. These two functions should be added.

Details

1. rtems_counting_semaphore_wait_timed_ticks(rtems_counting_semaphore *counting_semaphore,uint32_t ticks)
2. rtems_counting_semaphore_try_wait(rtems_counting_semaphore *counting_semaphore)

Testsuites and document need to be updated too.

Author: xiaojun zheng 2024-06-28T08:51:52.207Z

mentioned in merge request !100

Author: xiaojun zheng 2024-07-02T01:49:26.711Z

mentioned in commit acf12498cf00ab469e8139c55515f3b3c46cc5ac

Author: xiaojun zheng 2024-07-03T00:39:27.941Z

mentioned in merge request rtems/docs/rtems-docs!28

3.9.1.119 5053 - testsuit/libtest/dl12: build error

Id	5053
State	closed
Type	ISSUE
Author	Ranulfo Raphael
Closed by	Ranulfo Raphael
Created	2024-06-24T21:40:35.635Z
Closed	2024-08-11T10:28:30.855Z
Updated	2025-09-19T01:04:01.781Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5053
Merges	1

Summary

https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/25#note_107970

The `testsuit/libtest/dl12` causes a build error during the creation of incrementally linked object for some BSPs.

```
/home/devel/rtems-6/bin/arm-rtems6-ld: testsuites/libtests/dl12/dl12-o1.o:␣
↪compiled for a big endian system and target is little endian
/home/devel/rtems-6/bin/arm-rtems6-ld: failed to merge target specific data of␣
↪file testsuites/libtests/dl12/dl12-o1.o
/home/devel/rtems-6/bin/arm-rtems6-ld: testsuites/libtests/dl12/dl12-o2.o:␣
↪compiled for a big endian system and target is little endian
/home/devel/rtems-6/bin/arm-rtems6-ld: failed to merge target specific data of␣
↪file testsuites/libtests/dl12/dl12-o2.o
```

Steps to reproduce

```
[DEFAULT]
BUILD_TESTS = True

[arm/tms570lc4357_hdk_sdram]
```

Author: Ranulfo Raphael 2024-06-24T21:52:17.224Z

mentioned in merge request !91

Author: Sebastian Huber	2024-06-25T06:18:50.269Z

mentioned in merge request !92

3.9.1.120 5052 - amd64 BSP crashes on QEMU with KVM enabled

Id	5052
State	closed
Type	ISSUE
Author	Matheus Pecoraro
Closed by	Kinsey Moore
Created	2024-06-20T21:48:28.688Z
Closed	2024-06-25T13:35:38.443Z
Updated	2025-09-19T01:04:01.672Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5052
Merges	1

Summary

The global page flag is being set on the PML4 entries when it should only be set on the lowest level of the page-translation hierarchy, when KVM is enabled this causes a crash.

Author: Matheus Pecoraro	2024-06-20T21:49:03.912Z

Author: Matheus Pecoraro	2024-06-22T17:00:34.753Z

mentioned in merge request !88

3.9.1.121 5046 - x86_64: Global constructors/destructors don't get called

Id	5046
State	closed
Type	ISSUE
Author	Matheus Pecoraro
Closed by	Amar Takhar
Created	2024-06-15T20:32:16.276Z
Closed	2024-06-17T20:45:44.111Z
Updated	2025-09-19T01:04:01.568Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5046
Merges	1

Summary

Although the linker script places **.ctors** and **.dtors** inside **.init_array** and **.fini_array**, **CPU_USE_LIBC_INIT_FINI_ARRAY** is defined as FALSE which causes constructors and destructors to not get called.

x86_64 is actually never meant to use the _init and _fini generated by GCC as they will mess up stack alignment and potentially cause a General Protection Fault if any constructor utilizes SSE. Setting **CPU_USE_LIBC_INIT_FINI_ARRAY** to true fixes the issue.

Author: Matheus Pecoraro	2024-06-15T20:32:31.725Z

mentioned in merge request !75

Author: Matheus Pecoraro	2024-06-15T20:33:33.451Z

changed the description

Author: Matheus Pecoraro	2024-06-15T20:35:11.681Z

3.9.1.122 5044 - FAT32 creating a file after a rename of a still opened file can yield back the same file

Id	5044
State	closed
Type	ISSUE
Author	Loris Nardo
Closed by	Joel Sherrill
Created	2024-06-15T09:08:39.876Z
Closed	2024-07-25T20:13:40.966Z
Updated	2025-09-19T01:04:01.459Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5044
Merges	1

Summary

We have found that with FAT32 file system it is possible to end up in a situation in which creating a new file yields back a file whose name has been changed in the same folder.

Steps to reproduce

1. Open a file in a folder mounted with FAT32 file system (open call)
2. Rename the still opened file (rename call)

3. Create a file in the same folder (open call) At this point the newly created file aliases the file still open at point 1 if the FAT32 directory entry for the old name of the file at point 1 is used by the open call at point 3.

This happens because the fat_file_open constructs a key based on the directory entry position and uses it to perform a lookup, since the rename operation does not change the inode number nor does it update the hash table used for the lookup, it is possible for the fat_file_open called by point 3 to find in the lookup table the valid entry of the file opened at point 1.

A possible fix is to change the inode number of the file when it is renamed at point 2, this has the potentially undesired effect that the file opened at point 1 changes the inode number in between however.

Author: Loris Nardo 2024-06-15T09:26:11.756Z

changed the description

Author: Loris Nardo 2024-06-18T17:46:36.279Z

mentioned in merge request !80

Author: Chris Johns 2024-06-22T06:10:46.211Z

@loris.nardo how hard would it be to update https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/testsuites/fstests/fsrename/test.c to test this issue?

Author: Loris Nardo 2024-06-22T06:10:46.211Z

I think that it is easy enough. In the next days I'll add to it, thanks to pointing to the correct test file. The idea is to write to the first file before the rename and then check with a read on the other file created after the rename, if there is no data read then the test is fine. I've finished writing it but first I need to test it.

3.9.1.123 5042 - amd64: console_initialize throws fatal error due to console device_file having the same path

Id	5042
State	closed
Type	ISSUE
Author	Matheus Pecoraro
Closed by	Joel Sherrill
Created	2024-06-13T20:08:13.079Z
Closed	2024-06-14T20:53:30.563Z
Updated	2025-09-19T01:04:01.348Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5042
Merges	1

Summary

The current device_file path on the amd64 console is "/dev/console", causing **link** to fail and **console_initialize** (Located: **/bsps/shared/dev/serial/console-termios-init.c**) to throw an **BSP_FATAL_CONSOLE_INSTALL_1** error.

Author: Matheus Pecoraro 2024-06-13T20:08:45.878Z

mentioned in merge request !72

Author: Matheus Pecoraro 2024-06-13T20:10:44.904Z

3.9.1.124 5041 - x86_64: ISR handler macros do not follow expected behavior

Id	5041
State	closed
Type	ISSUE
Author	Matheus Pecoraro
Closed by	Amar Takhar
Created	2024-06-13T19:13:42.845Z
Closed	2024-07-01T17:49:03.199Z
Updated	2025-09-19T01:04:01.233Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5041
Merges	1

Summary

The **psxspin01** test fails on:

```
../../../testsuites/psxtests/psxspin01/test.c:102 _ISR_Get_level() != 0
```

Due to **_CPU_ISR_Disable** (located in **/cpukit/score/x86_64/include/rtems/score/cpu.h**) wrongfully calling **amd64_enable_interrupts** instead of **amd64_disable_interrupts**.

Even beyond this mistake the general implementation of **_CPU_ISR_Enable**, **_CPU_ISR_Disable** and **_CPU_ISR_Flash** do not follow the expected behavior as **_CPU_ISR_Disable** unconditionally sets level to disabled and both **_CPU_ISR_Enable** and **_CPU_ISR_Flash** enable interrupts independently of the level passed to them.

Author: Matheus Pecoraro 2024-06-13T19:15:01.367Z

mentioned in merge request !71

Author: Matheus Pecoraro 2024-06-13T19:26:09.027Z

Author: Amar Takhar 2024-06-14T23:46:28.822Z

3.9.1.125 5040 - aio_fsync() does not support O_DSYNC

Id	5040
State	closed
Type	ISSUE
Author	Alessandro Nardin
Closed by	Amar Takhar
Created	2024-06-13T08:50:11.587Z
Closed	2024-08-02T20:03:23.252Z
Updated	2025-09-19T01:04:01.113Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5040
Merges	1

The `aio_fsync()` specification defines that the `op` parameter can be either `O_DSYNC` or `O_SYNC`. However, the current implementation of the method only accepts `O_SYNC`.

Author: Alessandro Nardin 2024-06-13T08:50:23.920Z

changed title from **{-``-}aio_fsync(){-``-} does not support {-``-}O_DSYNC{-``-}** to **aio_fsync() does not support O_DSYNC**

Author: Alessandro Nardin 2024-06-13T08:59:35.107Z

I found issue #1683 from the last GSoC project that worked on the AIO Interface. I attempted to locate `fcntl.h` to check if the definitions were still missing, but I couldn't find the file. Could someone help me locate it?

Also, according to the specifications, when a call to `aio_fsync()` is made with `op=O_DSYNC`, the request should be handled by a call to `fdatasync()`. I searched for this function to verify if it was correctly implemented. The function is present, but I am not sure if it performs as expected. Before diving too deep into the code, I wanted to ask if any of you already know whether the fdatasync() function is correctly implemented.

Author: Kinsey Moore 2024-06-13T12:28:57.013Z

Author: Joel Sherrill 2024-06-16T12:22:06.005Z

fdatasync() itself is implemented correctly. It depends on the file system to do the work.

I think setting this means that after every read/write/etc, fdatasync() should be called. It is adding conditional behavior.

Author: Alessandro Nardin 2024-06-16T12:22:28.426Z

After a first read of the documentation, I was left with the impression that it would be sufficient to call `fdatasync` instead of `fsync` if op was with `O_DSYNC`.

I'll need to read more and verify if that's actually a valid approach or if i missed something.

Author: Joel Sherrill 2024-06-16T17:03:16.059Z

I think that is correct. Be careful reading the POSIX specification to see if the synchronization call is once for the entire set or on each operation.

FWIW AIO should be in the RTEMS POSIx guide. As you complete each functionality improvement, you should check it see if the documentation needs updating also

Author: Alessandro Nardin 2024-06-16T18:27:55.849Z

Awesome, i'll double check the specification and start working.

Author: Alessandro Nardin 2024-06-26T13:41:09.804Z

I reviewed the documentation and it doesn't specify whether `aio_fsync()` should synchronize after every individual operation or just once after all enqueued operations are completed. The specification only states that all currently queued operations for the file should be synchronized.

From my understanding, the current implementation uses the latter approach, synchronizing once after all enqueued operations have completed. However, I have some concerns about the implementation details:

To ensure synchronization after all already enqueued operations, the sync request should be placed at the end of the queue. This is because we process the next operation from the top of the queue.

However, in our implementation, the insertion into the queue is not always at the bottom. It's based on the request priority, with requests having a low `aio_reqprio` value being placed earlier in the queue. I've noticed that there's no mechanism to guarantee that the sync request is placed at the bottom of the queue. Is this an error or am I misunderstanding the code?

Author: Joel Sherrill 2024-06-27T15:24:55.314Z

It looks like the aio enqueue process will insert requests on to the one associated with the thread for that file descriptor. But if I am reading this code right, the requests are placed in LIFO order.

```
while (
req->aiocbp->aio_reqprio > prio &&
!rtems_chain_is_tail( chain, node )
) {
```

I think that should be >= prio so the scan for the insertion point will put new requests at the same priority at the end of the same priority ones. If I am reading this right, changing to >= prio should address your concern.

I think all requested operations on a single fd should be processed in priority order and FIFO order when at the same priority.

Author: Alessandro Nardin 2024-06-29T13:38:50.145Z

I have noticed that O_DSYNC is not defined, as noted in issue #1683. I tried to locate file fcntl.h but could not find it. How should i proceed?

Author: Joel Sherrill 2024-06-29T20:14:17.181Z

fsync.h is from newlib and installed with your compiler. The definition of O_DSYNC and O_RSYNC are inside an ifdef(__CYGWIN__) but according to POSIX, two of the four items defined there are standard. Find them in _default_fsync.h.

For the short term, edit the installed file and let's see what works for you. Then I can take the lead to get this submitted to newlib and bump the RTEMS RSB. [Disclaimer: I have nothing against you doing the fix to newlib but it is a detour which could take time away from your real goal of AIO.]

Perhaps we are also fixing #1683 at the same time.

Author: Alessandro Nardin 2024-07-25T15:55:03.275Z

mentioned in merge request !128

Author: Joel Sherrill 2025-01-31T00:42:57.190Z

mentioned in issue #1683

3.9.1.126 5039 - aio_return() can be called indefinitely.

Id	5039
State	closed
Type	ISSUE
Author	Alessandro Nardin
Closed by	Amar Takhar
Created	2024-06-13T08:22:32.167Z
Closed	2024-06-25T04:09:46.990Z
Updated	2025-09-19T01:04:00.993Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5039
Merges	1

According to the POSIX specifications for *aio_return() <)*](https://pubs.opengroup.org/onlinepubs/9699919799/>`_:

The aio_return() function may be called exactly once to retrieve the return status of a given asynchronous operation; thereafter, if the same aiocb structure is used in a call to aio_return() or aio_error(), an error may be returned.

However, the current implementation of aio_return() simply returns a value in `aiocbp->return_value`. This allows `aio_return()` and `aio_error()` to be called again after the first call to `aio_return()` without generating an error, contrary to the specification.

Author: Alessandro Nardin 2024-06-13T08:22:32.473Z

Author: Alessandro Nardin 2024-06-13T08:26:25.156Z

changed the description

Author: Alessandro Nardin 2024-06-13T08:29:32.256Z

My idea for a possible solution is to add an additional private field to the `aiocb` structure to indicate whether `aio_return()` has already been called.

Let me know if this approach is viable.

Author: Joel Sherrill 2024-06-16T12:13:16.636Z

I think this may be the only approach. Reading https://pubs.opengroup.org/onlinepubs/009695399/functions/aio_return.html, it looks like the AIO implementation will have to track from when requested until the status is returned.

So yes. Looks like the approach to me. Just honor the POSIX specification.

Author: Alessandro Nardin 2024-06-16T12:13:16.610Z

perfect, i'll start working on that then.

Author: Alessandro Nardin 2024-06-20T12:58:04.253Z

mentioned in merge request !85

Author: Alessandro Nardin 2024-06-27T19:09:44.001Z

mentioned in commit AlessandroNardin/rtems-docs@3f119478f902dbdd64d4293df874aea430e32127

Author: Alessandro Nardin 2024-06-27T19:13:07.682Z

mentioned in merge request rtems/docs/rtems-docs!26

Author: Alessandro Nardin 2024-07-02T16:17:58.549Z

mentioned in commit AlessandroNardin/rtems-docs@427902a9a2822aac1d82a16603ddeb8aee96ecc2

3.9.1.127 5036 - Fix incorrect macro definition for pl011 driver

Id	5036
State	closed
Type	ISSUE
Author	Ning Yang
Closed by	Amar Takhar
Created	2024-06-11T13:44:38.839Z
Closed	2024-06-13T19:54:55.153Z
Updated	2025-09-19T01:04:00.897Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5036
Merges	1

I checked the pl011 datasheet.

!`image <https://gitlab.rtems.org/-/project/uploads/5a42b544e134cc17714efc35340384e6/image.png>`_

The macro of SIRLP,SIREN and UARTEN in CR register is wrong.

Author: Ning Yang 2024-06-11T13:46:35.959Z

mentioned in merge request !64

3.9.1.128 5035 - Add GDB debug script section to executable

Id	5035
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Amar Takhar
Created	2024-06-11T06:14:01.785Z
Closed	2024-08-05T21:34:30.136Z
Updated	2025-09-19T01:04:00.779Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5035
Merges	1

Summary

Find a means to embed the `.debug_gdb_scripts` section in an executable.

The GDB manual provides a section The .debug_gdb_scripts section which details what the section looks like.

3.9.1.128.1.1 Solutions

This is an initial list of possible solutions. There may be more so please add to the list any other possible solutions.

1. Get the linker command file to embed the section directly into the executable
2. Create a object file the linker command file loaded into the executable

Author: Chris Johns 2024-06-11T06:14:02.891Z

Author: Chris Johns 2024-06-15T01:14:48.900Z

changed the description

Author: Suraj Kumar 2024-06-30T01:53:59.088Z

Using C to generate the object code for us seems to be the best way to go forward with this, to let us not worry about architecture specifics.

Currently, the idea is to add the code snippet containing the Python code to a C file which is universally accessed by the linker for all links. A starting point is: https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/cpukit/sapi/src/exinit.c

The following modifications can be made to the file to reflect the desired changes:

1. Add macro definition

```
#define DEFINE_GDB_PY() \\
asm( \\
".pushsection \\".debug_gdb_scripts\\", \\"MS\\",@progbits,1\\n" \\
".byte 4\\n" \\
".ascii \\"gdb.inlined-script\\\\n\\"\\n" \\
".ascii \\"import sys\\\\n\\"\\n" \\
".ascii \\"import os.path\\\\n\\"\\n" \\
".ascii \\"sys.path.append(os.path.join(gdb.PYTHONDIR, 'rtems'))\\\\n\\
↪"\\n" \\
".ascii \\"print(sys.path)\\\\n\\"\\n" \\
".ascii \\"print(gdb.PYTHONDIR)\\\\n\\"\\n" \\
".ascii \\"import rtems.stdcxx as stdcxx\\\\n\\"\\n" \\
".byte 0\\n" \\
".popsection\\n" \\
)
```

2. Add macro call in function `rtems_initialize_data_structures()`

After these modifications, build the BSP again and build this application

```
int main() {
DEFINE_GDB_PY();
std::cout << "Hello World" << std::endl;
```

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```
4
5  auto v = std::vector<int>({1, 2, 3, 5, 7, 8});
6  for (auto i: v) {
7  std::cout << i << ' ';
8  }
9  std::cout << std::endl;
10
11 return 0;
12 }
```

After that, running this command shows us the existence of `.unexpected_sections` (which exists because we didn't tell the linker about the custom section).

```
1 arm-rtems6-readelf -S <path_to_exe>
```

We can dump the section with

```
1 arm-rtems6-objdump -s -j .unexpected_sections <path_to_exe>
```

to verify the existence of said script.

To make the section show up as a valid section to test in GDB, add this line to `linkcmds.base` present in `{prefix}/rtems/6/arm-rtems6/xilinx_zynq_a9_qemu/lib/linkcmds.base`:

```
1 .debug_gdb_scripts 0 : { *(.debug_gdb_scripts) }
```

And rebuild the file

Author: Chris Johns 2024-06-30T01:53:59.055Z

This looks good.

Is check the linker commands for all archs also a task to be included in this list?

Author: Suraj Kumar 2024-06-30T15:48:50.582Z

@chris Yes that is currently under testing.

Right now, I am building multiple architectures and BSPs to verify that this feature works across the board (and to identify Architectures where it fails). The section is embedding itself perfectly in the executable with just modifications to

1. linkcmds.base
2. exinit.c

The issue I am facing is setting up a debugger for each architecture, as there seems to be an issue (especially in `sparc`) in debugging with the `sis`.

Should I mention somewhere specifically that testing across multiple architectures is also part of this?

Author: Chris Johns 2024-07-01T03:58:46.993Z

You do not need to run and step the executable for each arch. Starting `gdb` with the executable should be enough to the trigger the auto-loading of the python support and our special section. It you see the prints then it is all that is needed. I think there is a print in the RTEMS C++ loader?

Note, when comfortable you can remove the path prints in the debug section. I only added those to show what was happening. The will not be needed in the version we commit to the repo.

Author: Suraj Kumar 2024-07-01T10:31:18.514Z

Ooh okay, that makes things way more easier then! I shall do that, thank you. In that case then, the feature has been working on every arch so far, with no hiccups.

And yes I will remove the path-printing statement from the fragment in my next commit to the MR.

Author: Suraj Kumar 2024-06-27T19:08:53.791Z

mentioned in merge request !98

3.9.1.129 5032 - Add a doxygen group for the amd64 BSP

Id	5032
State	closed
Type	ISSUE
Author	Matheus Pecoraro
Closed by	Gedare Bloom
Created	2024-06-07T02:42:14.620Z
Closed	2024-06-20T15:38:18.573Z
Updated	2025-09-19T01:04:00.661Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5032
Merges	1

Author: Matheus Pecoraro 2024-06-07T02:43:33.294Z

mentioned in merge request !55

Author: Matheus Pecoraro 2024-06-13T19:26:08.978Z

Author: Amar Takhar 2024-06-14T23:46:10.874Z

Author: Matheus Pecoraro 2024-06-19T13:48:32.000Z

mentioned in merge request !83

3.9.1.130 5029 - Add gpio driver for aarch64/raspberrypi BSP

Id	5029
State	closed
Type	ISSUE
Author	Ning Yang
Closed by	Amar Takhar
Created	2024-06-05T05:23:24.731Z
Closed	2024-06-21T03:34:18.942Z
Updated	2025-09-19T01:04:00.558Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5029
Merges	0

The gpio driver is necessary for the development of other peripheral drivers.

Author: Ning Yang 2024-06-05T05:29:54.675Z

mentioned in merge request !59

Author: Ning Yang 2024-06-14T11:16:08.923Z

Author: Amar Takhar 2024-06-21T03:34:18.592Z

I guess 'Close' is not a valid keyword? Not sure why this didn't close as 'Close #5029' is in the commit message. Commit is here:

- https://gitlab.rtems.org/rtems/rtos/rtems/-/commit/dff15a820fa57a5ed02d2ddf47319d8ad24fdfc4

3.9.1.131 5028 - Refactor the amd64 BSP spec files

Id	5028
State	closed
Type	ISSUE
Author	Matheus Pecoraro
Closed by	Amar Takhar
Created	2024-06-04T21:10:40.834Z
Closed	2024-07-01T17:49:25.729Z
Updated	2025-09-19T01:04:00.264Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5028
Merges	1

Summary

The spec files for the amd64 and amd64efi contain a lot of duplicated links and sources which could be avoided using a common group and object file.

Author: Matheus Pecoraro 2024-06-04T21:11:40.241Z

mentioned in merge request !55

Author: Amar Takhar 2024-06-13T17:05:27.658Z

See this thread specifically: https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/55#note_106528

Author: Matheus Pecoraro 2024-06-13T19:26:08.945Z

Author: Amar Takhar 2024-06-14T23:46:01.260Z

Author: Matheus Pecoraro 2024-06-25T23:19:56.225Z

changed the description

Author: Matheus Pecoraro 2024-06-25T23:24:13.261Z

changed the description

Author: Matheus Pecoraro 2024-06-25T23:27:01.140Z

mentioned in merge request !96

3.9.1.132 5026 - Refactor the pl011 driver to be extensible

Id	5026
State	closed
Type	ISSUE
Author	Ning Yang
Closed by	Amar Takhar
Created	2024-05-31T04:06:26.176Z
Closed	2024-09-19T06:14:49.566Z
Updated	2025-09-19T01:04:00.141Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5026
Merges	2

!43 !47

Author: Ning Yang 2024-05-31T12:44:42.461Z

Hi @gedare,

I recommit !47, and I created new pl011 structures for `aarch64/xilinx\ |md_0_8206|\ -versal\ |md_0_8206|\ ``, ``aarch64/raspberrypi` and `arm/raspberrypi`.

please give your comments.

Thanks!

Author: Ning Yang 2024-06-14T11:16:43.562Z

Author: Chris Johns 2024-09-19T03:59:22.356Z

@sebhub is reporting some BSPs are not building. The define is not present in the sources:

```
$ grep -r ARM_PL011_FIFO_DEPTH cpukit/ bsps/
bsps/shared/dev/serial/arm-pl011.c:  char buffer[ARM_PL011_FIFO_DEPTH];
$
```

It is defined in a spec option:

```
$ grep -r ARM_PL011_FIFO_DEPTH spec/
spec/build/bsps/optconsolefifo.yml:name: ARM_PL011_FIFO_DEPTH
$
```

Author: Ning Yang 2024-09-19T03:59:22.320Z

The following BSPs use the arm-pl011 driver, and they can all be built successfully.

```
[aarch64/raspberrypi4b]

[aarch64/a53_lp64_qemu]

[aarch64/a72_lp64_qemu]

[aarch64/xilinx_versal_qemu]

[arm/raspberrypi]

[arm/realview_pbx_a9_qemu]

[arm/xen_virtual]
```

Author: Chris Johns 2024-09-19T04:01:01.248Z

Where is `ARM_PL011_FIFO_DEPTH` defined in your successful builds?

Author: Sebastian Huber 2024-09-19T04:01:37.593Z

When you do changes in the shared BSP directory, you have to build all BSPs. The arm-pl011.c is built for all BSPs:

```
grep -r arm-pl011.c spec
spec/build/bsps/aarch64/raspberrypi/bspraspberrypi4.yml:- bsps/shared/
↪dev/serial/arm-pl011.c
spec/build/bsps/aarch64/xilinx-versal/obj.yml:- bsps/shared/dev/serial/
↪arm-pl011.c
spec/build/bsps/obj.yml:- bsps/shared/dev/serial/arm-pl011.c
```

Author: Sebastian Huber 2024-09-19T04:05:01.820Z

Please change the build support to use something similar to spec/build/bsps/objdevserialzynq.yml. For example:

- spec/build/bsps/objdevserialarmpl011.yml
- spec/build/bsps/optarmpl011fifodepth.yml

Author: Ning Yang 2024-09-19T05:16:00.960Z

Done. !228

Author: Ning Yang 2024-09-19T05:15:51.208Z

mentioned in merge request !228

3.9.1.133 5018 - x86_64/amd64 start.S - Check ISR Stack Assumptions

Id	5018
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill, Chris Johns, Matheus Pecoraro
Closed by	Joel Sherrill
Created	2024-05-22T17:35:25.817Z
Closed	2024-05-25T19:21:31.995Z
Updated	2025-09-19T01:03:59.671Z
Milestone	6.1
Labels	arch:x86_64, bsp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5018
Merges	1

I attempted to add a comment to !34 but it was already merged. The code around start.S:42 needs to consider the following:

- How do we know the _ISR_Stack_area_end address is properly aligned? Is that guaranteed by the linker script? At least add a comment.
- And will the ISR stack pointer be decremented before anything is written to it? The end addresses are often the same as the start of the next area in the linker script.

Double check these possible issues and at least add comments to clarify assumptions.

Author: Amar Takhar 2024-05-22T17:40:46.970Z

assigned to @joel and @chris

Author: Amar Takhar 2024-05-22T17:41:05.187Z

@mpec tagging you so i can assign this ticket to you as well.

Author: Amar Takhar 2024-05-22T17:41:17.439Z

assigned to @mpec

Author: Matheus Pecoraro 2024-05-24T14:12:41.476Z

- I believe it's guaranteed to be aligned to 64 bits here
- The stack pointer will be decremented by the call instruction to save the return address

Would these comments be good?

Author: Matheus Pecoraro 2024-05-25T17:22:47.935Z

mentioned in merge request !48

3.9.1.134 5016 - Wrong output in psxaio01.scn

Id	5016
State	closed
Type	ISSUE
Author	Alessandro Nardin
Closed by	Joel Sherrill
Created	2024-05-21T16:54:55.100Z
Closed	2024-05-21T21:16:23.716Z
Updated	2025-09-19T01:03:59.466Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5016
Merges	1

Summary

The file psxaio01.scn currently contains output related to tests of POSIX Spinlock, while it should contain the expected output of tests on POSIX Aio.

Author: Alessandro Nardin 2024-05-21T16:55:32.647Z

mentioned in merge request !40

3.9.1.135 5015 - Error in aio_read.c header comment

Id	5015
State	closed
Type	ISSUE
Author	Alessandro Nardin
Closed by	Gedare Bloom
Created	2024-05-21T16:48:21.858Z
Closed	2024-05-23T19:10:34.089Z
Updated	2025-09-19T01:03:59.276Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5015
Merges	1

Summary

There is an error in the header comment of the aio_read.c file. The comment mistakenly refers to a write operation instead of a read operation. file location: /cpukit/posix/src/aio_read.c

Author: Alessandro Nardin 2024-05-21T16:53:13.245Z

mentioned in merge request !40

Author: Alessandro Nardin 2024-05-21T16:57:28.425Z

mentioned in merge request !41

Author: Alessandro Nardin 2024-05-23T19:10:35.978Z

mentioned in commit 3225f69db6e39f1be986cf3745ae06fa6a197441

3.9.1.136 5014 - Add a Bit Banged SPI

Id	5014
State	closed
Type	ISSUE
Author	Christian Mauderer
Assignee(s)	Christian Mauderer
Closed by	Gedare Bloom
Created	2024-05-17T08:23:12.777Z
Closed	2024-06-10T17:31:47.722Z
Updated	2025-09-19T01:03:59.153Z
Milestone	6.1
Labels	feature::request
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5014
Merges	1

Summary

3.9.1.136.1 Purpose

In some situations it can be useful to emulate an SPI using simple GPIO functions. An example for such an situation would be the one-time initialization of a chip on a system where all hardware SPI controllers are already used for other applications.

3.9.1.136.2 Result

A generic SPI driver which uses function pointers to pin get / set functions. Only basic SPI modes will be supported but it should be possible to extend more functionality later. Frequency is just as fast as possible. Additionally a driver for the arm/(imx|imxrt) family will be added.

Author: Christian Mauderer 2024-05-17T08:23:12.849Z

assigned to @c-mauderer

Author: Christian Mauderer 2024-05-17T08:43:47.648Z

mentioned in merge request !35

3.9.1.137 5012 - termios: scanf() is not blocking in UART interrupt mode

Id	5012
State	closed
Type	ISSUE
Author	Ning Yang
Assignee(s)	Ning Yang
Closed by	Ning Yang
Created	2024-05-13T14:20:02.373Z
Closed	2024-08-14T07:38:04.883Z
Updated	2025-09-19T01:03:58.986Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5012
Merges	0

Summary

scanf() is not blocking in UART interrupt mode. I think this might be a termios bug.

Steps to reproduce

I tried the `arm/xilinx_zynq_a9_qemu`.

It use interrupt driven mode for console devices (used by default).

My test app is:

```
#include <rtems.h>
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <sys/types.h>
#include <errno.h>
#include <sys/stat.h>
#include <fcntl.h>
#include <termios.h>
#include <rtems/error.h>
#include <string.h>

rtems_task Init(
rtems_task_argument ignored)
{
char s[10];
printf("scanf: ");
scanf("%s",s);
printf("printf: %s\\n",s);
exit(0);
}
#define CONFIGURE_APPLICATION_NEEDS_CLOCK_DRIVER
#define CONFIGURE_APPLICATION_NEEDS_CONSOLE_DRIVER

```

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```
#define CONFIGURE_UNLIMITED_OBJECTS
#define CONFIGURE_UNIFIED_WORK_AREAS

#define CONFIGURE_RTEMS_INIT_TASKS_TABLE

#define CONFIGURE_INIT

#define CONFIGURE_FILESYSTEM_IMFS

#include <rtems/confdefs.h>
```

output:

```
qemu-system-arm.exe -no-reboot -serial null -serial mon:stdio -net none -
↪nographic -M xilinx-zynq-a9 -m 256M -kernel test.exe
qemu-system-arm.exe: warning: nic cadence_gem.0 has no peer
qemu-system-arm.exe: warning: nic cadence_gem.1 has no peer
scanf: printf:

[ RTEMS shutdown ]
RTEMS version: 6.0.0.d3a0434a2c4759edac193b4f8b23224b8badbef5
RTEMS tools: 13.2.0 20230727 (RTEMS 6, RSB␣
↪07ba8d5f8f514b70ed6908c73d2dc5562f4723e1, Newlib 3cacedb)
executing thread ID: 0x0a010001
executing thread name: UI1
```

scanf() is not blocking.

but if I reapply existing settings without changes then it behaves as expected.

add the following code before scanf():

```
struct termios term;
tcgetattr(STDIN_FILENO, &term);
tcsetattr(STDIN_FILENO, TCSANOW, &term);
```

scanf() is blocking.

test app:

```
rtems_task Init(
rtems_task_argument ignored)
{
char s[10];
printf("scanf: ");

struct termios term;
tcgetattr(STDIN_FILENO, &term);
tcsetattr(STDIN_FILENO, TCSANOW, &term);

scanf("%s",s);
```

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```
printf("printf: %s\\n",s);
exit(0);
}
```

output:

```
qemu-system-arm.exe: warning: nic cadence_gem.0 has no peer
qemu-system-arm.exe: warning: nic cadence_gem.1 has no peer
scanf: testtest123
printf: testtest123

[ RTEMS shutdown ]
RTEMS version: 6.0.0.d3a0434a2c4759edac193b4f8b23224b8badbef5
RTEMS tools: 13.2.0 20230727 (RTEMS 6, RSB
↪07ba8d5f8f514b70ed6908c73d2dc5562f4723e1, Newlib 3cacedb)
executing thread ID: 0x0a010001
executing thread name: UI1
```

I found this issue while testing the UART interrupt mode of the pl011 driver using `aarch64/raspberrypi`. `aarch64/raspberrypi` also have this issue. I think this issue has nothing to do with UART driver.

Author: Ning Yang 2024-05-13T14:20:36.284Z

changed title from **termios: scanf() is not blocking in UART interrupt mode{-.-}** to **termios: scanf() is not blocking in UART interrupt mode**

Author: Ning Yang 2024-05-13T14:23:20.442Z

changed the description

Author: Ning Yang 2024-05-13T14:27:41.287Z

changed the description

Author: Amar Takhar 2024-05-13T19:00:37.129Z

assigned to @yangn0

Author: Ning Yang 2024-05-17T05:51:23.578Z

changed the description

Author: Ning Yang 2024-05-22T05:03:12.209Z

https://discord.com/channels/820452222382112799/820452222848335924/1241020536616915044

The driver should leave it in a blocking state.

Author: Ning Yang 2024-06-14T11:17:52.948Z

3.9.1.138 5011 - arm: Make _CPU_Fatal_halt() BSP-specific

Id	5011
State	closed
Type	ISSUE
Author	Sebastian Huber
Closed by	Sebastian Huber
Created	2024-05-08T13:19:48.298Z
Closed	2024-07-15T14:47:18.525Z
Updated	2025-09-19T01:03:58.856Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5011
Merges	0

Summary

In general, for test runs the system should reset once the test program terminated. The system reset implementation is BSP-specific. This makes _CPU_Fatal_halt() essentially a dead function since it is invoked after the BSP fatal extension which resets the system. To avoid this issue make the _CPU_Fatal_halt() implementation BSP-specific (similar to riscv and sparc).

Author: Sebastian Huber 2024-05-08T14:23:21.699Z

mentioned in merge request !28

Author: Sebastian Huber 2024-07-15T14:47:18.073Z

Closed in favour of #5067.

3.9.1.139 5010 - aarch64: Make _CPU_Fatal_halt() BSP-specific

Id	5010
State	closed
Type	ISSUE
Author	Sebastian Huber
Closed by	Sebastian Huber
Created	2024-05-08T13:18:31.728Z
Closed	2024-07-15T14:46:14.553Z
Updated	2025-09-19T01:03:58.735Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5010
Merges	0

Summary

In general, for test runs the system should reset once the test program terminated. The system reset implementation is BSP-specific. This makes _CPU_Fatal_halt() essentially a dead function since it is invoked after the BSP fatal extension which resets the system. To avoid this issue make the _CPU_Fatal_halt() implementation BSP-specific (similar to riscv and sparc).

Author: Sebastian Huber 2024-05-08T14:22:23.486Z

mentioned in merge request !28

Author: Sebastian Huber 2024-07-15T14:46:29.655Z

Closed in favour of #5067.

3.9.1.140 5001 - LittleVGL URL Broken

Id	5001
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Closed by	Joel Sherrill
Created	2024-03-19T15:26:29.000Z
Closed	2024-06-11T14:33:01.775Z
Updated	2025-09-19T01:03:58.568Z
Milestone	6.1
Labels	priority::normal, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5001
Merges	0

The URL https://docs.littlevgl.com/en/html/index.html used in the README.md appears to be broken.

If LittleVGL changed their domain or organization, rtems-littlevgl needs a review and update.

Author: Joel Sherrill 2024-03-19T15:26:51.000Z

- **Owner** set to Christian Mauderer
- **Status** changed from *new* to *assigned*

Author: Joel Sherrill 2024-06-11T14:33:01.895Z

moved to rtems/pkg/rtems-littlevgl#2

Author: Chris Johns 2025-09-19T01:03:58.628Z

changed the description

3.9.1.141 4965 - “trace” tool source requires C++17, build fails without it.

Id	4965
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-11-10T07:55:25.000Z
Updated	2025-09-19T01:03:58.361Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::7
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4965
Merges	0

Original author: mgsouth

sb-set-builder to build 7/rtems-arm fails with “C++17 needed” warnings and errors. If wscript is patched to include “-std=c++17” then the build is successful.

Attempted:

Build 7/arm on recentish Gentoo x86_64 build host.

```
git clone git://git.rtems.org/rtems-source-builder.git /XXX/rsb
git clone git://git.rtems.org/rtems.git /XXX/kernel
```

```
$ sb-set-builder --topdir=/XXX/rsb/rtems --prefix=/XXX/build/v7/tools 7/rtems-arm
```

Build log:

```
RTEMS Source Builder - Set Builder, 6 (633023de6517 modified)
Command Line: /XXX/rsb/source-builder/sb-set-builder --topdir=/XXX/rsb/rtems --
```

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```
↪prefix=/XXX/build/v7/tools 7/rtems-arm
Python: 3.11.5 (main, Oct  5 2023, 20:30:58) [GCC 12.3.1 20230526]
Build Set: 7/rtems-arm
Build Set: tools/rtems-default-tools.bset
...
config: tools/rtems-tools-6.cfg
package: rtems-tools-7dc34d2cabf5e9f77b6a9d035b01a75a6f593044-1
...
+ SB_HOST_CPPFLAGS=
+ SB_HOST_CFLAGS='-O2 -g -pipe '
+ SB_HOST_CXXFLAGS='-O2 -g -pipe '
+ SB_HOST_LDFLAGS=' -L/XXX/rsb/rtems/build/tmp/sb-500/tools/rtems-default-tools/
↪XXX/build/v7/tools/lib'
+ SB_HOST_LIBS=
+ SB_BUILD_CFLAGS='-O2 -g -pipe -I/XXX/rsb/rtems/build/tmp/sb-500/tools/rtems-
↪default-tools/XXX/build/v7/tools/include'
+ SB_BUILD_CXXFLAGS='-O2 -g -pipe -I/XXX/rsb/rtems/build/tmp/sb-500/tools/rtems-
↪default-tools/XXX/build/v7/tools/include'
+ SB_BUILD_LDFLAGS=' -L/XXX/rsb/rtems/build/tmp/sb-500/tools/rtems-default-tools/
↪XXX/build/v7/tools/lib'
+ SB_BUILD_LBS=
+ SB_CFLAGS='-O2 -g -pipe -I/XXX/rsb/rtems/build/tmp/sb-500/tools/rtems-default-
↪tools/XXX/build/v7/tools/include '
+ SB_CXXFLAGS='-O2 -g -pipe -I/XXX/rsb/rtems/build/tmp/sb-500/tools/rtems-default-
↪tools/XXX/build/v7/tools/include '
+ SB_ARCH=x86_64
+ SB_OS=linux
...
[255/259] Compiling trace/record/record-filter-zlib.cc
[256/259] Compiling trace/record/record-client-base.cc
[257/259] Compiling trace/record/inih/ini.c
In file included from /usr/lib/llvm/16/include/llvm/ADT/StringRef.h:12,
from /usr/lib/llvm/16/include/llvm/ADT/StringMapEntry.h:19,
from /usr/lib/llvm/16/include/llvm/ADT/StringMap.h:17,
from /usr/lib/llvm/16/include/llvm/DebugInfo/Symbolize/Symbolize.h:16,
from ../trace/record/record-main-lttng.cc:48:
/usr/lib/llvm/16/include/llvm/ADT/DenseMapInfo.h:294:52: error: 'variant' is not␣
↪a member of 'std'
294 | template <typename... Ts> struct DenseMapInfo<std::variant<Ts...>> {
|                                                    ^~~~~~~
/usr/lib/llvm/16/include/llvm/ADT/DenseMapInfo.h:294:52: note: 'std::variant' is␣
↪only available from C++17 onwards
/usr/lib/llvm/16/include/llvm/ADT/DenseMapInfo.h:294:52: error: 'variant' is not␣
↪a member of 'std'
```

and it's all downhill from there

```
Waf: Leaving directory `/XXX/rsb/rtems/build/rtems-tools-
↪7dc34d2cabf5e9f77b6a9d035b01a75a6f593044-1/rtems-tools-
```

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```
↪7dc34d2cabf5e9f77b6a9d035b01a75a6f593044/build'
Build failed
-> task in 'rtems-record-lttng' failed with exit status 1 (run with -v to display␣
↪more information)
shell cmd failed: /bin/sh -ex  /XXX/rsb/rtems/build/rtems-tools-
↪7dc34d2cabf5e9f77b6a9d035b01a75a6f593044-1/do-build
error: building rtems-tools-7dc34d2cabf5e9f77b6a9d035b01a75a6f593044-1
```

Fix:

Patched to replace "-std=c++14" with "-std=c++17". Build and install was successful. (I'll send the patch to the mailing list.)

Author: Trac Migrate 2023-11-10T08:06:42.000Z

Original author: mgsouth

"I'll send the patch to the mailing list". Never mind–a patch has already been submitted but not yet accepted. [https://lists.rtems.org/pipermail/devel/2023-May/075269.html]

Author: Chris Johns 2023-11-12T22:08:20.000Z

Original author: mgsouth

It needs testing on more than Linux. If it breaks MacOS and FreeBSD they have to sort out the problem just to work.

Author: Trac Migrate 2024-01-25T07:17:17.000Z

Original author: mgsouth

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"a78d940bf099e2d8a14234de071db341a97b91bb/rtems-tools" a78d940/rtems-tools]:

```
trace/wscript: Improve C++ standard selection

Use the latest C++ standard available up to C++20.

Close #4908.
Close #4965.
```

Author: Chris Johns 2025-09-19T01:03:58.453Z

changed the description

3.9.1.142 4938 - RSB: 6/rtems-arm fails on soon to be released FreeBSD 14.x

Id	4938
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-08-02T11:26:28.000Z
Updated	2025-09-19T01:03:58.156Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4938
Merges	0

Original author: kgardas

Hello,

FreeBSD 14.x release is behind the corner so I've attempted to build ordinary `6/rtems-arm` on it and it failed right at the GNU sed compilation with:

```
CC       lib/fpending.o
CC       lib/fwriting.o
CC       lib/getopt.o
CC       lib/getopt1.o
CC       lib/localtime-buffer.o
CC       lib/obstack.o
CC       lib/regex.o
CC       lib/setlocale-lock.o
../sed-4.8/lib/obstack.c:351:31: error: incompatible function pointer types␣
↪initializing 'void (*)(void) __attribute__((noreturn))' with an expression of␣
↪type 'void (void)' [-Wincompatible-function-pointer-types]
__attribute_noreturn__ void (*obstack_alloc_failed_handler) (void)
^
1 error generated.
gmake[2]: *** [Makefile:2781: lib/obstack.o] Error 1
gmake[2]: *** Waiting for unfinished jobs....
AR       sed/libver.a
gmake[2]: Leaving directory '/usr/home/karel/git/rtems/rtems-source-builder/rtems/
↪build/gsed-4.8-x86_64-freebsd14.0-1/build'
gmake[1]: *** [Makefile:3105: all-recursive] Error 1
gmake[1]: Leaving directory '/usr/home/karel/git/rtems/rtems-source-builder/rtems/
↪build/gsed-4.8-x86_64-freebsd14.0-1/build'
gmake: *** [Makefile:2321: all] Error 2
shell cmd failed: /bin/sh -ex  /usr/home/karel/git/rtems/rtems-source-builder/
↪rtems/build/gsed-4.8-x86_64-freebsd14.0-1/do-build
error: building gsed-4.8-x86_64-freebsd14.0-1
```

report is attached.

- rsb-report-gsed-4.8-x86_64-freebsd14.0-1.txt

Author: Trac Migrate 2023-08-02T11:27:26.000Z

Original author: kgardas

- **Attachment** rsb-report-gsed-4.8-x86_64-freebsd14.0-1.txt added

GNU sed 4.8 compilation failure on FreeBSD 14.x

Author: Chris Johns 2023-08-03T01:36:45.000Z

Original author: kgardas

Does `gsed-4.9` also fail?

Author: Trac Migrate 2023-08-05T20:20:49.000Z

Original author: kgardas

- **Owner** set to Karel Gardas <karel@functional.vision>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"71588196bd5a557643da5e265b2a0b440e3f6009/rtems-source-builder" 7158819/rtems-source-builder]:

```
testproc/gsed: update from 4.8 to 4.9.

Fixes #4938.
```

Author: Chris Johns 2025-09-19T01:03:58.240Z

changed the description

3.9.1.143 4930 - rtems_waf: type and logic issue when enforcing libbsd checking.

Id	4930
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-07-22T14:39:50.000Z
Updated	2025-09-19T01:03:57.947Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::build, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4930
Merges	0

Original author: kgardas

When libbsd checking is enforced in rtems_waf submodule, the following `./waf configure...` step fails with:

```
Checking for RTEMS_NETWORKING                : no
RTEMS LibBSD                                 : arm/stm32h757i-eval
Checking for header dlfcn.h                  : yes
Traceback (most recent call last):
File "/export/home/rtems/git/rtems/ssh-precidata-quickjs/.waf-2.0.25-
↪767522112be77f8585812fcfaa08e805/waflib/Scripting.py", line 119, in waf_entry_
↪point
run_commands()
File "/export/home/rtems/git/rtems/ssh-precidata-quickjs/.waf-2.0.25-
↪767522112be77f8585812fcfaa08e805/waflib/Scripting.py", line 182, in run_commands
ctx=run_command(cmd_name)
File "/export/home/rtems/git/rtems/ssh-precidata-quickjs/.waf-2.0.25-
↪767522112be77f8585812fcfaa08e805/waflib/Scripting.py", line 173, in run_command
ctx.execute()
File "/export/home/rtems/git/rtems/ssh-precidata-quickjs/.waf-2.0.25-
↪767522112be77f8585812fcfaa08e805/waflib/Configure.py", line 85, in execute
super(ConfigurationContext,self).execute()
File "/export/home/rtems/git/rtems/ssh-precidata-quickjs/.waf-2.0.25-
↪767522112be77f8585812fcfaa08e805/waflib/Context.py", line 92, in execute
self.recurse([os.path.dirname(g_module.root_path)])
File "/export/home/rtems/git/rtems/ssh-precidata-quickjs/.waf-2.0.25-
↪767522112be77f8585812fcfaa08e805/waflib/Context.py", line 133, in recurse
user_function(self)
File "/export/home/rtems/git/rtems/ssh-precidata-quickjs/wscript", line 31, in␣
↪configure
rtems.configure(conf, bsp_configure = bsp_configure)
File "/export/home/rtems/git/rtems/ssh-precidata-quickjs/rtems_waf/rtems.py",␣
↪line 300, in configure
bsp_configure(conf, ab)
File "/export/home/rtems/git/rtems/ssh-precidata-quickjs/wscript", line 24, in␣
↪bsp_configure
rtems_bsd.bsp_configure(conf, arch_bsp, mandatory = True)
File "/export/home/rtems/git/rtems/ssh-precidata-quickjs/rtems_waf/rtems_bsd.py",␣
↪line 74, in bsp_configure
if conf.options.rtems is None:
AttributeError: Values instance has no attribute 'rtems'
```

this is due to fact the conf.options variable does not have any `rtems` field e.g. the dictionary is missing `rtems` key.

Another issue is that when this is fixed, then following code sets libbsd path to None if RTEMS path was not submitted to configure step (and is None) instead of to the provided prefix one.

Author: Trac Migrate 2023-08-06T09:51:21.000Z

Original author: kgardas

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Fixed by:

commit 8151754a5d6efd9b6be4d728f3633dc6a63672a9 Author: Karel Gardas <karel@functional.vision> Date: Sat Jul 22 17:03:50 2023 +0200

fix typo and logic issue when libbsd checking is enforced by the user code

Fixes #4930.

Author: Chris Johns 2025-09-19T01:03:58.036Z

changed the description

3.9.1.144 4917 - rtems_waf errors on checking installed BSPs

Id	4917
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-06-13T01:25:33.000Z
Updated	2025-09-19T01:03:57.703Z
Milestone	6.1
Labels	priority::normal, resolution::invalid, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4917
Merges	0

Original author: UtkarshVerma

I did a fresh installation of the `aarch64/raspberrypi4b` BSP on a fresh install of RTEMS 6. However, I got an error from `rtems_waf` while creating a new app (hello). The logs are attached below, but in summary, here is what happens.

In `$RTEMS_PREFIX/lib/pkgconfig/`, I have three files:

```
aarch64-rtems6-raspberrypi4b.pc
expat.pc
gmp.pc
```

The `_arch_from_arch_bsp()` function in `rtems_waf/rtems.py` tries to infer the arch name based on the file names, by splitting on hyphens. It works for BSP names, but not on the other files, therefore the `StopIteration` exception is thrown.

To remedy around that, I modified that function as follows:

```
def _arch_from_arch_bsp(arch_bsp):
rtems_index = arch_bsp.find("-rtems")
if rtems_index == -1:
return None
```

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```
5
6 end = arch_bsp.find("-", rtems_index + 1)
7 if end == -1:
8 return None
9
10 return arch_bsp[:end]
```

Fixing this function solves the issue resulting in successful compilation.

- rtems_waf.log

Author: Trac Migrate	2023-06-13T01:25:59.000Z

Original author: UtkarshVerma

- **Attachment** rtems_waf.log added

error log

Author: Chris Johns	2023-06-19T05:10:38.000Z

Original author: UtkarshVerma

- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*

Author: Chris Johns	2025-09-19T01:03:57.792Z

changed the description

3.9.1.145 4908 - Unable to build with LLVM 16

Id	4908
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-05-19T04:10:05.000Z
Updated	2025-09-19T01:03:57.447Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4908
Merges	0

Original author: jhj

Building with LLVM 16 fails on all host platforms when compiling rtems-tools's record-main-lttng.cc.

The cause is `HAVE_LLVM_DEBUGINFO_SYMBOLIZE_SYMBOLIZE_H` being defined. If that is forced off, everything works fine.

This causes all versions of RTEMS I've tried, from 5.1 through git master, to fail, on every platform. Using an older version of LLVM is OK, or hacking to disable this.

I did a git bisect, and the failing commit is https://github.com/RTEMS/rtems-tools/commit/5d80d0b2e1de9decb24c2d7ef481e4b63525595e

I've attached the build failure.

- 0001-trace-wscript-Improve-C-standard-selection.patch
- 423NKXVP3.txt.gz

Author: Trac Migrate 2023-05-19T04:12:15.000Z

Original author: jhj

Could you please attach the build failure message?

Author: Trac Migrate 2023-05-19T04:13:17.000Z

Original author: jhj

Sorry, I am unable to attach the build failure. Trac refuses to allow it, saying "Error: Submission rejected as potential spam: Akismet says content is spam. Maximum number of external links per post exceeded". I have no idea why, this is a text file without any links at all.

Author: Trac Migrate 2023-05-19T04:13:44.000Z

Original author: jhj

- **Attachment** 423NKXVP3.txt.gz added

Author: Trac Migrate 2023-05-19T04:14:13.000Z

Original author: jhj

I was able to attach it but only after gzip'ing it. Sorry.

Author: Trac Migrate 2023-05-19T04:19:49.000Z

Original author: jhj

I should also add, this failure is being unable to build on any system that has LLVM 16 installed, not a failure building using Clang 16. Unfortunately every Linux system that I have has moved to Clang 16, except RHEL. I verified using RHEL 9, which ships Clang 15 that is works. Also verified using a container with any other distribution but without installing LLVM, also OK.

Author: Trac Migrate 2023-05-19T04:21:00.000Z

Original author: jhj

diff –git a/rtems/config/tools/rtems-tools-common-1.cfg b/rtems/config/tools/rtems-tools-common-1.cfg index c15f514..2233eeb 100644 — a/rtems/config/tools/rtems-tools-common-1.cfg +++ b/rtems/config/tools/rtems-tools-common-1.cfg @@ -50,6 +50,7 @@ License: BSD-2-Clause + GPL-2.0

cd ${source_dir_rtems_tools} ./waf distclean configure ${RT_HOST} –prefix=%{_prefix} + sed -i ‘s/define HAVE_LLVM_DEBUGINFO_SYMBOLIZE_SYMBOLIZE_H 1/undef HAVE_LLVM_DEBUGINFO_SYMBOLIZE_SYMBOLIZE_H/’ build/trace/config.h || true ./waf cd ${build_top}

diff –git a/rtems/config/tools/rtems-tools-git-1.cfg b/rtems/config/tools/rtems-tools-git-1.cfg index ec44132..7ad6873 100644 — a/rtems/config/tools/rtems-tools-git-1.cfg +++ b/rtems/config/tools/rtems-tools-git-1.cfg @@ -39,6 +39,7 @@ URL: http://www.rtems.org/

cd ${source_dir_rtems_tools} ./waf configure ${RT_HOST} –prefix=%{_prefix} + sed -i ‘s/define HAVE_LLVM_DEBUGINFO_SYMBOLIZE_SYMBOLIZE_H 1/undef HAVE_LLVM_DEBUGINFO_SYMBOLIZE_SYMBOLIZE_H/’ build/trace/config.h || true ./waf cd ${build_top}

This dirty hack works to let me build RTEMS. I’m doing it only because I don’t know a more proper way to fix the underlying problem, having never really looked at LLVM under the hood.

If you need any more information, let me know.

Author: Trac Migrate 2023-05-19T04:21:49.000Z

Original author: jhj

The problem is again that we use a -std=c++14 flag. This seems to cause regular issues after clang updates.

Author: Trac Migrate 2023-05-19T04:43:44.000Z

Original author: jhj

- **Attachment** 0001-trace-wscript-Improve-C-standard-selection.patch added

Author: Trac Migrate 2023-05-19T04:44:05.000Z

Original author: jhj

Could you please test the attached patch?

Author: Trac Migrate 2023-05-19T04:49:00.000Z

Original author: jhj

Thanks - I only tested one system but it seems OK!

It'll be a day or so I can verify further.

Author: Trac Migrate 2024-01-25T07:17:17.000Z

Original author: jhj

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"a78d940bf099e2d8a14234de071db341a97b91bb/rtems-tools" a78d940/rtems-tools]:

```
trace/wscript: Improve C++ standard selection

Use the latest C++ standard available up to C++20.

Close #4908.
Close #4965.
```

Author: Chris Johns 2025-09-19T01:03:57.546Z

changed the description

3.9.1.146 4907 - libbsd: Header installed multiple times

Id	4907
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Closed by	Amar Takhar
Created	2023-05-16T15:20:27.000Z
Closed	2024-11-08T04:30:56.384Z
Updated	2025-09-19T01:03:57.332Z
Milestone	6.1
Labels	libbsd, old-indefinite, priority::normal, tickettype::defect, version::6, version::7
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4907
Merges	1

There are several headers that are installed multiple times to the target include directories. Examples are (from both freebsd/include/rpc and freebsd/sys/rpc): include/rpc/rpc.h include/rpc/rpc_com.h include/rpc/rpc_msg.h include/rpc/rpcb_clnt.h include/rpc/svc_auth.h and several others.

This is due to the header installation being controlled by the header-paths key in the _defaults data structure including freebsd/include (and subdirectories including rpc) and freebsd/sys/rpc both being targeted at include/rpc. These installations should ideally be tied to the modules they're related to such that unused headers are not installed.

There is a separate issue with both rpc and rpc_user being active simultaneously in the default config that needs to be resolved once those headers are tied to modules properly.

Author: Chris Johns 2024-02-16T00:37:51.000Z

- **Milestone** changed from %"6.1" to %"Indefinite"
- **Version** changed from ~"6" to ~"7"

The work around for 6 is to install with `-j 1`.

Author: Kinsey Moore 2024-09-19T02:16:05.759Z

mentioned in merge request rtems/pkg/rtems-libbsd!13

Author: Amar Takhar 2025-09-05T02:55:32.290Z

changed the description

3.9.1.147 4894 - RSB: does not build tools for x86_64 due to gdb failure.

Id	4894
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-04-08T10:52:28.000Z
Updated	2025-09-19T01:03:57.144Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::gdb
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4894
Merges	0

Original author: kgardas

Probably a result of recent hacking to support macOS well, but on Ubuntu 20.04 I see this:

```
config: tools/rtems-gdb-13.1.cfg
error: shell macro failed: /export/home/rtems/git/rtems/rtems-source-builder-ref/
↪source-builder/sb/rtems-build-dep -c gcc  -L /usr/lib/python3.8/config-3.8-x86_
```

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```
↪64-linux-gnu
/usr/lib -l libpython3.8\\*: 126: error: no header or library file to find found.
/bin/sh: 2: /usr/lib: Permission denied
Build FAILED
Build Set: Time 0:00:52.749192
error: shell macro failed: /export/home/rtems/git/rtems/rtems-source-builder-ref/
↪source-builder/sb/rtems-build-dep -c gcc  -L /usr/lib/python3.8/config-3.8-x86_
↪64-linux-gnu
/usr/lib -l libpython3.8\\*: 126: error: no header or library file to find found.
/bin/sh: 2: /usr/lib: Permission denied
Build Set: Time 0:00:52.754762
Build FAILED
```

Author: Trac Migrate 2023-04-08T11:32:27.000Z

Original author: kgardas

git revert 9919f1217c66dad5e721802a265cdbdcf6070069 – helps with this issue.

Author: Chris Johns 2023-04-11T05:38:54.000Z

Original author: kgardas

To debug this run the command with the options `--trace` and `--dry-run` as this is an RSB config issue. Running:

```
../source-builder/sb-set-builder --prefix=/opt/work/rtems/6 --log=a.txt␣
↪--trace --dry-run 6/rtems-aarch64
```

shows in the log:

```
exe: shell: /usr/bin/python3-config --ldflags --embed | awk 'BEGIN{FS="
↪"}/python/{for(i=1;i<NF;++i)if(match($i,".*lpython.*")) print "lib
↪"substr($i,3)"\\\\*";}'
exe: /usr/bin/python3-config --ldflags --embed | awk 'BEGIN{FS=" "}/
↪python/{for(i=1;i<NF;++i)if(match($i,".*lpython.*")) print "lib
↪"substr($i,3)"\\\\*";}'
shell-output: 0 libpython3.9\\*
config: source-builder/config/gdb-common-1.cfg: 121:>%define gdb-python-
↪config-libpath %(%{gdb-python-config} %{gdb-python-config-lib-check-
↪flags} | %{gdb-python-libpath-filter} | uniq) [True]
exe: shell: /usr/bin/python3-config --ldflags --embed | awk 'BEGIN{FS="
↪"}/python/{for(i=1;i<NF;++i)if(match($i,".*L.*")) print substr($i,3);}
↪' | uniq
exe: /usr/bin/python3-config --ldflags --embed | awk 'BEGIN{FS=" "}/
↪python/{for(i=1;i<NF;++i)if(match($i,".*L.*")) print substr($i,3);}'␣
↪| uniq
shell-output: 0 /usr/lib/python3.9/config-3.9-x86_64-linux-gnu
```

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```
/usr/lib/x86_64-linux-gnu
config: source-builder/config/gdb-common-1.cfg: 122:>%define gdb-python-lib-check %(%{_sbdir}/sb/rtems-build-dep -c %{__cc} %{gdb-host-libs} -L %{gdb-python-config-libpath} -l %{gdb-python-config-libs}) [True]
exe: shell: /opt/work/chris/rtems/kernel/rtems-source-builder.git/source-builder/sb/rtems-build-dep -c gcc  -L /usr/lib/python3.9/config-3.9-x86_64-linux-gnu
/usr/lib/x86_64-linux-gnu -l libpython3.9\\*
exe: /opt/work/chris/rtems/kernel/rtems-source-builder.git/source-builder/sb/rtems-build-dep -c gcc  -L /usr/lib/python3.9/config-3.9-x86_64-linux-gnu
/usr/lib/x86_64-linux-gnu -l libpython3.9\\*
shell-output: 126 error: no header or library file to find found.
/bin/sh: 2: /usr/lib/x86_64-linux-gnu: Permission denied
error: shell macro failed: /opt/work/chris/rtems/kernel/rtems-source-builder.git/source-builder/sb/rtems-build-dep -c gcc  -L /usr/lib/python3.9/config-3.9-x86_64-linux-gnu
/usr/lib/x86_64-linux-gnu -l libpython3.9\\*: 126: error: no header or library file to find found.
/bin/sh: 2: /usr/lib/x86_64-linux-gnu: Permission denied
```

The issue is the python config command outputting more than one library and the awk post processing turning this into more than one line:

```
/usr/bin/python3-config --ldflags --embed
-L/usr/lib/python3.9/config-3.9-x86_64-linux-gnu -L/usr/lib/x86_64-linux-gnu -lpython3.9 -lcrypt -ldl  -lm -lm
```

The breaks the library check script.

Author: Trac Migrate 2023-04-11T22:07:38.000Z

Original author: kgardas

- **Owner** set to Chris Johns <chrisj@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"78913bcbba06b30b0823a4c2152b911cf3c33cd1/rtems-source-builder" 78913bc/rtems-source-builder]:

```
gdb-common: Fix the python-config library parsing

Closes #4894
```

Author: Chris Johns 2025-09-19T01:03:57.212Z

changed the description

3.9.1.148 4879 - Use Cortex-Mx fault registers to show more information about the fault while printing exception info.

Id	4879
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-03-14T22:44:20.000Z
Updated	2025-09-19T01:03:56.980Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4879
Merges	0

Original author: kgardas

It would be great if _CPU_Exception_frame_print would use a little bit more fault information provided on Cortex-Mx cores and prints them too. E.g. CSFR with its UFSR, BFSR and MMFSR looks like good to have there. Also perhaps HFSR content.

Author: Trac Migrate 2023-03-14T22:44:45.000Z

Original author: kgardas

- **Owner** set to kgardas
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-07-14T17:25:30.000Z

Original author: kgardas

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Fixed by:

```
commit 0e4e9dd42169ba6e7bb086b6b863283c63d81bdb (HEAD -> master, origin/
↪master, origin/HEAD)
Author: Karel Gardas <karel@functional.vision>
Date:   Wed Mar 15 19:15:51 2023 +0100

score/arm: improve printed exception information for Cortex-Mx CPUs

Sponsored-By:   Precidata
```

Author: Chris Johns 2025-09-19T01:03:57.035Z

changed the description

3.9.1.149 4876 - RISC-V BSP Variant for the Kendryte K210 SoC

Id	4876
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-03-09T14:21:07.000Z
Updated	2025-09-19T01:03:56.876Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4876
Merges	0

Original author: alancudmore

The Kendryte K210 is low cost 64-bit dual core RISC-V SoC with: * Built in 8 MiB SRAM (6 for RISC-V applications, and 2 for the AI NPU) * An AI NPU * A number of other peripherals including UARTS, SPI, I2C, etc

https://www.canaan.io/product/kendryteai https://www.seeedstudio.com/blog/2019/09/12/get-started-with-k210-hardware-and-programming-environment/

While it is unclear how long these CPUs will be available, there are still low cost boards available that can run RTEMS including: https://wiki.sipeed.com/soft/maixpy/en/develop_kit_board/maix_bit.html https://wiki.sipeed.com/soft/maixpy/en/develop_kit_board/maix_duino.html

In addition there is basic support for the SoC on the renode.io simulator: https://renode.io/ https://github.com/renode/renode/blob/master/scripts/single-node/kendryte_k210.resc

Caanan provides a standalone SDK with an Apache 2.0 license that has examples for using nearly all of the peripherals including the AI NPU. This could be used as a reference for future BSP support. https://github.com/kendryte/kendryte-standalone-sdk

Basic RTEMS support for the device is a riscv/riscv BSP variant with only a few code changes, so it should be easy to maintain.

The basic BSP variant is complete and supports a polled console that is shared with the frdme310arty variant, interrupt, and timer support. It uses a built in device tree blob similar to the Microchip polarfire variant.

Author: Trac Migrate 2023-03-16T01:29:27.000Z

Original author: alancudmore

Looking at ticket 4876 wanting to get into bsp development Do I need hardware to work on this?

Author: Trac Migrate 2023-03-28T18:46:10.000Z

Original author: alancudmore

In [changeset:"ca1c4e70f517f95ce2b7fd9b76cf32429ad60957/rtems" ca1c4e70/rtems]:

```
bsps/riscv: add device tree source and device tree blob header for k210 bsp variant

This patch adds the k210 device tree source and the corresponding
device tree blob encoded in the header which is used for the
embedded device tree blob for the Kendryte K210 BSP variant.

Updates #4876
```

Author: Trac Migrate 2023-03-28T18:46:12.000Z

Original author: alancudmore

In [changeset:"26853a06243857015d47abc9e2c2216f5bf7ab7c/rtems" 26853a06/rtems]:

```
bsps/riscv: add riscv/kendrytek210 BSP variant source changes

This patch adds support for the Kendryte K210 RISC-V BSP variant.
The SoC uses the existing Interrupt Controller, Timer, and console UART.
It only needs SoC specific initialization and an embedded device tree binary
similar to the polarfire SoC BSP.

Updates #4876
```

Author: Trac Migrate 2023-03-28T18:46:14.000Z

Original author: alancudmore

In [changeset:"4021b87e002a094fb0d8ddd099cb8483d6986c8b/rtems" 4021b87/rtems]:

```
spec: add riscv kendrytek210 variant build options

This patch includes the spec/build options for the riscv kendrytek210
BSP variant. It includes options to allow the frdme310arty console
UART to be used on multiple BSPS, device tree options, memory
options, and other required options for the variant.

Updates #4876
```

Author: Trac Migrate 2023-04-11T18:09:55.000Z

Original author: alancudmore

- **Owner** set to Alan Cudmore <alan.cudmore@gmail.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"e38a90084273c2cc22a396f5e56b27e796cb15dd/rtems-docs" e38a900/rtems-docs]:

```
docs/user: add docs for riscv/kendrytek210 BSP variant

This patch adds the documentation for building and running RTEMS on the␣
↪Kendryte K210
RISC-V SoC. The generic riscv introducion was re-arranged to list the␣
↪multilib variants
then the specific hardware targets. In addition a couple of errors were␣
↪fixed for the
generic QEMU commands.

V2 corrected a typo, expanded K210 Console UART parameters, and addded␣
↪a hyperlink
to renode.io install instructions.

Closes #4876
```

Author: Trac Migrate 2023-04-11T20:45:15.000Z

Original author: alancudmore

In [changeset:"cbeaec94e1cb9513237c2feadff7899c63da0f93/rtems-docs" cbeaec9/rtems-docs]:

```
docs/user: add docs for riscv/kendrytek210 BSP variant

This patch adds the documentation for building and running RTEMS on the␣
↪Kendryte K210 RISC-V SoC.
The generic riscv introducion was re-arranged to list the multilib␣
↪variants then the specific
hardware targets. In addition a couple of errors were fixed for the␣
↪generic QEMU commands.

V2 corrected a typo, expanded K210 Console UART parameters, and addded␣
↪a hyperlink to renode.io install
instructions.

V3 clarified the multilib variant description, clarified the multilib␣
↪variant reference platform, and
corrected capitalization on SiFive.

V4 improves the instructions for running the K210 BSP on the Renode.io␣
↪simulator.

```

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```
V5 cleaned up the text to be no more than 80 characters per line.

V6 applied word wrap to paragraphs and replaced hard coded RTEMS major␣
↪versions with macros.

Closes #4876
```

Author: Amar Takhar 2024-04-25T20:50:40.737Z

changed the description

3.9.1.150 4873 - Registers definitions wrongly defined when there are reserved bits

Id	4873
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-03-09T12:32:50.000Z
Updated	2025-09-19T01:03:56.660Z
Milestone	6.1
Labels	priority::normal, resolution::duplicate, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4873
Merges	0

Original author: dppinto

With respect to RTEMS 6 (ESA-promoted RTEMS SMP Qualification Data Pack release 3), the following issues are observed:

File	Lines	Discrepancy
bsps\inclu regs.h	84; 86; 88; 91; 96; 98; 101; 106; 109; 115; 120; 123	According to table 365 of page 294 of the GR740 User Manual (v.2.50), the register addresses are incorrectly defined.
bsps\inclu regs.h	225	According to table 406 of page 319 of the GR740 User Manual (v.2,50), the register address is incorrect;
bsps\inclu regs.h	435	According to table 538 of page 403 of the GR740 User Manual (v.2.5), the register address is incorrect according to the table but it is correct according to the table description.
bsps\inclu regs.h	609	According to table 327 of page 259 of the GR740 User Manual (v.2.50), the register address is incorrect according to the table but it is correct according to the table description.
bsps\inclu regs.h	151	According to table 213 of page 200 of the GR740 User Manual (v.2.5), the register address is incorrect according to the table but it is correct according to the table description.
bsps\inclu regs.h	575; 591; 715; 787; 809	According to tables 191, 192, 199, 201, 202, respectively (to each identified line) starting on page 192 of the GR740 User Manual (v.2.5), the register addresses are incorrect according to the table but are correct according to the table description.

It seems that the generation of these registers definitions leads to incorrect bit definitions whenever there are reserved bits specified in the Gaisler User Manual.

Can you please double-check these cases?

Additional Notes:

This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). The original ISVV reference for this issue is RTEMS-SMP-CODE-VER-014.

Author: Trac Migrate 2023-03-09T12:34:47.000Z

Original author: dppinto

- **Resolution** set to ~"duplicate"
- **Status** changed from *new* to *closed*

Wrong ticket raised.

Author: Chris Johns 2025-09-19T01:03:56.753Z

changed the description

3.9.1.151 4854 - Deprecated Functions

Id	4854
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-02-13T14:16:55.000Z
Updated	2025-09-19T01:03:56.526Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::duplicate, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4854
Merges	0

Original author: dppinto

It is stated in the comments that these functions are deprecated: * cpukitincludertemsfatal.h: RTEMS_NO_RETURN void rtems_fatal_error_occurred(uint32_t fatal_code); * cpukitincludertemsscorethread.h: void rtems_iterate_over_all_threads( );

Can these be removed now or are there still portability reasons to still keep these?

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). The original ISVV reference for this issue is RTEMS-SMP-CODE-VER-018.

Author: Trac Migrate 2023-02-13T14:17:55.000Z

Original author: dppinto

- **Resolution** set to ~"duplicate"
- **Status** changed from *new* to *closed*

Author: Amar Takhar 2024-04-25T20:50:36.347Z

changed the description

3.9.1.152 4851 - Variable not initialized in any file / missing #ifdefs

Id	4851
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-02-13T13:00:39.000Z
Updated	2025-09-19T01:03:56.328Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::duplicate, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4851
Merges	0

Original author: dppinto

Within **bspssparcleon3includebspleon3.h (lines 207, 309)**

The *LEON3_IrqCtrl_Adev and *LEON3_Timer_Adev are declared but not initialized in any file of the QDP.:

Please consider having these declared within the |md_0_8220|else|md_0_8221| blocks of the |md_0_8220|#if defined(LEON3_IRQAMP_BASE)|md_0_8221| where *LEON3_IrqCtrl_Regs and *LEON3_Timer_Regs are declared.

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). Original ISVV reference for this issue is RTEMS-SMP-CODE-VER-041.

Author: Trac Migrate 2023-02-13T13:05:38.000Z

Original author: dppinto

- **Resolution** set to ~"duplicate"
- **Status** changed from *new* to *closed*

Author: Amar Takhar 2024-04-25T20:50:35.486Z

changed the description

3.9.1.153 4841 - Setup Wiki.js for new wiki.

Id	4841
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Trac Migrate
Closed by	Amar Takhar
Created	2023-02-07T20:36:14.000Z
Closed	2024-04-26T02:03:47.338Z
Updated	2025-09-19T01:03:56.197Z
Milestone	6.1
Labels	infra::project-2, old-indefinite, priority::normal, tickettype::infra
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4841
Merges	0

As we transition off of Trac we'll need a new wiki to replace https://devel.rtems.org/

https://js.wiki/ offers the best situation for us for several reasons:

- It uses Markdown as it's main language
- It can replicate itself to a Git repository making easy branching or local copies of the wiki. It can directly interface with GitLab.
- We can, in the future build a PDF using Sphinx from the Git repository.
- It supports OATH so we can log in using our local GitLab instance.
- Has instant search capabilities.

Moving to a purely Sphinx based system is too heavyweight for developer documentation as an open source project we need to have a strong focus on lowering the barrier to contributions. Documentation lags behind everything else as it we shouldn't be making it more difficult to contribute.

There is one downside to this as anyone who wants to modify the wiki will need to have their local GitLab account approved whereas Trac currently is automatic right after applying.

Author: Amar Takhar 2024-04-25T20:50:30.968Z

changed the description

Author: Amar Takhar 2024-04-26T02:03:47.452Z

moved to administration/infra#18

3.9.1.154 4779 - RISC-V: Remove RISCV_ENABLE_HTIF_SUPPORT option

Id	4779
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-12-18T14:11:55.000Z
Updated	2025-09-19T01:03:55.902Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4779
Merges	0

Original author: heshamelmatary

Currently **RISCV_ENABLE_HTIF_SUPPORT** [1] is required to be set to 1 for Spike platform. This adds more confusions to users and doubles the number of BSPs for testing on both QEMU and Spike.

I suggest removing the RISCV_ENABLE_HTIF_SUPPORT option and always prob for it in the FDT in the C code (only during init and shutdown), it shouldn't affect any critical paths.

This should get us a single BSP that runs on both QEMU and Spike.

[1] https://docs.rtems.org/branches/master/user/bsps/bsps-riscv.html

Author: Trac Migrate 2022-12-23T09:07:57.000Z

Original author: heshamelmatary

In [changeset:"88b80a5fd0035d4f2a5c752c0159a989812d29c8/rtems" 88b80a5f/rtems]:

```
RISC-V: Always probe for HTIF and remove RISCV_ENABLE_HTIF_SUPPORT

Updates #4779
```

Author: Trac Migrate 2023-01-09T18:11:07.000Z

Original author: heshamelmatary

- **Owner** set to Hesham Almatary <hesham.almatary@cl.cam.ac.uk>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"763c97df20bc3059cb9b494dcc08e2a4d0a9ed16/rtems-docs" 763c97d/rtems-docs]:

```
RISC-V: Remove the RISCV_ENABLE_HTIF_SUPPORT option

Closes #4779
```

Author: Trac Migrate 2023-01-12T07:01:13.000Z

Original author: heshamelmatary

In [changeset:"d46366a2e755865884551166c9fec0533673ec87/rtems" d46366a/rtems]:

```
riscv: Resurrect RISCV_ENABLE_HTIF_SUPPORT

Low-end configurations may want to have the HTIF support removed.
Enable the option by default.  Fix formatting.  Fix node validity
checks.

Updates #4779.
```

Author: Trac Migrate 2023-01-12T07:07:24.000Z

Original author: heshamelmatary

In [changeset:"1030fea8ed2accdb40b61791a1b73e2894e16bdc/rtems-docs" 1030fea/rtems-docs]:

```
riscv: Resurrect RISCV_ENABLE_HTIF_SUPPORT

Updates #4779.
```

Author: Chris Johns 2025-09-19T01:03:56.002Z

changed the description

3.9.1.155 4753 - Encountered “fatal source: 9 (RTEMS_FATAL_SOURCE_EXCEPTION)” when booting up with RTEMS 6 on stm32h7 board

Id	4753
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-11-10T06:53:38.000Z
Updated	2025-09-19T01:03:55.733Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4753
Merges	0

Original author: cal

Hi,

I have followed the RTEMS Quick Start webpage and have successfully built the BSP for stm32h7 (STM32H745I_DISCO board) with the RTEMS source code that I git cloned 2 weeks ago. I have successfully compiled a hello world application and ran on the board.

This week, however, I repeated the steps to build the bsp but with the latest RTEMS git cloned. After successfully building the BSP and compiled the hello world application, I encountered an exception as shown below.

* **FATAL** * fatal source: 9 (RTEMS_FATAL_SOURCE_EXCEPTION)

R0 = 0x00000000 R8 = 0x00000000 R1 = 0x00000002 R9 = 0x00000000 R2 = 0x0000001c R10 = 0x00000000 R3 = 0x240063a8 R11 = 0x00000000 R4 = 0x00000001 R12 = 0xffffffff R5 = 0x00000000 SP = 0x24006398 R6 = 0x00000000 LR = 0x0800d503 R7 = 0x00000000 PC = 0x0800d512 XPSR = 0x210b0000 VEC = 0x00000004 RTEMS version: 6.0.0.df814344215b6ec29d46238be47e3bbd2a2e22e4 RTEMS tools: 12.2.1 20221104 (RTEMS 6, RSB f690701431fc88d0d79a56c41bc6a11d4641e60b, Newlib a8526cb) executing thread ID: 0x0a010001 executing thð

I did a comparison between the previous RTEMS code with the latest version. I replaced some of the codes in the latest code with the older codes. Below are the minimum changes that I did to make the board work.

1) cpukitincludertemsscoretls.h Added the lines of codes in the file:

static inline uintptr_t _TLS_Align_up(uintptr_t val) { uintptr_t alignment = CPU_STACK_ALIGNMENT;

return RTEMS_ALIGN_UP(val, alignment); } static inline void *_TLS_TCB_at_area_begin_initialize(void *tls_area) { void *tls_block = (char *) tls_area + _TLS_Get_thread_control_block_area_size(); TLS_Thread_control_block *tcb = (TLS_Thread_control_block *) tls_area; uintptr_t aligned_size = _TLS_Align_up((uintptr_t) _TLS_Size); TLS_Dynamic_thread_vector *dtv = (TLS_Dynamic_thread_vector *) ((char *) tls_block + aligned_size);

_TLS_Initialize_TCB_and_DTV(tls_block, tcb, dtv); _TLS_Copy_and_clear(tls_block); return tls_block; }

2) cpukitscorecpuarmarmv7m-context-initialize.c Replaces the last line in the code:

void _CPU_Context_Initialize(Context_Control *context, void *stack_area_begin, size_t stack_area_size, uint32_t new_level, void (*entry_point)(void), bool is_fp, void *tls_area) { char *stack_area_end = (char *) stack_area_begin + stack_area_size;

memset(context, 0, sizeof(*context));

context->register_lr = entry_point; context->register_sp = stack_area_end;

if (tls_area != NULL) { //_TLS_Initialize_area(tls_area); //replace the line with: ** _TLS_TCB_at_area_begin_initialize(tls_area);** } }

3) cpukitscorecpuarm__aeabi_read_tp.c replace the codes:

void __attribute__((naked)) __aeabi_read_tp(void) { __asm__ volatile (“ldr r0, =_Per_CPU_Informationn” “ldr r0, [r0, %[executingoff]]n”

if defined(__thumb__) && !defined(__thumb2__)

“add r0, %[tlsareaoff]n” “ldr r0, [r0]n”

else

“ldr r0, [r0, %[tlsareaoff]]n”

endif

“bx lrn” : : [executingoff] “I” (offsetof(Per_CPU_Control, executing)), [tlsareaoff] “I” (offsetof(Thread_Control, Start.tls_area))); }

May I know if I might have configured the bsp wrongly during the build, or it is an actual bug that is introduced in the new code release?

Thanks, Cal

Author: Trac Migrate 2022-11-10T06:59:50.000Z

Original author: cal

- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2022-11-10T09:58:49.000Z

Original author: cal

- **Resolution** set to ~”fixed”
- **Status** changed from *assigned* to *closed*

In [changeset:”8f6dd3ca1fa9c7772746fcd2f487e504e6968598/rtems” 8f6dd3c/rtems]:

```
arm: Fix Armv7-M TLS support

Set the thread ID register in the CPU context.

Update #3835.
Close #4753.
```

Author: Amar Takhar 2024-04-25T20:50:03.039Z

changed the description

3.9.1.156 4740 - Teach libdebugger to wait for GDB to connect and ask to continue

Id	4740
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2022-10-13T09:51:53.000Z
Updated	2025-09-19T01:03:55.302Z
Milestone	6.1
Labels	cpukit::debugger, priority::normal, resolution::fixed, ticket-type::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4740
Merges	0

Original author: legouguec

In #4739, Chris noted this snippet in the reproducer:

```
/* Debugger lock, there is no way to ask the libdebugger to wait for a
* connection, that would block the kernel.  Instead use the following global
* variable and 'set release_debugger = 1' in GDB when ready.  */
volatile int release_debugger = 0;

static void start_gdb_server(void)
{
rtems_printer printer;
int r;

rtems_print_printer_fprintf(&printer, stdout);
r = rtems_debugger_register_tcp_remote();
if (r < 0) {
perror("TCP remote register");
abort();
}

r = rtems_debugger_start("tcp", "1122", 3, 1, &printer);
```

(continues on next page)

(continued from previous page)

```
if (r < 0) {
perror("can't start debugger");
abort();
}

/* Definitely not nice, but it doesn't seem like there is any other choice
* for libdebugger based debugging.  GDB just has to setup and only then
* set release_debugger variable.  */
while (!release_debugger) {
sleep(0.1);
}
}
```

Chris suggests adding an option to make libdebugger halt execution until GDB connects and sends a “continue”, which would make the debugging experience similar to targeting QEMU with the -S (uppercase S) switch:

https://www.qemu.org/docs/master/system/gdb.html#gdb-usage

We would appreciate that option very much, as it would make our testsuite support code for RTEMS more akin to other platforms by getting rid of that release_debugger variable.

The API has yet to be defined:

> Don’t know how that would translate in terms of API (adding an argument to rtems_debugger_start, if breaking the API is allowed; adding a function to request the wait after rtems_debugger_start has been called; ...);

I think breaking the API may be worth the short term pain. I tend to prefer a `const char* option` type argument that can be `NULL`. That argument can then be passed around and parsed by backends, transports etc and options can come and go without breaking the API.

I know some programmers feel strongly against so-called “stringly-typed” APIs (e.g. they subvert type-checking; they require “

Author: Trac Migrate 2022-10-13T09:54:59.000Z

Original author: legouguec

(Woops, looks like part of my OP got bitten off. Here it is, without the weird Unicode characters that presumably caused it to be truncated?)

I know some programmers feel strongly against so-called “stringly-typed” APIs (e.g. they subvert type-checking; they require “parsing”), but I’ve seen reasonable cases for them; FWIW I do not have a clear preference for or against them in this context (C type-checking is a bit of a joke so not much is lost; parsing can be fraught but libdebugger probably does not belong in a critical stack anyway).

So I’ll trust your judgment on this!

Again, thanks for suggesting this.

Author: Chris Johns 2022-10-14T02:12:44.000Z

Original author: legouguec

Replying to K|md_0_233|vin Le Gouguec:

> (Woops, looks like part of my OP got bitten off. Here it is, without the weird Unicode characters that presumably caused it to be truncated?) I know some programmers feel strongly against so-called “stringly-typed” APIs (e.g. they subvert type-checking; they require “parsing”), but I’ve seen reasonable cases for them; FWIW I do not have a clear preference for or against them in this context (C type-checking is a bit of a joke so not much is lost; parsing can be fraught but libdebugger probably does not belong in a critical stack anyway).
>
> The statements are true and valid however given the context I see more value in a set of string options. The link you provide is great. I will add to the list of examples the NFS options to a kernel such as FreeBSD.
>
> Libdebugger will expand and grow in ways we might not appreciate today and I do not see value in maintaining C code to do this. The first example is `continue`. I would make waiting the default as GDB does when you connect to a running process. A continue option would be:

```
"cont"
```

> Now a setting for a transports such as serial (which does not exist):

```
cont;serial=tty0:115000,8,1,e
```

> and in time some adds support to load XML files so registers for a target SoC can be seen by GDB:

```
"cont;serial=tty0:115000,8,1,e;xml=/xx/soc-abc.xml"
```

> The options can be easily and cheaply passed around and then used as needed by different subsystems in `libdebugger`.
>
> > So I’ll trust your judgment on this!
> >
> > It is also the lazy alternative so maybe you should not ;)
> >
> > > Again, thanks for suggesting this.
> > >
> > > No problem.

Author: Chris Johns 2022-10-17T20:30:38.000Z

Original author: legouguec

I took a closer look at the debug server code and saw a simpler solution. I have have added a new call:

```
/**
* Suspend all running threads including the caller if not
* excluded. Returns when the debugger has connected and continued.
*
* If wait is true and there is no remote connected wait then break.
*/
extern int rtems_debugger_break(bool wait);
```

I think this is simpler and cleaner to implement and use and it also lets users make the call anytime to break the target.

The patch can be found here https://lists.rtems.org/pipermail/devel/2022-October/073581.html

Author: Trac Migrate 2022-10-18T09:23:52.000Z

Original author: legouguec

I gave the patch a whirl, removing the `release_debugger` variable in our code and replacing the `while` loop with a call to `rtems_debugger_break(true)`, and as far as I can tell, it works pretty well.

Thanks for implementing this!

Author: Trac Migrate 2022-10-18T22:36:41.000Z

Original author: legouguec

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"d574e08663ee57a15802fdc5f0c8f8a5b09bd528/rtems" d574e08/rtems]:

```
libdebugger: Add a target break call to suspend all running threads

- Optionally wait if there is no remote debugger connected and break
when the remote connects

Closes #4740
```

Author: Chris Johns 2025-09-19T01:03:55.442Z

changed the description

3.9.1.157 4738 - psxrwlock01 uses uninitialized lock that may or may not autoinitialize

Id	4738
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-10-06T14:29:15.000Z
Updated	2025-09-19T01:03:55.097Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::test
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4738
Merges	0

Original author: lsilistr

When running psxrwlock01, the NULL argument check from testsuites/psxtests/psxrwlock01/test.c:458 uses the uninitialized rwlock. Depending on memory content this lock may or may not be auto-initialized. The cases I can see are:

1. if memory is zeroed, it will auto a new lock and acquire without checking abstime value. Will return SUCCESS and test will fail.
2. if memory is random it will instantly return EINVAL from autoinitialization, again not checking abstime. Test will pass.
3. if memory somehow ends up over another older lock structure, it will try to take over that lock - not encountered this specific behaviour.

Author: Joel Sherrill 2022-10-06T16:15:15.000Z

Original author: lsilistr

The odds are that on the BSPs which get the most testing, the memory is zeroed. Can you see if initializing the id variable in question to 0 resolves the issue and the test still works?

Patch appreciated if so.

Author: Trac Migrate 2022-10-07T05:04:22.000Z

Original author: lsilistr

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"46f08961a22ff7ffc6196971c0ff04006689ded1/rtems" 46f08961/rtems]:

```
psxrwlock01: Use an initilized lock for tests

Close #4738.
```

Author: Chris Johns 2025-09-19T01:03:55.178Z

changed the description

3.9.1.158 4728 - RISC-V console device tree parsing fails with a list of properties

Id	4728
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-09-29T01:31:01.000Z
Updated	2025-09-19T01:03:54.817Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4728
Merges	0

Original author: alancudmore

The riscv console configuration code uses a macro:

define RISCV_CONSOLE_IS_COMPATIBLE(actual, actual_len, desired) \

(actual_len == sizeof(desired) && memcmp(actual, desired, sizeof(desired) - 1) == 0)

And is used to find a compatible console device in the device tree like this: if (RISCV_CONSOLE_IS_COMPATIBLE(compat, compat_len, “ucb,htif0”)) { htif_console_context_init(&htif_console_instance.base, node);

An example device tree entry: compatible = “ns16550a”; works with the macro, but when the device tree entry has multiple items like: compatible = “canaan,k210-uarths”, “sifive,uart0”; the macro cannot parse the entry because the list is being treated like a single string. The compat_len variable ends up having the length of the entire list, causing the comparison to fail.

If the macro is replaced with a call to fdt_stringlist_contains like: if (fdt_stringlist_contains(compat, compat_len, “ucb,htif0”)) { htif_console_context_init(&htif_console_instance.base, node);

The substring can be found in the compatible list.

This works with my use case where there are multiple items in the compatible list.

Unless there is a reason why the macro is used, I can submit a patch that replaces the macros with fdt_stringlist_contains calls.

Note: I am not sure how to test all cases of this code, I can test the generic riscv-v/qemu based BSP, and the BSP I am working on, but I do not have access to a FE310/Arty system

Author: Trac Migrate 2022-10-14T13:04:07.000Z

Original author: alancudmore

- **Owner** set to Alan Cudmore <alan.cudmore@gmail.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"1d2fab8a79c963cdb88e6616031984b18db81191/rtems" 1d2fab8/rtems]:

```
bsps: Improve riscv console FDT parsing

This fixes a problem with parsing the FDT compatible property by
replacing the RISCV_CONSOLE_IS_COMPATIBLE macro with calls to
the fdt_stringlist_contains function. The macro only works when
the compatible FDT entry is a single string and not a list of
strings. The new call will compare each item in the string list.

Close #4728.
```

Author: Chris Johns 2025-09-19T01:03:54.940Z

changed the description

3.9.1.159 4723 - Issue with NFSv4

Id	4723
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2022-09-23T09:35:45.000Z
Updated	2025-09-19T01:03:54.545Z
Milestone	6.1
Labels	filesystem, priority::high, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4723
Merges	0

Original author: PirovanoF

We are testing NFSv4 on a coldfire mcf5329 platform using rtems-6 (MASTER) and 6-freebsd-12 (downloaded September 9th). The tool chain is bould by rtems-source-builder last version.

The test program testsuite/nfs01 work correctly but if we try to copy a file in a subfolder of NFS disk we meet the issue that I try to describe below:

using telnetd01 example from the testsuite (adding NFS filesytem at configuration with #define CONFIGURE_FILESYSTEM_NFS) and opening a shell we are capable to mount a NFS disk with the command:

mount -t nfs -o nfsv4,minorversion=1 192.168.3.36:/rtems /nfs

(where “192.168.3.36/rtems” is a share from an ubuntu 20.1 machine).

Mount is fine and we receive the following reply

“nfs: mount: nfs -> 192.168.3.36:/rtems (nfsv4,minorversion=1) nfs: mount args: 8 16 addr=10 02 08 01 ffffffc0 fffffa8 03 24 00 00 00 00 00 00 00 00 0 nfsv4 7 dirpath=/rtems 4 fstype=nfs 4 fspath=nfs 20 hostname=192.168.3.36:/rtems 0 rw 2 minorversion=1 nfs: mount: (0) Success”

The issue happen when we try to copy a file in a /nfs subfolder. If we create subfolders

mkdir /nfs/1 mkdir /nfs/1/2 mkdir /nfs/1/2/3 folders are creted correctly but if we try to copy a file as:

cp xxx /nfs/1/2/3

unfortunately the file xxx is copied in /nfs/1/2 and NOT inside /nfs/1/2/3 folder. The same issue happen in other locations:

cp xxx /nfs/1/2 file is copied in /nfs/1 cp xxx /nfs/1 file is copied in /nfs

Author: Chris Johns 2022-09-26T01:53:14.000Z

Original author: PirovanoF

- **Owner** set to @chrisj
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2022-11-21T12:05:09.000Z

Original author: PirovanoF

Hi Chris, No news about this issue? we are developing a project based on NFS and rtems but we are stopped. There is any prevision about a solution ? Thanks in advance.

Author: Chris Johns 2022-11-21T20:46:58.000Z

Original author: PirovanoF

Replying to Fabrizio Pirovano:

> Hi Chris, No news about this issue? we are developing a project based on NFS and rtems but we are stopped. There is any prevision about a solution ?
>
> I am sorry about the delay and I am sorry your project has stopped. I have been busy on a few other things but I plan to take a look.

Author: Trac Migrate 2023-02-01T18:23:47.000Z

Original author: PirovanoF

Fabrizio,

let me ask, are you sure you are using NFSv4 and not plain old NFSv2 on the RTEMS side? I'm asking since all evidence I've seen so far point to only NFSv2 on the RTEMS and that is including wireshark debugging.

The idea: your -o options get silently ignored, your RTEMS is using NFSv2 which your server luckily supports although there are some issues...

By any chance, if you are using Linux as a NFS server, what does:

```
$ sudo cat /proc/fs/nfsd/versions
```

tells you?

Example: Ubuntu 20.04 LTS as a NFS server by default:

```
-2 +3 +4 +4.1 +4.2
```

and obviously RTEMS refuses to work with that. E.g. nfs01.exe:

```
NFS (proc 0) - RPC: Program/version mismatch
NFS Ping 169.254.1.1  failed: I/O error
```

but when I reconfigure and enforce NFSv2 to be supported, then cat tells correctly:

```
+2 +3 +4 +4.1 +4.2
```

and RTEMS nfs01.exe runs fine.

Now, back to your testcase as I'm able to test that too now. Actually with few days old RTEMS and libbsd repos, both `master` branches I'm not able to duplicate your issue. See:

```
SHLL [/nfs] # ls -la /nfs/1/2/3
total 2
drwxr-xr-x  2 1000  100  2 Feb  1  2023 .
drwxr-xr-x  3 1000  100  4 Feb  1  2023 ..
SHLL [/nfs] # cp rtems.txt /nfs/1/2/3
SHLL [/nfs] # ls -la /nfs/1/2/3
total 3
drwxr-xr-x  2 1000  100   3 Feb  1  2023 .
drwxr-xr-x  3 1000  100   4 Feb  1  2023 ..
-rw-r--r--  1 1000  100  38 Feb  1  2023 rtems.txt
```

perhaps the issue is already solved?

Author: Trac Migrate 2023-02-01T18:25:00.000Z

Original author: PirovanoF

- **Cc** added @karel@functional.vision

Author: Joel Sherrill 2023-02-01T19:24:25.000Z

Original author: PirovanoF

Which version of RTEMS are you using and which network stack?

NFS v4 is only in libbsd

Author: Trac Migrate 2023-02-01T19:28:17.000Z

Original author: PirovanoF

Oh. Today, as of February 1 2023, I followed README from libbsd: https://github.com/RTEMS/rtems-libbsd – concretely steps to make that working on zynq-a9-qemu bsp. When I did so, then compiled nsf01.exe was purely NFS v2 client application.

I just passed in custom network configuration to be more in-line with recommended qtap configuration:

```
NET_CFG_SELF_IP = 169.254.10.10
NET_CFG_NETMASK = 255.255.0.0
NET_CFG_PEER_IP = 169.254.1.1
NET_CFG_GATEWAY_IP = 169.254.1.1
```

Let me ask, where exactly is this NFS v4 implementation located? Thanks!

Author: Trac Migrate 2023-02-02T10:49:46.000Z

Original author: PirovanoF

Hi Karel, as I wrote in my opened ticket NFSv4 implementation is located in 6-freebsd-12 branch.

my Ubuntu server when I type sudo cat /proc/fs/nfsd/versions answer -2 +3 +4 +4.1 +4.2 so I am sure that I am not using NFSv2 also because I forced rtems side to use NFSV4.1 and wireshark dump confirm NFSv4.

Author: Trac Migrate 2023-02-02T11:03:48.000Z

Original author: PirovanoF

Hi Fabrizio,

cool! I stand corrected then and it looks like NFSv4 got into the 6-freebsd-12 and not to the master. What a confusion! I really would expect everything to be on the `master` as it is described as a:

master

_ This branch is intended for the RTEMS master which tracks the FreeBSD master branch. This branch must be used for libbsd development. Back ports to the 6-freebsd-12 are allowed._

sorry about my confusing message than, it was not done on purpose. I was confused myself. :-)

Author: Trac Migrate 2023-02-07T09:11:51.000Z

Original author: PirovanoF

Hi Karel, Do you have news? You were capable to reproduce the issue and confirm it ? Tell me if I can support you in any way. BR

Author: Trac Migrate 2023-07-23T23:21:52.000Z

Original author: PirovanoF

In [changeset:"60e40e9b83414b43c60bea47f628dd1f60f018b6/rtems-libbsd" 60e40e9/rtems-libbsd]:

```
freenbsd/vfs: VFS attributes need to have the same size mode_t variable

If the size in the attributes struct does not match the mode_t the
VNOVAL checks fail because size of the values are not the same.

Updates #4723
```

Author: Trac Migrate 2023-07-23T23:21:54.000Z

Original author: PirovanoF

In [changeset:"65913f4b3bc6589c4534daf4a7c16f3c2c938aaa/rtems-libbsd" 65913f4/rtems-libbsd]:

```
syscall/open: Reference the path info directory vnode

The kernel open call requires a path so to open a file we need to
set the current directory to the parent vnode. If the open mode is
create the path info vnode is the directory to perform the open
create in. Using the parent node creates the file in wrong path.

Updates #4723
```

Author: Trac Migrate 2023-07-23T23:21:56.000Z

Original author: PirovanoF

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"1dfdee9ce95ed5527f1b035ce24650c118e26993/rtems-libbsd" 1dfdee9/rtems-libbsd]:

```
freebsd/vfs: Pass in the td's cred to the VFS calls

Closes #4723
```

Author: Chris Johns 2025-09-19T01:03:54.666Z

changed the description

3.9.1.160 4722 - Odd IDLE thread ID printing from various BSPs in minimum.exe

Id	4722
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-09-22T15:09:23.000Z
Updated	2025-09-19T01:03:54.227Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4722
Merges	0

Original author: noor

I have built a new aarch64 raspberry pi 4 BSP and while trying out the minimum.exe on the target and the IDLE thread ID printing was 0x089010001. As per Joel, This is not limited to aarch64 BSPs but to sparc/leon3 too. Here's my output from Raspberry pi 4B aarch64 minimum.exe

```
*** FATAL ***
fatal source: 0 (INTERNAL_ERROR_CORE)
fatal code: 5 (INTERNAL_ERROR_THREAD_EXITTED)
RTEMS version: 6.0.0.ee92899632c823e19aa4f2e7048af3d910f59be2
RTEMS tools: 12.1.1 20220622 (RTEMS 6, RSB␣
↪eea379370116628dbe91f19e61ad6129aa1951ac, Newlib ea99f21)
executing thread ID: 0x089010001
executing thread name: IDLE
```

From the cpuuse command, this is the IDLE thread ID:

```
0x09010001 | IDLE                                 |     20.301428 |  96.344
Looks like a bug somewhere not related to the Pi4
```

For some reason, the MSB is set. Doesn't look like sign-extension. But could be a bug in printk() versus printf().

Author: Joel Sherrill 2022-09-22T15:23:03.000Z

Original author: noor

- **Description** changed

```
I have built a new aarch64 raspberry pi 4 BSP and while trying out the minimum.exe on the target and the IDLE thread ID printing was 0x089010001. As per Joel, This is not limited to aarch64 BSPs but to sparc/leon3 too. Here's my output from Raspberry pi 4B aarch64 minimum.exe

{{{
*** FATAL ***
fatal source: 0 (INTERNAL_ERROR_CORE)
fatal code: 5 (INTERNAL_ERROR_THREAD_EXITTED)
RTEMS version: 6.0.0.ee92899632c823e19aa4f2e7048af3d910f59be2
RTEMS tools: 12.1.1 20220622 (RTEMS 6, RSB eea379370116628dbe91f19e61ad6129aa1951ac, Newlib ea99f21)
executing thread ID: 0x089010001
executing thread name: IDLE
}}}
+
+ From the cpuuse command, this is the IDLE thread ID:
+
+ {{{
+
+
+  0x09010001 | IDLE                                |     20.301428 |  96.344
+ Looks like a bug somewhere not related to the Pi4
+ }}}
+
+ For some reason, the MSB is set. Doesn't look like sign-extension. But could be a bug in printk() versus printf().
```

Author: Trac Migrate 2022-09-23T06:30:13.000Z

Original author: noor

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"962904cd940c114235f3d466abf5164b01b1289e/rtems" 962904c/rtems]:

```
bsps: Fix format specifier

Close #4722.
```

Author: Chris Johns 2025-09-19T01:03:54.332Z

changed the description

3.9.1.161 4719 - risc-v fe310 console driver uart read error

Id	4719
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-09-18T14:28:20.000Z
Updated	2025-09-19T01:03:53.905Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4719
Merges	0

Original author: alancudmore

In the riscv/riscv fe310_uart_read function, the uart RX data/status register is read twice when reading a character: once for the status, then a second time when reading the data. Reading the RX data/status register twice discards the input data from the first read.

It can be fixed by first reading the RX data/status register into a local variable.

This was verified on a Kendryte K210 CPU which uses the same SiFive UART. I will submit a patch to fix it.

Author: Trac Migrate 2022-09-19T15:00:54.000Z

Original author: alancudmore

- **Owner** set to Alan Cudmore <alan.cudmore@gmail.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"88f4d44f00ad11978a973f5f474ed8a92ffe3a98/rtems" 88f4d44f/rtems]:

```
bsps/riscv/riscv: Fix fe310_uart_read

Note: Resending after learning how to use git send-email, please␣
↪disregard previous message.

This fixes the riscv fe310 console driver fe310_uart_read function. The␣
↪function
reads the RX status/data register to check if data is available, but␣
↪discards
the data and reads it a seconds time.
Also cleared the interrupt enable bit in the first_open function.

Close #4719
```

Author: Chris Johns 2025-09-19T01:03:54.073Z

changed the description

3.9.1.162 4688 - Support /etc/sysctl.conf in libbsd

Id	4688
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2022-07-29T17:08:37.000Z
Closed	2025-01-31T18:29:42.472Z
Updated	2025-09-19T01:03:53.716Z
Milestone	6.1
Labels	libbsd, old-indefinite, priority::normal, tickettype::enhancement, version::6, version::7
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4688
Merges	0

We support the various APIs to set tunable values but not the /etc/sysctl.conf file to set them during initialization. They cannot be set before the network stack is initialized as this leads to a fault.

Doing this brings us more in line with FreeBSD Configuration and Tuning. We already have the sysctl APIs and /etc/rc.conf. This would round out the support.

Author: Chris Johns 2022-11-29T23:57:28.000Z

- **Milestone** changed from %"6.1" to %"Indefinite"
- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*
- **Version** changed from ~"6" to ~"7"

Author: Kinsey Moore 2025-01-31T18:29:42.670Z

moved to rtems/pkg/rtems-libbsd#32

Author: Amar Takhar 2025-09-05T02:55:31.442Z

changed the description

3.9.1.163 4657 - Apple M1 hardware is not able to compile rtems toolchain while using RSB.

Id	4657
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-05-16T17:24:58.000Z
Updated	2025-09-19T01:03:52.972Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4657
Merges	0

Original author: kgardas

Hello, patch for the defect was already provided here: https://lists.rtems.org/pipermail/devel/2022-May/071507.html

and here: https://lists.rtems.org/pipermail/devel/2022-May/071509.html

however especially second patch has met strong resistance from inclusion without a proper attempt to contact upstream projects and report, provide patch there.

So, here I clearly declare, that I've contacted all three projects by using mailing lists (in case of mfc and mfpr) and google group (in case of isl). Unfortunately neither archive to mailing lists neither google group is easily publicably accessible. I'll try my best to link replies here as much as possible.

Anyway, as discussed on devel@, I'm also attaching 3 required patches here.

- fix-mac-arm64-isl-config.patch
- fix-mac-arm64-mpc-config.patch
- fix-mac-arm64-mpfr-config.patch

Author: Trac Migrate 2022-05-16T17:25:35.000Z

Original author: kgardas

- **Attachment** fix-mac-arm64-isl-config.patch added

ISL patch

Author: Trac Migrate 2022-05-16T17:25:57.000Z

Original author: kgardas

- **Attachment** fix-mac-arm64-mpc-config.patch added

MPC patch

Author: Trac Migrate 2022-05-16T17:26:17.000Z

Original author: kgardas

- **Attachment** fix-mac-arm64-mpfr-config.patch added

MPFR patch

Author: Trac Migrate 2022-05-17T09:10:02.000Z

Original author: kgardas

ISL library discussion: https://groups.google.com/g/isl-development/c/DsL8jaJB-hg MPFR library discussion: https://sympa.inria.fr/sympa/arc/mpfr/2022-05/msg00004.html MPC library discussion: https://sympa.inria.fr/sympa/arc/mpc-discuss/2022-05/msg00000.html

Author: Trac Migrate 2022-05-17T18:27:26.000Z

Original author: kgardas

In [changeset:"5e76e64bccc2d84acb6c37380f2f9d98df3b7382/rtems-source-builder" 5e76e64/rtems-source-builder]:

```
ISL, MPC, MPFR: fix configuration issues on ARM64/Darwin host

Updates #4657.

Sponsored-By:   Precidata
```

Author: Trac Migrate 2023-07-10T15:23:26.000Z

Original author: kgardas

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

I've tested building of 6/rtems-riscv 6/rtems-arm 6/rtems-i386 6/rtems-x86_64 6/rtems-aarch64 and all built fine on:

```
karel@mini ~ % sw_vers
ProductName:            macOS
ProductVersion:         13.4
BuildVersion:           22F66
```

thanks to Chris Johns for hacking on it. Closing as I'm original reporter.

Author: Kinsey Moore 2024-12-28T04:46:22.295Z

Uploading an updated ISL fix that resolves issues for FreeBSD since it also references arm64 instead of aarch64. fix-mac-arm64-isl-config-v2.patch

Author: Kinsey Moore 2024-12-28T04:46:22.256Z

This fixes compilation on FreeBSD14.2 running on both the Raspberry Pi 5 and Apple M-series hardware. The change to apply this patch is in rtems/tools/rtems-source-builder!101

Author: Kinsey Moore 2024-12-29T23:34:03.180Z

And now uploading the similarly expanded version of the MPC patch fix-mac-arm64-mpc-config-v2.patch

Author: Chris Johns 2025-09-19T01:03:53.281Z

changed the description

3.9.1.164 4645 - waf crashes when building PSXTESTS

Id	4645
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-05-04T23:23:28.000Z
Updated	2025-09-19T01:03:52.769Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::waf, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4645
Merges	0

Original author: ecp

Working off of RTEMS master (d56d8a60695805d9a54bcc14fdaaae04e6c1ab53) and waf 2.0.20 (668769470956da8c5b60817cb8884cd7d0f87cd4), invoking `./waf` with the following configuration file

```
[aarch64/xilinx_zynqmp_lp64_zu3eg]
RTEMS_POSIX_API=True
BUILD_PSXTESTS=True
```

crashes with failure message

```
...
[1355/2642] Compiling testsuites/psxtests/psxftw01/psxftw01.tar
[1356/2642] Processing testsuites/psxtests/psxftw01/psxftw01.tar
Waf: Leaving directory `.../rtems/build/aarch64/xilinx_zynqmp_lp64_zu3eg'
Build failed
Traceback (most recent call last):
```

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```
File ".../rtems/.waf3-2.0.20-36f5354d605298f6a89c09e0c7ef6c1d/waflib/Task.py", line 180, in process
ret=self.run()
File ".../rtems/wscript", line 460, in run
cmd = [bld.env.BIN2C[0]]
IndexError: list index out of range
```

I'm building on an x86_64 MacBook running macOS 11.6.5.

Author: Trac Migrate 2022-05-04T23:40:40.000Z

Original author: ecp

Setting `BUILD_TESTS=True` avoids this error and successfully builds (but also builds the whole test suite).

Author: Trac Migrate 2022-05-05T06:14:12.000Z

Original author: ecp

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"4e449f49ac22925f07e5d706494ac0400fb3a17d/rtems" 4e449f49/rtems]:

```
build: Check for psxtests prerequisites

Close #4645.
```

Author: Amar Takhar 2024-04-25T20:49:53.715Z

changed the description

3.9.1.165 4642 - RSB: log.py tends to remove relevant error messages

Id	4642
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-04-12T14:03:02.000Z
Updated	2025-09-19T01:03:51.919Z
Milestone	6.1
Labels	old-indefinite, priority::low, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::6, version::7
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4642
Merges	0

Original author: frank_k

I sometime see (spontaneous) RSB build errors when building the tools. Fortunately, RSB provides error logs like this:

```
rtems/rsb-report-sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1.txt
```

Unfortunately, I can often not find the error message in the report. The reason is that the file `source-builder/sb/log.py` shortens the report to the last 400 lines in

```
148         if len(self.tail) > self.tail_size:
149             self.tail = self.tail[-self.tail_size:]
```

This is fine if the number of jobs is 1. If the number of jobs is greater one, the following tends to happen:

Assume the top level Makefile is called with `-j 2` and it makes one job to execute a sub-Makefile in `foo/Makefile` and concurrently the second job to execute another one: `bar/Makefile`. Now, assume the job in `foo/Makefile` runs into an error, prints the error and returns to the top Makefile. The top Makefile will then wait for the second job to finish `bar/Makefile`. This job will typically print thousands of lines into the log and succeed in its execution. The result is that the truncated log will not contain the error message but only final lines of the output of the successful job.

For example, I oft did see this log report:

```
make[8]: Entering directory '/home/minna/src/rtems-source-builder/rtems/build/
↪sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build/sparc-rtems6/
↪soft/leon/at697f/libstdc++-v3'
true "AR_FLAGS=rc" "CC_FOR_BUILD=gcc -O2 -g -pipe -I/home/minna/src/rtems-source-
↪builder/rtems/build/tmp/sb-1000/6/rtems-sparc/opt/rtems/6/include" "CC_FOR_
↪TARGET=/home/minna/src/rtems-source-builder/rtems/build/sparc-rtems6-gcc-
↪0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build/./gcc/xgcc -B/home/minna/src/
↪rtems-source-builder/rtems/build/sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-
↪linux-gnu-1/build/./gcc/" "CFLAGS=-g -O2  -msoft-float -mcpu=leon -mfix-at697f"
↪"CXXFLAGS=-g -O2  -msoft-float -mcpu=leon -mfix-at697f" "CFLAGS_FOR_BUILD=-g -O2
↪" "CFLAGS_FOR_TARGET=-g -O2" "INSTALL=/usr/bin/install -c" "INSTALL_DATA=/usr/
```

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```
↪bin/install -c -m 644" "INSTALL_PROGRAM=/usr/bin/install -c" "INSTALL_SCRIPT=/
↪usr/bin/install -c" "LDFLAGS=-msoft-float -mcpu=leon -mfix-at697f" "LIBCFLAGS=-
↪g -O2  -msoft-float -mcpu=leon -mfix-at697f" "LIBCFLAGS_FOR_TARGET=-g -O2"
↪"MAKE=make" "MAKEINFO=makeinfo --split-size=5000000 --split-size=5000000
↪" "SHELL=/bin/sh" "RUNTESTFLAGS=" "exec_prefix=/opt/rtems/6" "infodir=/opt/
↪rtems/6/share/info" "libdir=/opt/rtems/6/lib" "includedir=/opt/rtems/6/include"
↪"prefix=/opt/rtems/6" "tooldir=/opt/rtems/6/sparc-rtems6" "gxx_include_dir=/opt/
↪rtems/6/lib/gcc/sparc-rtems6/10.3.1/include/c++" "AR=sparc-rtems6-ar" "AS=/home/
↪minna/src/rtems-source-builder/rtems/build/sparc-rtems6-gcc-0f001dd-newlib-
↪64b2081-x86_64-linux-gnu-1/build/./gcc/as" "LD=/home/minna/src/rtems-source-
↪builder/rtems/build/sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/
↪build/./gcc/collect-ld" "RANLIB=sparc-rtems6-ranlib" "NM=/home/minna/src/rtems-
↪source-builder/rtems/build/sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-
↪gnu-1/build/./gcc/nm" "NM_FOR_BUILD=" "NM_FOR_TARGET=sparc-rtems6-nm" "DESTDIR=
↪" "WERROR=" DO=all multi-do # make
make[8]: Leaving directory '/home/minna/src/rtems-source-builder/rtems/build/
↪sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build/sparc-rtems6/
↪soft/leon/at697f/libstdc++-v3'
make[7]: Leaving directory '/home/minna/src/rtems-source-builder/rtems/build/
↪sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build/sparc-rtems6/
↪soft/leon/at697f/libstdc++-v3'
make[6]: Leaving directory '/home/minna/src/rtems-source-builder/rtems/build/
↪sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build/sparc-rtems6/
↪soft/leon/at697f/libstdc++-v3'
make[5]: Leaving directory '/home/minna/src/rtems-source-builder/rtems/build/
↪sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build/sparc-rtems6/
↪libstdc++-v3'
make[4]: Leaving directory '/home/minna/src/rtems-source-builder/rtems/build/
↪sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build/sparc-rtems6/
↪libstdc++-v3'
make[3]: Leaving directory '/home/minna/src/rtems-source-builder/rtems/build/
↪sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build/sparc-rtems6/
↪libstdc++-v3'
make[2]: Leaving directory '/home/minna/src/rtems-source-builder/rtems/build/
↪sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build/sparc-rtems6/
↪libstdc++-v3'
make[1]: Leaving directory '/home/minna/src/rtems-source-builder/rtems/build/
↪sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build'
make: *** [Makefile:965: all] Error 2
shell cmd failed: /bin/sh -ex  /home/minna/src/rtems-source-builder/rtems/build/
↪sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/do-build
error: building sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1minna@
```

When I managed to get the complete output, the real error was in line 881481 of 894625 (please, do not ask why this was build with Fortran – it turned out that I did build using command line options I did not intend to use):

```
/bin/sh ./libtool  --tag=CC   --mode=compile /home/minna/src/rtems-source-builder/
↪rtems/build/sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build/./
```

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```
↪gcc/xgcc -B/home/minna/src/rtems-source-builder/rtems/build/sparc-rtems6-gcc-
↪0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build/./gcc/ -nostdinc -B/home/minna/
↪src/rtems-source-builder/rtems/build/sparc-rtems6-gcc-0f001dd-newlib-64b2081-
↪x86_64-linux-gnu-1/build/sparc-rtems6/newlib/ -isystem /home/minna/src/rtems-
↪source-builder/rtems/build/sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-
↪gnu-1/build/sparc-rtems6/newlib/targ-include -isystem /home/minna/src/rtems-
↪source-builder/rtems/build/sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-
↪gnu-1/gnu-mirror-gcc-0f001dd/newlib/libc/include -B/usr/lib/rtems6/devtools-arm/
↪sparc-rtems6/bin/ -B/usr/lib/rtems6/devtools-arm/sparc-rtems6/lib/ -isystem /
↪usr/lib/rtems6/devtools-arm/sparc-rtems6/include -isystem /usr/lib/rtems6/
↪devtools-arm/sparc-rtems6/sys-include    -DHAVE_CONFIG_H -I. -I../../../gnu-
↪mirror-gcc-0f001dd/libgfortran  -iquote../../../gnu-mirror-gcc-0f001dd/
↪libgfortran/io -I../../../gnu-mirror-gcc-0f001dd/libgfortran/../gcc -I../../../
↪gnu-mirror-gcc-0f001dd/libgfortran/../gcc/config  -I../.././gcc -I../../../gnu-
↪mirror-gcc-0f001dd/libgfortran/../libgcc -I../libgcc -I../../../gnu-mirror-gcc-
↪0f001dd/libgfortran/../libbacktrace -I../libbacktrace -I../libbacktrace  -
↪std=gnu11 -Wall -Wstrict-prototypes -Wmissing-prototypes -Wold-style-definition␣
↪-Wextra -Wwrite-strings -Werror=implicit-function-declaration -Werror=vla  -fcx-
↪fortran-rules -ffunction-sections -fdata-sections   -g -O2 -MT pause.lo -MD -MP␣
↪-MF .deps/pause.Tpo -c -o pause.lo `test -f 'runtime/pause.c' || echo '../../../
↪gnu-mirror-gcc-0f001dd/libgfortran/'`runtime/pause.c
In file included from ../../../gnu-mirror-gcc-0f001dd/libgfortran/runtime/fpu.
↪c:29:
./fpu-target.h: In function 'set_fpu_trap_exceptions':
./fpu-target.h:90:3: error: implicit declaration of function 'feenableexcept';␣
↪did you mean 'feraiseexcept'? [-Werror=implicit-function-declaration]
90 |   feenableexcept (mode_set);
|   ^~~~~~~~~~~~~~
|   feraiseexcept
./fpu-target.h:91:3: error: implicit declaration of function 'fedisableexcept';␣
↪did you mean 'feraiseexcept'? [-Werror=implicit-function-declaration]
91 |   fedisableexcept (mode_clr);
|   ^~~~~~~~~~~~~~~
|   feraiseexcept
./fpu-target.h: In function 'get_fpu_trap_exceptions':
./fpu-target.h:98:20: error: implicit declaration of function 'fegetexcept'; did␣
↪you mean 'fetestexcept'? [-Werror=implicit-function-declaration]
98 |   int exceptions = fegetexcept ();
|                    ^~~~~~~~~~
|                    fetestexcept
libtool: compile:  /home/minna/src/rtems-source-builder/rtems/build/sparc-rtems6-
↪gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build/./gcc/xgcc -B/home/minna/
↪src/rtems-source-builder/rtems/build/sparc-rtems6-gcc-0f001dd-newlib-64b2081-
↪x86_64-linux-gnu-1/build/./gcc/ -nostdinc -B/home/minna/src/rtems-source-
↪builder/rtems/build/sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/
↪build/sparc-rtems6/newlib/ -isystem /home/minna/src/rtems-source-builder/rtems/
↪build/sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build/sparc-
↪rtems6/newlib/targ-include -isystem /home/minna/src/rtems-source-builder/rtems/
↪build/sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/gnu-mirror-gcc-
```

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```
↪0f001dd/newlib/libc/include -B/usr/lib/rtems6/devtools-arm/sparc-rtems6/bin/ -B/
↪usr/lib/rtems6/devtools-arm/sparc-rtems6/lib/ -isystem /usr/lib/rtems6/devtools-
↪arm/sparc-rtems6/include -isystem /usr/lib/rtems6/devtools-arm/sparc-rtems6/sys-
↪include -DHAVE_CONFIG_H -I. -I../../../gnu-mirror-gcc-0f001dd/libgfortran -
↪iquote../../../gnu-mirror-gcc-0f001dd/libgfortran/io -I../../../gnu-mirror-gcc-
↪0f001dd/libgfortran/../gcc -I../../../gnu-mirror-gcc-0f001dd/libgfortran/../gcc/
↪config -I../.././gcc -I../../../gnu-mirror-gcc-0f001dd/libgfortran/../libgcc -I.
↪./libgcc -I../../../gnu-mirror-gcc-0f001dd/libgfortran/../libbacktrace -I../
↪libbacktrace -I../libbacktrace -std=gnu11 -Wall -Wstrict-prototypes -Wmissing-
↪prototypes -Wold-style-definition -Wextra -Wwrite-strings -Werror=implicit-
↪function-declaration -Werror=vla -fcx-fortran-rules -ffunction-sections -fdata-
↪sections -g -O2 -MT pause.lo -MD -MP -MF .deps/pause.Tpo -c ../../../gnu-mirror-
↪gcc-0f001dd/libgfortran/runtime/pause.c -o pause.o
cc1: some warnings being treated as errors
make[5]: *** [Makefile:2809: fpu.lo] Error 1
make[5]: *** Waiting for unfinished jobs....
mv -f .deps/main.Tpo .deps/main.Plo
mv -f .deps/environ.Tpo .deps/environ.Plo
mv -f .deps/pause.Tpo .deps/pause.Plo
mv -f .deps/error.Tpo .deps/error.Plo
mv -f .deps/single.Tpo .deps/single.Plo
make[5]: Leaving directory '/home/minna/src/rtems-source-builder/rtems/build/
↪sparc-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1/build/sparc-rtems6/
↪libgfortran'
```

I would expect that the log/RSB report contains the actual error message by either somehow making sure the error containing piece is kept or the whole output is available. (I do not want to suggest a design decision on how this is solved the best way.)

For the records:

```
$ git -C rtems-source-builder/ rev-parse HEAD
49e3dac17765fa82ce2f754da839638ee352f95c
```

Build command:

```
$ cd rtems-source-builder/rtems && ../source-builder/sb-set-builder --rtems-
↪version 6 --prefix /usr/lib/rtems6/devtools-arm --with_ada --with_cxx --with_
↪fortran --with_objc --log /home/minna/src/sb-set-builder.log --trace --no-clean␣
↪--jobs=12 6/rtems-arm 6/rtems-sparc 6/rtems-powerpc 6/rtems-riscv
```

Build environment: _openSUSE Leap 15.3 **container_**

Author: Trac Migrate 2022-04-22T14:02:05.000Z

Original author: frank_k

There is an easy workaround:

When using the `--log <log-file>` option on the `sb-set-builder` command line, that log file contains all the output - including the lines not in the `rtems/`

`rsb-report-*.txt` file. What me confused is the message “See error report” below the error:

Error: building arm-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1 Build FAILED See error report: rsb-report-arm-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1.txt

This error report is shortened and may not contain the actual error message but it can be found in the log file mentioned above. Maybe changing the text to something link “See log or this error report” would prevent users like me from only looking into the error report.

Author: Chris Johns 2022-06-08T04:10:42.000Z

Original author: frank_k

It is not possible to teach the RSB all the error messages that exist so it can find them.

A few of solutions exist:

1. Increase the size of the log tail
2. Remove the log tail on error
3. Do nothing and close this ticket? (my preferred option)

Author: Trac Migrate 2022-06-08T09:24:15.000Z

Original author: frank_k

I opened this ticked because I wasted a lot of time looking into the error reports and not understanding that the real error is not shown there at all. With this ticket, I would like to prevent others to drop into the same pit I did fall in.

An error message like

`See error report: rsb-report-arm-rtems6-gcc-0f001dd-newlib-64b2081-x86_64-linux-gnu-1.txt`

strongly suggests that the error can be found in the report. This is the more confusing when the log close to the end contains something like `make: *** [Makefile:965: all] Error 2`. Yet, it turns out that when the number of jobs is greater than 1, the “real” error message appears so early that it is not in this report. (The real error message appears typically just before it says `make: [...] Error 1` - but this may depend on the used `make` tool).

1. “Increasing the log size” does not help as the errors appears a lot of lines before the output ends.
2. “Remove the log tail on error.” Keeping the whole log would help. Yet, these files are very very large and the current `log.py` implementation keeps everything in memory.
3. “Do nothing and close this ticket?” You can certainly close this ticks, as it is not a hard bug. Yet, many stupid users like me will end up looking uselessly

into the report, instead of identifying the error and providing a patch. But nonetheless, just closing this ticket is certainly valid.

As a forth solution I would suggest to print a different text or some text below (esp. when the “jobs > 1”), indicating that the error cause in some cases can only be spotted in the full log generated by the `-log <log-file>` option.

Author: Chris Johns 2022-06-09T01:21:16.000Z

Original author: frank_k

Yes the message can be wrong and it depends on the number of jobs and cores you have running and on the package being built. There are too many variables.

The log.py code does not keep the log in memory. Only the tail fragment is kept.

I think I will remove the log tail from the RSB and users can check the actual log. I can update the message to refer to the log.

Author: Chris Johns 2022-11-30T00:12:25.000Z

Original author: frank_k

- **Milestone** changed from %”6.1” to %”Indefinite”
- **Version** changed from ~”6” to ~”7”

Author: Trac Migrate 2023-01-20T11:00:41.000Z

Original author: frank_k

There was a discussion on the _devel at **rtems.org_** mailing list on this topic. The thread starts with _[PATCH 1/1] RSB: Mitigate too short error **reports_** Tue Dec 20 16:44:11 UTC 2022:

https://lists.rtems.org/pipermail/devel/2022-December/073973.html

and continues in January 2023:

https://lists.rtems.org/pipermail/devel/2023-January/074087.html

With the following results:

- It is not possible to change the error report so that it always contains the relevant error. The errors can come from too may different sources and tools.
- Nonetheless the error report should be kept as it proved often helpful.
- The message which is printed when an error report is produced should be changed in such a way that the reader is made aware of the problem that the relevant error can sometimes not be found in the error report but only in the full build log.

Author: Trac Migrate 2023-01-20T14:40:22.000Z

Original author: frank_k

- **Summary** changed from *RSB: log.py tends removes relevant error messages* to *RSB: log.py tends to remove relevant error messages*

Author: Trac Migrate 2023-01-23T10:46:25.000Z

Original author: frank_k

- **Owner** set to Frank Kühndel <frank.kuehndel@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"b3b53c524205def52b9daf04f1fbc209cdb2e709/rtems-source-builder" b3b53c52/rtems-source-builder]:

```
RSB: Mitigate too short error reports

Close #4642
```

Author: Amar Takhar 2025-09-05T02:57:53.007Z

changed the description

3.9.1.166 4625 - Cleanup of IMD and embedded brains File Headers

Id	4625
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-03-01T15:07:34.000Z
Updated	2025-09-19T01:03:48.399Z
Milestone	6.1
Labels	priority::low, resolution::fixed, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4625
Merges	0

Original author: Christian Mauderer

Due to the ticket #3053 a lot of outdated headers have been pointed out:

(1) Thomas Doerfler is now using an embedded-brains.de mail address.

(2) A number of embedded brains copyright notices include ground addresses. That is a violation of the published recommendation for file headers and copyright blocks as shown here:

https://docs.rtems.org/branches/master/eng/coding-file-hdr.html#copyright-and-license-block

If headers are touched during the cleanup work for #3053 these two points should be cleaned up.

Author: Trac Migrate 2022-03-10T08:06:59.000Z

Original author: Christian Mauderer

In [changeset:"5fbb477952f284c01ae313bb14f8880dac936c44/rtems" 5fbb4779/rtems]:

```
testsuites/.../*doc: Manual cleanup of embedded brains File Headers

There were not a lot of these and they did not match the patterns
of the C.

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:03.000Z

Original author: Christian Mauderer

In [changeset:"951fa14a1e25d2bb4e2fd4f150a0f00f6daae0bd/rtems" 951fa14/rtems]:

```
bsps/m68k/genmcf548x/README: Manual cleanup of embedded brains File␣
↪Headers

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:07.000Z

Original author: Christian Mauderer

In [changeset:"da7204301a7d713896329cf554d286a1f4678520/rtems" da72043/rtems]:

```
testsuites/fstests/fsdosfsname01/create_files.cs: Convert to UNIX CR/LF.

This file had a mix of both DOS and UNIX CR/LF.

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:10.000Z

Original author: Christian Mauderer

In [changeset:"78af9249f3b661176079b4d6e31920c547b940f7/rtems" 78af924/rtems]:

```
telnetd.c: Manual cleanup of embedded brains File Headers

This file's text looked different from others. Fixed by hand.

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:14.000Z

Original author: Christian Mauderer

In [changeset:"d83692252526d0ae48422ef7d7ce17229fda7056/rtems" d8369225/rtems]:

```
libmisc/serdbg: Manual header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:17.000Z

Original author: Christian Mauderer

In [changeset:"255fe433fdc66f108fdea3dc27ceea3d810bb7ca/rtems" 255fe43/rtems]:

```
cpukit/: Scripted embedded brains header file clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:21.000Z

Original author: Christian Mauderer

In [changeset:"8c6bf983ba03a4a678041e59d796be410c0839cc/rtems" 8c6bf98/rtems]:

```
m68k/gen68360/spi/m360_spi.c: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:25.000Z

Original author: Christian Mauderer

In [changeset:"3878b0107fc4ce8b670c490e422c614a322fa308/rtems" 3878b01/rtems]:

```
m68k/genmcf548x/README: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:28.000Z

Original author: Christian Mauderer

In [changeset:"9365dd7c46ad9d2740fa294e50ea834bffda71ca/rtems" 9365dd7/rtems]:

```
powerpc/mpc55xxevb: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:32.000Z

Original author: Christian Mauderer

In [changeset:"2ccb2fc5654db9c7ea2af477dc93409b85d7d2cb/rtems" 2ccb2fc/rtems]:

```
include/libchip/spi-flash-m25p40.h: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:35.000Z

Original author: Christian Mauderer

In [changeset:"100873796b1365704491dfc86c5093363e2b40d5/rtems" 1008737/rtems]:

```
bsps/include/libchip/disp_hcms29xx.h: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:39.000Z

Original author: Christian Mauderer

In [changeset:"e77f7260d74ceab43fae8598093816f6981486d0/rtems" e77f7260/rtems]:

```
bsps/include/libchip/spi-fram-fm25l256.h: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:42.000Z

Original author: Christian Mauderer

In [changeset:"3a17ee8e45c7a94d08cfc1ea969d95c3f594b13a/rtems" 3a17ee8/rtems]:

```
bsps/include/libchip/spi-memdrv.h: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:46.000Z

Original author: Christian Mauderer

In [changeset:"1ea6f50f2500d52470296af43467a2f335a66a2b/rtems" 1ea6f50f/rtems]:

```
bsps/lm32/include/bsp/irq.h: manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:49.000Z

Original author: Christian Mauderer

In [changeset:"9a60aa72a726d9647e9dde1f4b52b0d868f52e42/rtems" 9a60aa72/rtems]:

```
bsps/m68k/gen68360/spi/m360_spi.h: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:53.000Z

Original author: Christian Mauderer

In [changeset:"621ddfce9171cb4543866e63d85e840f1cfe9721/rtems" 621ddfce/rtems]:

```
m68k/genmcf548x: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:56.000Z

Original author: Christian Mauderer

In [changeset:"9a9442e85c4f99927a7cf53d6106f5064f7c66e2/rtems" 9a9442e8/rtems]:

```
m68k/genmcf548x/: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:07:59.000Z

Original author: Christian Mauderer

In [changeset:"7a9b2408019128f33ae7819c81404c1e99752b7c/rtems" 7a9b240/rtems]:

```
bsps/sparc: Scripted embedded brains header file clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:03.000Z

Original author: Christian Mauderer

In [changeset:"ba619b7f36d0cb059e5d3252eb84df6ddd02f163/rtems" ba619b7f/rtems]:

```
bsps/arm/: Scripted embedded brains header file clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:06.000Z

Original author: Christian Mauderer

In [changeset:"9bf813c5f189f32bb49fcb01f5e8613713dbd9d3/rtems" 9bf813c5/rtems]:

```
bsps/shared/: Scripted embedded brains header file clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:10.000Z

Original author: Christian Mauderer

In [changeset:"51e06729b11b2bb8f5fcb33abed070a91edaa0e3/rtems" 51e06729/rtems]:

```
bsps/sh/: Scripted embedded brains header file clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:13.000Z

Original author: Christian Mauderer

In [changeset:"e560ee85cf91e03568e668a610afa545f262417f/rtems" e560ee85/rtems]:

```
bsps/powerpc/: Scripted embedded brains header file clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:17.000Z

Original author: Christian Mauderer

In [changeset:"099dda2df5e5d3211e1e824ea8f4eb0609cefd28/rtems" 099dda2/rtems]:

```
bsps/m68k/: Scripted embedded brains header file clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:20.000Z

Original author: Christian Mauderer

In [changeset:"fe6d96cc851c1db612a8cc3714f07a57b12899e0/rtems" fe6d96c/rtems]:

```
bsps/include/: Scripted embedded brains header file clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:24.000Z

Original author: Christian Mauderer

In [changeset:"bbe71c611b8dac99f72bbaac5bf76416ce646ff6/rtems" bbe71c61/rtems]:

```
bsps/testsuites/: Scripted embedded brains header file clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:27.000Z

Original author: Christian Mauderer

In [changeset:"98e43e833b278118a5e9dfb7103288ddd2808b11/rtems" 98e43e83/rtems]:

```
bsps/m68k: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:31.000Z

Original author: Christian Mauderer

In [changeset:"4a85ce8d6ad7993b2731a3e569a3541a3368f2e6/rtems" 4a85ce8/rtems]:

```
bsps/shared: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:34.000Z

Original author: Christian Mauderer

In [changeset:"eeea4feecab4a7a5c576628f5a56536d63e58731/rtems" eeea4fee/rtems]:

```
bsps/powerpc/tqm8xx: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:38.000Z

Original author: Christian Mauderer

In [changeset:"a11e1219c41c3445f4410e26473516f2915de950/rtems" a11e1219/rtems]:

```
bsps/powerpc/gen83xx: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:41.000Z

Original author: Christian Mauderer

In [changeset:"6d4a72eb063fedb075e00cbc59100154e14c5dff/rtems" 6d4a72eb/rtems]:

```
bsps/powerpc: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:44.000Z

Original author: Christian Mauderer

In [changeset:"3fb2a815c7a8efaf3c77cb2592fe9d0d24d04a19/rtems" 3fb2a815/rtems]:

```
bsps/powerpc/gen5200: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:48.000Z

Original author: Christian Mauderer

In [changeset:"f0f6e88882c3bae294debceb4cd351cb75b3fe85/rtems" f0f6e888/rtems]:

```
bsps/powerpc: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:51.000Z

Original author: Christian Mauderer

In [changeset:"5028a9f6c45b0a9f3c6a2b43aab65657f3d57788/rtems" 5028a9f/rtems]:

```
testsuites: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:55.000Z

Original author: Christian Mauderer

In [changeset:"52a8cc97efa9922505829c19bb501e7c5c779015/rtems" 52a8cc9/rtems]:

```
bsps/powerpc/gen5200: Manual file header clean up

This cleans some of the more complex headers including IPR.

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:08:58.000Z

Original author: Christian Mauderer

In [changeset:"d7955b245e1cc4e890a08a422807e6131fafe123/rtems" d7955b2/rtems]:

```
bsps and cpukit: Manual file header clean up

Updates #4625.
```

Author: Trac Migrate 2022-03-10T08:09:02.000Z

Original author: Christian Mauderer

In [changeset:"c39c12b97f430c432ad65f441c88e99b7625c18f/rtems" c39c12b/rtems]:

```
bsps/powerpc/gen83xx/start/cpuinit.c: Manual Header clean up

There is not really anything left from the referenced cpuinit.c file
from MPC8260ads CPU initialization. So ignore that part of the header
during rework.

Update #4625.
```

Author: Trac Migrate 2022-03-10T08:09:05.000Z

Original author: Christian Mauderer

In [changeset:"4f9db3fae69687f4f3bdbc0a67217ac0c78491ca/rtems" 4f9db3f/rtems]:

```
bsps/powerpc/gen5200: Manual Header clean up

Update #4625.
```

Author: Trac Migrate 2022-03-10T08:09:09.000Z

Original author: Christian Mauderer

In [changeset:"bb2e149e0b8bf1ceca61210e0028750a6cdfe17c/rtems" bb2e149e/rtems]:

```
cpukit: Automated IMD header file clean up

Use the same form of IMD in all copyright lines

Update #4625.
```

Author: Trac Migrate 2022-03-10T08:09:12.000Z

Original author: Christian Mauderer

In [changeset:"3293a21c73b8bb6a59c6c2d87ee98964d60c3142/rtems" 3293a21/rtems]:

```
bsps: Automated IMD header file clean up

Use the same form of IMD in all copyright lines

Update #4625.
```

Author: Trac Migrate 2022-03-10T08:09:16.000Z

Original author: Christian Mauderer

In [changeset:"947c66456ce3eaf5b39556421e71e92865b9a719/rtems" 947c6645/rtems]:

```
bsps/m68k: Restore license file

Quite some files in the bsps/m68k/genmcf548x mention a
Freescale_license.txt file. The file has been accidentally removed
during the source reorganization in 2018. This commit restores it and
moves it to the right location for licenses.

Update #4625.
```

Author: Trac Migrate 2022-03-10T13:43:58.000Z

Original author: Christian Mauderer

In [changeset:"817ee563275c4564cf5ad33b7ffc97c93233f55e/rtems" 817ee56/rtems]:

```
bsps/.../disp_hcms29xx.h: Fix comment block

Update #4625
```

Author: Trac Migrate 2022-03-10T13:45:05.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

The headers should be cleaned up now (except if I missed one).

Author: Chris Johns 2025-09-19T01:03:48.514Z

changed the description

3.9.1.167 4621 - libbsd/ipsec: ipsec-tools allocate big buffers

Id	4621
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-02-24T09:10:50.000Z
Updated	2025-09-19T01:03:48.180Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4621
Merges	0

Original author: Christian Mauderer

By default, pfkey allocates a 2MB buffer that is used for SPD entries. This size is a good choice for a server system where a lot of clients should be handled. But on our embedded systems, an application with that much clients is unlikely and 2MB is a lot of space.

Author: Trac Migrate 2022-02-24T09:11:57.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"0b30f38951d5f6291e9691ce8eb51a14242e26be/rtems-libbsd" 0b30f38/rtems-libbsd]:

```
ipsec-tools: Reduce allocated buffer size

By default, pfkey allocates a 2MB buffer that is used for SPD entries.
This size is a good choice for a server system where a lot of clients
should be handled. But on our embedded systems, an application with that
```

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```
much clients is unlikely and 2MB is a lot of space. So reduce that to
the default value of 128kB which should be enough for a small number of
ipsec connections.

See https://bugzilla.redhat.com/show_bug.cgi?id=607361 for more details
why the upstream project originally increased the size.

If someone really needs a bigger size, there is a option in the
configuration file of pfkey called `pfkey_buffer` that can overwrite
this value.

Closes #4621
```

Author: Trac Migrate 2022-02-24T09:13:02.000Z

Original author: Christian Mauderer

In [changeset:"330f65f987c312c74ee473de1acd250bf0ca1dcb/rtems-libbsd" 330f65f9/rtems-libbsd]:

```
ipsec-tools: Reduce allocated buffer size

By default, pfkey allocates a 2MB buffer that is used for SPD entries.
This size is a good choice for a server system where a lot of clients
should be handled. But on our embedded systems, an application with that
much clients is unlikely and 2MB is a lot of space. So reduce that to
the default value of 128kB which should be enough for a small number of
ipsec connections.

See https://bugzilla.redhat.com/show_bug.cgi?id=607361 for more details
why the upstream project originally increased the size.

If someone really needs a bigger size, there is a option in the
configuration file of pfkey called `pfkey_buffer` that can overwrite
this value.

Closes #4621
```

Author: Chris Johns 2025-09-19T01:03:48.252Z

changed the description

3.9.1.168 4610 - BSP/atsam: UART driver sends data with a small gap

Id	4610
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-02-11T07:53:25.000Z
Updated	2025-09-19T01:03:47.608Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4610
Merges	0

Original author: Christian Mauderer

The ATSAM UART waits for data to be completely send before queuing the next character. Due to that there is a small gap between two characters. This is only notable if the UART is 100% busy. For example if received data should be echoed back at maximum data rate the software buffer fills till it is full and then starts to loose characters.

Author: Trac Migrate 2022-02-15T13:39:53.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"cff16379c9650324e1a320d0931892e220f8f55a/rtems" cff16379/rtems]:

```
bsp/atsam: Improve UART / USART tx performance

Put the next character into the send buffer if the buffer is empty and
not when the last character has been sent out to the line. This improves
the performance slightly.

Before that patch, the receive path was faster than the transmit path.
Therefore a simple echo could drop characters on a busy connection.
With this patch sending and receiving has about the same performance so
that no characters are lost.

Fixes #4610
```

Author: Chris Johns 2025-09-19T01:03:47.684Z

changed the description

Author: Chris Johns 2025-09-19T01:03:48.064Z

mentioned in issue #4611

3.9.1.169 4592 - BSP/Atsam: I2C driver doesn't return errors on NACK

Id	4592
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-02-08T09:50:19.000Z
Updated	2025-09-19T01:03:46.451Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4592
Merges	0

Original author: Christian Mauderer

Cloned from #4591:

At the moment the I2C driver of the ATSAM doesn't return an error if a message is not acknowledged by the I2C device. The expected behavior would be to return a EIO.

Author: Trac Migrate 2022-02-08T09:56:41.000Z

Original author: Christian Mauderer

- **Summary** changed from *BSP/Atsam: I2C driver doesn't return errors on NACK (cloned)* to *BSP/Atsam: I2C driver doesn't return errors on NACK*

Author: Trac Migrate 2022-02-08T09:57:02.000Z

Original author: Christian Mauderer

- **Owner** set to Christian Mauderer
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2022-02-11T07:37:31.000Z

Original author: Christian Mauderer

In [changeset:"974d24f8a8018308a1ac202286e486fda2fd8a83/rtems" 974d24f8/rtems]:

```
bsp/atsam/i2c: Simplify driver

Do some clean ups. Remove superfluous variables. Eliminate some overly
complex logic (information about transfer and remaining bytes has been
```

(continues on next page)

(continued from previous page)

```
tracked redundantly in multiple variables).

This patch doesn't change the behavior of the driver.

Update #4592
```

Author: Trac Migrate 2022-02-11T07:37:34.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"0074c9ecf3fafcceaf8a84d60304153cec7eed68/rtems" 0074c9ec/rtems]:

```
bsp/atsam/i2c: Add error return and fix edge cases

The driver didn't return with an error on (for example) a NACK on the
bus. This adds the expected error return. Due to the new case that a
transfer can be interrupted on an error, there were some new edge cases.
This patch therefore also fixes these edge cases by removing the
transfer_state that more or less duplicated the interrupt states.

Fixes #4592
```

Author: Chris Johns 2025-09-19T01:03:46.723Z

changed the description

3.9.1.170 3910 - Add BSP for STM32H7

Id	3910
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-03-19T08:31:22.000Z
Updated	2025-09-19T01:03:46.060Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::project, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3910
Merges	0

Original author: sebastian.huber

Add a BSP for the STM32H7 series. Import the HAL from https://github.com/STMicroelectronics/stm32h7xx_hal_driver. Add a VERSION file to allow future updates sim-

ilar to https://git.rtems.org/rtems/tree/cpukit/dtc/VERSION. Add standard clock and console drivers.

Author: Trac Migrate 2020-04-02T09:14:25.000Z

Original author: sebastian.huber

In [changeset:"2c7cd341a038776843f4f29ccde7b3dc3d2b15a7/rtems-docs" 2c7cd34/rtems-docs]:

```
eng: Add documentation guidelines

Start with templates for the application configuration options.

Remove "Format to be followed for making changes in this file" from
c-user.

Update #3910.
```

Author: Trac Migrate 2020-10-20T15:29:55.000Z

Original author: sebastian.huber

Hi Sebastian, I was keen to use RTEMS on an STM32H7xx board and thought I would reach out and see how the effort was going. I'm not much of a C/C++ dev unfortunately but if there is anything I can do to assist please let me know.

Cheers,

Mick

Author: Trac Migrate 2020-10-21T05:59:34.000Z

Original author: sebastian.huber

In [changeset:"3fccdc956c298a3f8942e83f3c933ade447e3c16/rtems" 3fccdc95/rtems]:

```
bsps/arm: Add support for MPU region alignment

Update #3910.
```

Author: Trac Migrate 2020-10-27T05:14:39.000Z

Original author: sebastian.huber

In [changeset:"2131228f793fafda7bc05e22d2167985502b046d/rtems" 2131228/rtems]:

```
bsp/stm32h7: Import from STM32CubeMX-5.6.0

Update #3910.
```

Author: Trac Migrate 2020-10-27T05:14:43.000Z

Original author: sebastian.huber

In [changeset:"2cfcd005e9e4a14ccda6ab4bcd5f2466762cf86d/rtems" 2cfcd00/rtems]:

```
bsp/stm32h7: Constify some functions

Update #3910.
```

Author: Trac Migrate 2020-10-27T05:14:46.000Z

Original author: sebastian.huber

In [changeset:"2f157e20073d11364a3e3811328d8657e04d8788/rtems" 2f157e2/rtems]:

```
bsp/stm32h7: Move <math.h> include

This is necessary for libbsd compatibility.

Update #3910.
```

Author: Trac Migrate 2020-10-27T05:14:49.000Z

Original author: sebastian.huber

In [changeset:"abb78587b6d1be08697810cdae31cd2dbe35ee4a/rtems" abb7858/rtems]:

```
bsp/stm32h7: Enable LL drivers

Update #3910.
```

Author: Trac Migrate 2020-10-27T05:14:53.000Z

Original author: sebastian.huber

In [changeset:"e4ba06f8b49da4334543f713ba437263c794d7ee/rtems" e4ba06f/rtems]:

```
bsp/stm32h7: Disable unused functions

Update #3910.
```

Author: Trac Migrate 2020-10-27T05:14:56.000Z

Original author: sebastian.huber

In [changeset:"c44e404888bb99c1b3ff3052907c9df012d80fb9/rtems" c44e404/rtems]:

```
bsp/stm32h7: Fix warnings

Update #3910.
```

Author: Trac Migrate 2020-10-27T05:14:59.000Z

Original author: sebastian.huber

In [changeset:"99494370d6124ef5d773119fa59f5bac4bbf395f/rtems" 99494370/rtems]:

```
bsp/stm32h7: New BSP

Update #3910.
```

Author: Trac Migrate 2020-10-27T06:51:45.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"8fe0da219826116b22fae50a7a8991736118b6f7/rtems-docs" 8fe0da2/rtems-docs]:

```
user: Add arm/stm32h7

Close #3910.
```

Author: Trac Migrate 2020-11-26T07:37:19.000Z

Original author: sebastian.huber

In [changeset:"fe58f6ce4bf1ff5e92d64b9fee0cb46b6ac06e64/rtems" fe58f6ce/rtems]:

```
bsp/stm32h7: Add and use BSP Doxygen group

Update #3910.
```

Author: Trac Migrate 2023-07-31T16:11:55.000Z

Original author: sebastian.huber

In [changeset:"4b3d7993d2cebf0596066d99f2475017064723c0/rtems" 4b3d799/rtems]:

```
bsp/stm32h7: Disable unused functions

Re-apply based on:

commit e4ba06f8b49da4334543f713ba437263c794d7ee
Author: Sebastian Huber <sebastian.huber@embedded-brains.de>
Date:   Thu Apr 2 08:28:56 2020 +0200

bsp/stm32h7: Disable unused functions

Update #3910.
```

Author: Trac Migrate 2023-07-31T16:11:57.000Z

Original author: sebastian.huber

In [changeset:"ed358507a3ef5ed2d894dfaf8d0b9a885e649604/rtems" ed35850/rtems]:

```
bsp/stm32h7: Enable LL drivers

Re-apply based on:

commit abb78587b6d1be08697810cdae31cd2dbe35ee4a
Author: Sebastian Huber <sebastian.huber@embedded-brains.de>
Date:   Wed Apr 1 11:11:59 2020 +0200

bsp/stm32h7: Enable LL drivers

Update #3910.
```

Author: Trac Migrate 2023-07-31T16:12:06.000Z

Original author: sebastian.huber

In [changeset:"ba8ac65929f9e82892d44779a3c37d4cfea14ec7/rtems" ba8ac65/rtems]:

```
bsp/stm32h7: Add and use BSP Doxygen group

Inspired by:

commit fe58f6ce4bf1ff5e92d64b9fee0cb46b6ac06e64
Author: Sebastian Huber <sebastian.huber@embedded-brains.de>
Date:   Thu Nov 26 08:13:52 2020 +0100

bsp/stm32h7: Add and use BSP Doxygen group

Update #3910.
```

Author: Trac Migrate 2023-07-31T16:12:08.000Z

Original author: sebastian.huber

In [changeset:"f08f75f0bdc8e482e10625938a7000d43f97ad51/rtems" f08f75f/rtems]:

```
bsps/stm32h7: fix compilation issue after HAL update

Based on:

commit 99494370d6124ef5d773119fa59f5bac4bbf395f
Author: Sebastian Huber <sebastian.huber@embedded-brains.de>
Date:   Wed Mar 4 12:34:34 2020 +0100

bsp/stm32h7: New BSP

Update #3910.
```

Author: Chris Johns 2025-09-19T01:03:45.980Z

mentioned in issue #4580

3.9.1.171 4580 - Update BSP for STM32H7

Id	4580
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-01-15T00:47:50.000Z
Updated	2025-09-19T01:03:45.597Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4580
Merges	0

Original author: kgardas

It looks like after STM32H7 BSP was added STM added few more members to the stm32h7 chip family. So code addition tracked by #3910 is now a bit incomplete and it would be great to grab what was grabbed in the past and merge again since both projects https://github.com/STMicroelectronics/stm32h7xx_hal_driver and https://github.com/STMicroelectronics/STM32CubeH7 are up to date with latest hardware offerings from STM. Anyway, when I tried to do merge myself I've found several things which may be considered difficult for merge: (1) both projects seems to switch t o Unix line endings while original bsp submission kept original (of that time) DOS line endings. (2) STM changed license note in the code itself:

```
-  @endverbatim
-  ******************************************************************************
-  * @attention
-  *
-  * <h2><center>&copy; Copyright (c) 2017 STMicroelectronics.
-  * All rights reserved.</center></h2>
-  *
-  * This software component is licensed by ST under BSD 3-Clause license,
-  * the "License"; You may not use this file except in compliance with the
-  * License. You may obtain a copy of the License at:
-  *                        opensource.org/licenses/BSD-3-Clause
-  *
-  ******************************************************************************
-  */
-
+  ******************************************************************************
+  * @attention
+  *
+  * Copyright (c) 2017 STMicroelectronics.
+  * All rights reserved.
+  *
+  * This software is licensed under terms that can be found in the LICENSE file
+  * in the root directory of this software component.
+  * If no LICENSE file comes with this software, it is provided AS-IS.
+  *
```

Anyway, the new code adds support for following chips:

```
bsps/arm/stm32h7/include/stm32h723xx.h
bsps/arm/stm32h7/include/stm32h725xx.h
bsps/arm/stm32h7/include/stm32h730xx.h
bsps/arm/stm32h7/include/stm32h730xxq.h
bsps/arm/stm32h7/include/stm32h733xx.h
bsps/arm/stm32h7/include/stm32h735xx.h
bsps/arm/stm32h7/include/stm32h745xg.h
bsps/arm/stm32h7/include/stm32h747xg.h
```

and also for Cordic and FMAC features whatever that means.

Author: Trac Migrate 2022-01-15T00:51:37.000Z

Original author: kgardas

I've found out that using `git diff -b` may help with (1) problem to review update changes ignoring line ends changes. Still the diff itself is about 117k lines of code so quite heavy to push thorough email I would guess.

Author: Trac Migrate 2022-02-06T22:13:47.000Z

Original author: kgardas

As per Sebastian request here: https://lists.rtems.org/pipermail/devel/2022-January/070320.html – I've updated HAL and reapplied necessary patches (those removed by files update) and fixed possible rejects by hand except the patch:

```
commit fe58f6ce4bf1ff5e92d64b9fee0cb46b6ac06e64
Author: Sebastian Huber <sebastian.huber@embedded-brains.de>
Date:   Thu Nov 26 08:13:52 2020 +0100

bsp/stm32h7: Add and use BSP Doxygen group

Update #3910.
```

on which I've started working on solving rejects just to notice after several files that even if I add all necessary groups, then still there are more added by HAL update and the tree will still not be complete with the change. Hence I left it without the patch completely in an idea that embedded-brains probably do have some script which updates those docygen directives.

Anyway, update hal project is here: https://github.com/kgardas/rtems – and the branch is `` stm32h7-hal-update ``

Sebastian, I hope you don't mind if I reassign to you now for review. Thanks!

Author: Trac Migrate 2022-02-06T22:14:29.000Z

Original author: kgardas

- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2022-02-07T06:24:39.000Z

Original author: kgardas

Thanks for the update, I am very busy this week. Reviewing the patches needs a bit of time. Please ping me if you don't get feedback by mid of next week.

The license text in the in the ticket is an issue. Please make sure the LICENSE file is included in the branch in "the root directory of this software component". If the root directory is not clear, then this needs to be discussed on the mailing list. If it is a standard license, then an SPDX License Identifier should be added to the files.

Author: Trac Migrate 2022-02-07T20:56:58.000Z

Original author: kgardas

My proposed LICENSE file for the bsps/arm/stm32h7 subdirectory is:

```
Files in this subdirectory which are copyrighted by STMicroelectronics
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license. The license in use depends on the origin of the particular
file in question. Files here come from two projects:

stm32h7xx_hal_driver located on:
https://github.com/STMicroelectronics/stm32h7xx_hal_driver.git

STM32CubeH7 located on:
https://github.com/STMicroelectronics/STM32CubeH7.git

Files coming from STM32CubeH7 project which are listed in
explicit list below are provided with Apache License 2.0.

Apache License 2.0 file list:

stm32h723xx.h
stm32h725xx.h
stm32h730xx.h
stm32h730xxq.h
stm32h733xx.h
stm32h735xx.h
stm32h742xx.h
stm32h743xx.h
stm32h745xg.h
stm32h745xx.h
stm32h747xg.h
stm32h747xx.h
stm32h750xx.h
stm32h753xx.h
stm32h755xx.h
stm32h757xx.h
stm32h7a3xx.h
stm32h7a3xxq.h
stm32h7b0xx.h
stm32h7b0xxq.h
stm32h7b3xx.h
stm32h7b3xxq.h
stm32h7xx.h
system_stm32h7xx.h
system_stm32h7xx.c


All other files here copyrighted by STMicroelectronics come from
```

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```
stm32h7xx_hal_driver project and are provided with BSD-3-Clause
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↪AND ON
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↪OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
```

I'll try to draw Joel's or Gedare attention to this to get some wording fixes and review of it.

Author: Trac Migrate 2022-02-07T21:51:00.000Z

Original author: kgardas

Sebastian, I've created LICENSE in bsps/arm/stm32h7 with the content above reviewed by Joel. It's already in the branch on github.com waiting for your next week review.

Author: Trac Migrate	2023-08-06T09:53:35.000Z

Original author: kgardas

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

This is duplicate and fixed as part of #4934.

Author: Chris Johns	2025-09-19T01:03:45.773Z

changed the description

3.9.1.172 4578 - arm/atsamv: UART loses receive characters when the system has a high interrupt load (cloned)

Id	4578
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-01-13T07:22:57.000Z
Updated	2025-09-19T01:03:45.278Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4578
Merges	0

Original author: Christian Mauderer

Cloned from #4577:

The UART/USART of the ATSAM doesn't have any FIFO buffer. Therefore every received character has to be processed before the next one arrives. In situations with a high interrupt load or during long interrupt locks, this might not work reliable and the UART/USART can loose characters.

Author: Trac Migrate	2022-01-18T08:10:47.000Z

Original author: Christian Mauderer

In [changeset:"fbd18c09af38eadb16c07e11d4aa84b74afc2142/rtems" fbd18c0/rtems]:

```
bsp/atsam: Merge USART and UART driver

If no extended features of the USART are used and if the comparison
feature of the UART is not used, the two modules are compatible. The
drivers were nearly identical except for some names of the defines.

This patch merges the two drivers into one.

Update #4578
```

Author: Trac Migrate 2022-01-18T08:10:52.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"aa95122c17707d6eaadcbdae71aad33446fcf66c/rtems" aa95122/rtems]:

```
bsp/atsam: Optionally use DMA for UART Rx

If the system is busy with other interrupts and the UART is set to a
fast baud rate, it's possible to loose UART interrupts and therefore
characters. This allows to optionally enable a DMA for the UARTs so that
a number of lost interrupts can be tolerated.

The number of DMAs on this chip is limited and not not all applications
need that feature. Therefore the DMA is disabled by default.

Close #4578
```

Author: Chris Johns 2025-09-19T01:03:45.364Z

changed the description

3.9.1.173 4574 - Unable to setup rtems in (arm-apple) m1 Mac mini.

Id	4574
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-12-26T11:42:25.000Z
Updated	2025-09-19T01:03:44.992Z
Milestone	6.1
Labels	arch:arm, priority::high, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4574
Merges	0

Original author: hypersyd

I could setup rtems on two of my linux laptops but I am not able to do it on my m1 Mac mini its getting an invalid config error probably some kind of version mismatch is happening. The error - Invalid configuration ``arm64-apple-darwin21.2.0': machine ``arm64-apple' not recognized

Author: Trac Migrate 2023-08-02T09:14:26.000Z

Original author: hypersyd

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Hi, I tested fresh RSB and compiled 6/rtems-arm on mini M1 with macOS 13.4.1:

```
reporting: tools/rtems-tools-6.cfg -> rtems-tools-
↪eaf14a654b528b44de14f9da9919555e54324e0d-1.txt
reporting: tools/rtems-tools-6.cfg -> rtems-tools-
↪eaf14a654b528b44de14f9da9919555e54324e0d-1.xml
staging: dtc-1.6.1-arm64-apple-darwin22.5.0-1 -> /Users/karel/git/rtems-
↪source-builder-ref/rtems/build/tmp/sb-502-staging
staging: expat-2.5.0-arm64-apple-darwin22.5.0-1 -> /Users/karel/git/
↪rtems-source-builder-ref/rtems/build/tmp/sb-502-staging
staging: gmp-6.2.1-arm64-apple-darwin22.5.0-1 -> /Users/karel/git/rtems-
↪source-builder-ref/rtems/build/tmp/sb-502-staging
staging: arm-rtems6-gdb-13.2-arm64-apple-darwin22.5.0-1 -> /Users/karel/
↪git/rtems-source-builder-ref/rtems/build/tmp/sb-502-staging
staging: arm-rtems6-binutils-2.39-arm64-apple-darwin22.5.0-1 -> /Users/
↪karel/git/rtems-source-builder-ref/rtems/build/tmp/sb-502-staging
staging: arm-rtems6-gcc-506cb58-newlib-a021448-arm64-apple-darwin22.5.0-
↪1 -> /Users/karel/git/rtems-source-builder-ref/rtems/build/tmp/sb-502-
↪staging
staging: rtems-tools-eaf14a654b528b44de14f9da9919555e54324e0d-1 -> /
↪Users/karel/git/rtems-source-builder-ref/rtems/build/tmp/sb-502-
↪staging
cleaning: dtc-1.6.1-arm64-apple-darwin22.5.0-1
```

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```
cleaning: expat-2.5.0-arm64-apple-darwin22.5.0-1
cleaning: gmp-6.2.1-arm64-apple-darwin22.5.0-1
cleaning: arm-rtems6-gdb-13.2-arm64-apple-darwin22.5.0-1
cleaning: arm-rtems6-binutils-2.39-arm64-apple-darwin22.5.0-1
cleaning: arm-rtems6-gcc-506cb58-newlib-a021448-arm64-apple-darwin22.5.
↪0-1
cleaning: rtems-tools-eaf14a654b528b44de14f9da9919555e54324e0d-1
Build Sizes: usage: 6.765GB total: 2.636GB (sources: 1.537GB, patches:␣
↪591.836KB, installed 1.099GB)
Build Set: Time 0:27:21.048826
installing: 6/rtems-arm -> /opt/precidata/rtems/6.testing-issue4574
clean staging: 6/rtems-arm
Staging Size: 1.098GB
Build Set: Time 0:27:21.890986
```

although not shown here, I use those tools to build several ARM based RTEMS BSPs without any troubles on macOS.

as the ticket is quite old and we spent quite some time making sure macOS is well supported in '22 and '23 I guess the ticket is already outdated and should be closed.

If this is not the case, please reopen again and provide more information so we can duplicate your issue. Thanks!

Author: Amar Takhar 2024-04-25T20:49:28.572Z

changed the description

3.9.1.174 4568 - untar: problems with existing directories

Id	4568
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-12-09T07:16:26.000Z
Updated	2025-09-19T01:03:44.880Z
Milestone	6.1
Labels	library, old-indefinite, priority::normal, resolution::fixed, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4568
Merges	0

Original author: Christian Mauderer

Cloned from #4552:

Our current implementation of untar in cpukit/libmisc/untar/untar.c has problems if a directory in the archive already exists. Note that this is no problem, if the archive contains only a file.

The problem exists on 5 and master.

Example: If I have a tar.gz file which contains a file and directories l1/l2/x.txt and call Untar_FromGzChunk_Print twice, the first attempt will print

```
untar: dir: l1
untar: dir: l1/l2
untar: file: l1/l2/x.txt (s:12,m:0644)
```

After that the directories l1 already exists. So if I re-try to extract the archive, I'll get the following:

```
untar: dir: l1
untar: mkdir: l1: (17) File exists
```

My expectation would have been that the files are just integrated into an existing directory structure. If a file exists, it should be overwritten.

We have multiple references for expected behavior. GNU or BSD `tar` or POSIX `pax`. In my experience `tar` is the better known tool so my suggestion would be to use the default behavior of `tar` as a reference.

GNU or BSD *tar*

I tested the default behavior of GNU `tar` and BSD `tar`. It seems to be the same for both:

- If a directory structure exists, the files from the archive will be integrated. Existing files are overwritten.
- If a file exists and the archive contains a directory with the same name, the file is removed and a directory is created. In the above example: if `l1/l2` is a file it will be overwritten with a new directory.
- If a directory exists and the archive contains a file with the same name, the directory will be replaced if it is empty. If it contains files, the result is an error.
- An archive also can contain only a file without the parent directories. If in that case one of the parent directories exists as a file extracting the archive results in an error. In the example: if `l1/l2` is a file and the archive doesn't contain the directories but only the file `l1/l2/x.txt` that would be an error.

In case of an error, it is possible that the archive has been partially extracted.

Note: GNU `tar` has options to change the behavior (like –recursive-unlink). I'm sure there are similar options in BSD `tar`. From my point of view we should adapt to the default behavior, so I ignored these options.

The POSIX *pax* utility

https://pubs.opengroup.org/onlinepubs/9699919799/utilities/pax.html

Default behavior is described as follows:

If an attempt is made to extract a directory when the directory already exists, this shall not be considered an error. If an attempt is made to extract a FIFO when the FIFO already exists, this shall not be considered an error.

From some quick tests pax has a similar behavior like `tar`. The only difference I noted is that empty directories are not overwritten with files from the archive.

Author: Trac Migrate 2021-12-09T07:19:46.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"ffc57e3cf33ec0e2cc51ce214cedc24f390a7ea5/rtems" ffc57e3/rtems]:

```
untar: Make behavior similar to GNU or BSD tar

RTEMS untar implementation had problems with overwriting or integrating
archives into existing directory structures. This patch adapts the
behavior to mimic that of a GNU tar or BSD tar and extends the tar01
test to check for the behavior. That is:

* If a directory structure exists, the files from the archive will be
integrated. Existing files are overwritten.

* If a file exists and the archive contains a directory with the same
name, the file is removed and a directory is created. In the above
example: if l1/l2 is a file it will be overwritten with a new
directory.

* If a directory exists and the archive contains a file with the same
name, the directory will be replaced if it is empty. If it contains
files, the result is an error.

* An archive also can contain only a file without the parent
directories. If in that case one of the parent directories exists as a
file extracting the archive results in an error. In the example: if
l1/l2 is a file and the archive doesn't contain the directories but
only the file l1/l2/x.txt that would be an error.

* In case of an error, it is possible that the archive has been
partially extracted.

Closes #4568
```

Author: Amar Takhar 2025-09-05T02:57:51.485Z

changed the description

3.9.1.175 4540 - Healthcare Mailing Lists

Id	4540
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-10-29T17:08:30.000Z
Updated	2025-09-19T01:03:44.587Z
Milestone	6.1
Labels	priority::normal, resolution::invalid, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4540
Merges	0

Original author: fountmedia

Removed all links as spam.

Author: Joel Sherrill 2021-10-29T17:12:30.000Z

Original author: fountmedia

- **Description** changed

```
+ Removed all links as spam.
-
-                                [[Mailing Lists](https://www.fountmedia.
↪com/healthcare-mailing-lists/|Healthcare)] with a Privacy Guarantee.␣
↪We provide an extensive array of segments including HCP, Pharmacy,␣
↪Mental Health, Home Healthcare, Physicians, and more. Our healthcare␣
↪mailing lists are segmented by type of service provider and payor␣
↪which will increase the effectiveness of your mail campaign.
- Address: Monmouth Junction NJ (New Jersey) 08852US (United States)
- Contact us:sales@fountmedia.com
- Contact No: 7327039915
- Website -  [[https://www.fountmedia.com/|FountMedia]]
```

- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*

Author: Chris Johns 2025-09-19T01:03:44.644Z

changed the description

3.9.1.176 4526 - pthread_cond_wait() causes an INTERNAL_ERROR_BAD_THREAD_DISPATCH_DISABLE_LEVEL

Id	4526
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-10-08T21:00:00.000Z
Updated	2025-09-19T01:03:43.178Z
Milestone	6.1
Labels	api::posix, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4526
Merges	0

Original author: bernardi

Calling `pthread_cond_wait()` with a mutex using the priority ceiling protocol causes the kernel to terminate with an `INTERNAL_ERROR_BAD_THREAD_DISPATCH_DISABLE_LEVEL` fatal code.

The following C program reproduces the error with the latest Git master checkout (f6385b4edc5d0cc6626783c7920c521622796b4b) on AArch64:

```
#include <pthread.h>

void *
POSIX_Init (void *argument)
{
pthread_mutex_t mutex;
pthread_mutexattr_t mutex_attr;
pthread_cond_t cond;

pthread_mutexattr_init (&mutex_attr);
pthread_mutexattr_setprotocol (&mutex_attr, PTHREAD_PRIO_PROTECT);
pthread_mutex_init (&mutex, &mutex_attr);
pthread_cond_init (&cond, NULL);
pthread_mutex_lock (&mutex);
pthread_cond_wait (&cond, &mutex);

return 0;
}

/* configuration */

#define CONFIGURE_APPLICATION_NEEDS_CLOCK_DRIVER
#define CONFIGURE_POSIX_INIT_THREAD_TABLE
#define CONFIGURE_UNLIMITED_OBJECTS
#define CONFIGURE_UNIFIED_WORK_AREAS
#define CONFIGURE_INIT

```

(continues on next page)

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```
#include <rtems/confdefs.h>
```

A debugging session shows that _Thread_Dispatch_disable_critical is called twice within _Thread_queue_Enqueue:

```
Thread 1 hit Breakpoint 2, _Thread_Dispatch_disable_with_CPU () at src/kernel/
↪cpukit/include/rtems/score/threaddispatch.h:171
4: cpu_self->thread_dispatch_disable_level = 0
++bt
#0  _Thread_Dispatch_disable_with_CPU () at src/kernel/cpukit/include/rtems/score/
↪threaddispatch.h:171
#1  _Thread_Dispatch_disable_critical () at src/kernel/cpukit/include/rtems/score/
↪threaddispatch.h:195
#2  _Thread_queue_Dispatch_disable () at src/kernel/cpukit/include/rtems/score/
↪threadqimpl.h:449
#3  _Thread_queue_Enqueue () at src/kernel/cpukit/score/src/threadqenqueue.c:432
#4  _POSIX_Condition_variables_Wait_support () at src/kernel/cpukit/posix/src/
↪condwaitsupp.c:148
#5  pthread_cond_wait () at src/kernel/cpukit/posix/src/condwait.c:54
++c

Thread 1 hit Breakpoint 2, _Thread_Dispatch_disable_with_CPU () at src/kernel/
↪cpukit/include/rtems/score/threaddispatch.h:171
4: cpu_self->thread_dispatch_disable_level = 1
++bt
#0  _Thread_Dispatch_disable_with_CPU () at src/kernel/cpukit/include/rtems/score/
↪threaddispatch.h:171
#1  _Thread_Dispatch_disable_critical () at src/kernel/cpukit/include/rtems/score/
↪threaddispatch.h:195
#2  _Thread_queue_Surrender_priority_ceiling () at src/kernel/cpukit/score/src/
↪threadqenqueue.c:813
#3  _POSIX_Mutex_Ceiling_surrender () at src/kernel/cpukit/include/rtems/posix/
↪muteximpl.h:400
#4  pthread_mutex_unlock () at src/kernel/cpukit/posix/src/mutexunlock.c:93
#5  _POSIX_Condition_variables_Mutex_unlock () at src/kernel/cpukit/posix/src/
↪condwaitsupp.c:40
#6  _POSIX_Condition_variables_Enqueue_no_timeout () at src/kernel/cpukit/posix/
↪src/condwaitsupp.c:59
#7  _Thread_queue_Enqueue () at src/kernel/cpukit/score/src/threadqenqueue.c:435
#8  _POSIX_Condition_variables_Wait_support () at src/kernel/cpukit/posix/src/
↪condwaitsupp.c:148
#9  pthread_cond_wait () at src/kernel/cpukit/posix/src/condwait.c:54
```

We found this regression was introduced by commit 9c0591f12d450401746bc0bf7cd7a0e0b14a5f3b.

Author: Joel Sherrill 2021-10-08T21:10:27.000Z

Original author: bernardi

- **Owner** set to sebastian.huber

- **Status** changed from *new* to *assigned*

The referenced commit is by Sebastian so assigning to him.

Although I don't think it matters, was SMP enabled or disabled?

Author: Trac Migrate 2021-10-08T21:30:44.000Z

Original author: bernardi

Thanks Joel. SMP was disabled, but I just checked and it also occurs with SMP enabled.

Author: Trac Migrate 2021-10-11T11:19:37.000Z

Original author: bernardi

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"d61fbeda590936ee03e91cf4b200f24d613e6ec2/rtems" d61fbeda/rtems]:

```
score: _Thread_queue_Surrender_priority_ceiling()

Do not use a direct thread dispatch in
_Thread_queue_Surrender_priority_ceiling() since it may be used in␣
↪condition
variables using POSIX mutexes.

Close #4526.
```

Author: Trac Migrate 2021-10-12T14:03:02.000Z

Original author: bernardi

There was no existing test case, so I added a new one.

Author: Chris Johns 2025-09-19T01:03:43.313Z

changed the description

3.9.1.177 4510 - Fix ILP32 multilib variant in newlib for AArch64

Id	4510
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill, Kinsey Moore
Closed by	Kinsey Moore
Created	2021-08-31T20:01:54.000Z
Closed	2025-03-02T01:52:06.274Z
Updated	2025-09-19T01:03:43.054Z
Milestone	6.1
Labels	arch:aarch64, old-indefinite, priority::normal, resolution::fixed, ticket-type::defect, version::6, version::7
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4510
Merges	0

Original author: rlong

This flag is needed to force the generation of AArch64 assembly from C sources instead of using the hand-optimized code in newlib. The existing hand-optimized code has bugs for ILP32. There are multiple technical options to address this and lots of discussion:

- Update newlib from upstream ARM source code
- Add -DPREFER_SIZE_OVER_SPEED and always use C versions on aarch64
- Fix existing code
- 0001-aarch64-Add-ILP32-ABI-support-in-assembly-v2.patch
- 0001-aarch64-Add-ILP32-ABI-support-in-assembly.patch
- 0001-configure.host-Add-DPREFER_SIZE_OVER_SPEED.patch

Author: Trac Migrate 2021-09-03T12:31:34.000Z

Original author: rlong

- **Attachment** 0001-configure.host-Add-DPREFER_SIZE_OVER_SPEED.patch added

Author: Trac Migrate 2021-09-03T16:36:21.000Z

Original author: rlong

This patch is only temporary. It will be removed once it is fixed upstream.

Author: Chris Johns 2021-09-07T22:56:37.000Z

Original author: rlong

Who is fixing the upstream?

I have not been following newlib so is there a link to the discussion about this?

Author: Trac Migrate 2021-09-08T13:25:42.000Z

Original author: rlong

Replying to Chris Johns:

> Who is fixing the upstream? Kinsey has already gotten a fix merged with ARM. Newlib hasn't pulled those changes in yet though.
>
> > I have not been following newlib so is there a link to the discussion about this? Here are the links to the discussions
> >
> > https://sourceware.org/pipermail/newlib/2020/017781.html https://sourceware.org/pipermail/newlib/2020/018169.html https://sourceware.org/pipermail/newlib/2020/018197.html

Author: Chris Johns 2021-09-09T08:28:12.000Z

Original author: rlong

As discussed on `devel@` the ILP32 support should be fixed or patched in newlib and we should not cause an performance regressions for LP64 targets.

Author: Joel Sherrill 2021-09-09T13:42:54.000Z

Original author: rlong

- **Description** changed

```
- This flag is needed to force the generation of AArch64 assembly from␣
↪C sources instead of using the hand-optimized code in newlib. The␣
↪existing hand-optimized code does not support ILP32.
?                                                                    ␣
↪                                                                    ␣
↪                         ^^^^^^^^^^^^^^^^
+ This flag is needed to force the generation of AArch64 assembly from␣
↪C sources instead of using the hand-optimized code in newlib. The␣
↪existing hand-optimized code has bugs for ILP32. There are multiple␣
↪technical options to address this and lots of discussion:
?                                                                    ␣
↪                                                                    ␣
↪                         ^^^^^^^^^^^^                              ␣
↪+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+
+ * Update newlib from upstream ARM source code
+ * Add -DPREFER_SIZE_OVER_SPEED and always use C versions on aarch64
+ * Fix existing code
```

- **Summary** changed from *Add -DPREFER_SIZE_OVER_SPEED for AArch64 builds* to *Fix ILP32 multilib variant in newlib for AArch64*

Author: Trac Migrate 2021-09-10T21:42:33.000Z

Original author: rlong

- **Attachment** 0001-aarch64-Add-ILP32-ABI-support-in-assembly.patch added

Author: Trac Migrate 2021-09-20T20:37:49.000Z

Original author: rlong

In [changeset:"0e54d5854939e98755c3156c4fef248ac4793db2/rtems-source-builder" 0e54d58/rtems-source-builder]:

```
rtems-gcc-10-newlib-head.cfg: Add newlib patch

Adds patch to add sanitation to the padding of bits and size_t types for
AArch64 tools builds with newlib. These changes have been made in ARM,␣
↪but
newlib has yet to pull them. This can be removed once newlib has pulled
the code.

Updates #4510
```

Author: Trac Migrate 2021-09-20T20:37:52.000Z

Original author: rlong

In [changeset:"3950b1e2d857a5dba054cdd230f52635f1bad4dc/rtems-source-builder" 3950b1e/rtems-source-builder]:

```
rtems-gcc-head-newlib-head.cfg: Add newlib patch

Adds patch to add sanitation to the padding of bits and size_t types for
AArch64 tools builds with newlib. These changes have been made in ARM,␣
↪but
newlib has yet to pull them. This can be removed once newlib has pulled
the code.

Updates #4510
```

Author: Kinsey Moore 2021-12-16T15:56:03.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

This has been verified as fixed thanks to Ryan's patches.

Author: Kinsey Moore 2022-03-17T21:17:26.000Z

Original author: rlong

- **Attachment** 0001-aarch64-Add-ILP32-ABI-support-in-assembly-v2.patch added

Fix patch for current newlib

Author: Kinsey Moore 2022-03-17T21:53:24.000Z

Original author: rlong

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

Reopening this since it needs to be tracked until the patch is merged with newlib from the upstream optimized-routines repo.

Author: Chris Johns 2022-11-29T23:04:24.000Z

Original author: rlong

- **Milestone** changed from %"6.1" to %"7.1"
- **Version** changed from ~"6" to ~"7"

Moved until ARM adds a correct patch to newlib.

Author: Trac Migrate 2023-07-27T15:01:56.000Z

Original author: rlong

- **Milestone** changed from %"7.1" to %"6.1"
- **Owner** set to sebastian.huber
- **Status** changed from *reopened* to *assigned*
- **Version** changed from ~"7" to ~"6"

I guess you can wait forever if you want ARM to get this fixed. There are open issues in the ARM code:

https://github.com/ARM-software/optimized-routines/issues/56

https://github.com/ARM-software/optimized-routines/pull/57

Author: Kinsey Moore 2023-07-27T15:11:38.000Z

Original author: rlong

I've actually had some luck getting changes into optimized-routines. The hard part is getting them merged into newlib.

Author: Trac Migrate 2023-07-27T15:12:55.000Z

Original author: rlong

I prepared some patches for Newlib, however, there is this open issue with the notes.

Author: Trac Migrate 2023-11-22T06:12:50.000Z

Original author: rlong

In [changeset:"07be298e0d32b1cccfcd8456782f40fc92cddc21/rtems-source-builder" 07be298/rtems-source-builder]:

```
6/7: Update Newlib

Pick up fixes for ARM/optimized-routines and the memory reclamation at
↪thread
exit.

Update #4510.
Update #4967.
```

Author: Amar Takhar 2024-05-17T02:03:35.671Z

changed the description

Author: Amar Takhar 2024-05-17T02:03:35.708Z

assigned to @joel and @opticron and unassigned @tracmigrate

Author: Amar Takhar 2024-05-17T02:03:55.675Z

Can this be closed? If not can it be moved to %6.2?

Author: Kinsey Moore 2024-05-17T02:55:20.622Z

This can move to %Indefinite because it needs to be open until the patch actually gets pulled into newlib.

Author: Kinsey Moore 2025-03-02T01:52:05.962Z

The updated code has been pulled into newlib and this issue is no longer necessary with 6 or main branches.

3.9.1.178 4504 - RTEMS6 has incorrect code generation for stm32f4 bsp

Id	4504
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-19T23:07:19.000Z
Updated	2025-09-19T01:03:42.921Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::gcc, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4504
Merges	0

Original author: andreic

I'm working with the master head targeting arm/stm32f4 for RTEMS 6.

I built the tools and RTEMS using:

```
mkdir -p rtems/6
export PREFIX=`pwd`/rtems/6
mkdir external
cd external
git clone git://git.rtems.org/rtems.git
git clone git://git.rtems.org/rtems-source-builder.git
cd rtems-source-builder/rtems
../source-builder/sb-set-builder --prefix=${PREFIX} --log=../b-rsb-toolchain-arm.
↪log 6/rtems-arm
cd ../../rtems
./waf bsp_defaults --rtems-bsps=arm/stm32f4 > config.ini
./waf configure --prefix=${PREFIX}
./waf
```

This setup gives me code that faults when calling the memset() function from bsp_start_clear_bss(). The version of memset() being used in any of the compiled samples has the flags (from rtems-execinfo -O) of:

```
| memset.c                        : -mcpu=arm7tdmi -marm -march=armv4t
```

whereas other functions in the executable have:

```
| lseek.c                         : -mthumb -mcpu=cortex-m4 -march=armv7e-m
```

If I rebuild with

```
./waf bsp_defaults --rtems-bsps=arm/stm32f105rc > config.ini
```

then all of the functions are compiled with the correct architecture flags for a 105rc and the program can reach Init() when run on a 105rc chip.

```
Common flags: 3
| -mthumb -mcpu=cortex-m3 -march=armv7-m
```

If I configure for stm32f4 and change the config.ini file to use:

```
ABI_FLAGS = -mthumb -mcpu=cortex-m3
```

Then rtems-exeinfo shows that all functions are using the same common flags as the stm32f105rc bsp configuration. The generated code cannot be used on an stm32f407, but it does compile an executable with one consistent instruction set.

So, providing -mcpu=cortex-m4 in ABI_FLAGS triggers the use of the wrong version of functions from libgcc (I think).

Author: Trac Migrate 2021-09-14T05:53:28.000Z

Original author: andreic

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"af722b76d203c1724138480882b7dbecee3a6b43/rtems" af722b7/rtems]:

```
bsps/arm: Fix ABI flags for Cortex-M4

Close #4504.
```

Author: Amar Takhar 2024-04-25T20:49:11.028Z

changed the description

3.9.1.179 4503 - Add glibc malloc family extension malloc_usable_size()

Id	4503
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Amar Takhar
Created	2021-08-19T22:40:22.000Z
Closed	2025-07-27T01:44:34.814Z
Updated	2025-09-19T01:03:42.823Z
Milestone	6.1
Labels	gsoc, gsoc::small, lang::c, old-indefinite, project::small
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4503
Merges	1

Background

See https://man7.org/linux/man-pages/man3/malloc_usable_size.3.html https://www.freebsd.org/cgi/man.cgi?query=malloc_usable_size

Approach

RTEMS already has this functionality so it should not be hard to implement this.

The prototype may need to be added to the appropriate newlib header file with the same guard as Linux and FreeBSD.

Add implementation and test code to the malloc family in libcsupport/. The required functionality should already be in the underlying score/ capability used.

The method would need to be fully tested.

The method would need to be documented.

Knowledge/Skills

C

Possible Mentors

@joel @gedare

Author: Joel Sherrill 2021-09-08T20:21:50.000Z

- **Description** changed

```
- The man page for this method is at:
+ RTEMS already has this functionality so it should not be hard to implement this.

https://man7.org/linux/man-pages/man3/malloc_usable_size.3.html
+ https://www.freebsd.org/cgi/man.cgi?query=malloc_usable_size

+ The prototype may need to be added to the appropriate newlib header file with the same guard as Linux and FreeBSD.
+
- Add implementation and test code to the malloc family in libcsupport/. The required functionality should be in the underlying score/ capability used.
+ Add implementation and test code to the malloc family in libcsupport/. The required functionality should already be in the underlying score/ capability used.
?                                                
```

(continued from previous page)

```
+
+ The method would need to be documented.
```

Author: Chris Johns 2021-09-09T08:26:22.000Z

Is `glibc` some sort of new standard?

Author: Joel Sherrill 2021-12-17T17:21:31.000Z

- **Milestone** changed from %"6.1" to %"Indefinite"

Author: Gedare Bloom 2022-02-25T22:04:48.000Z

- **Owner** set to @joel
- **Status** changed from *new* to *assigned*

Author: Amar Takhar 2024-04-25T20:49:10.217Z

changed the description

Author: Gedare Bloom 2025-01-18T01:36:34.733Z

changed the description

Author: Jeremy Lorelli 2025-07-17T06:09:24.498Z

mentioned in merge request !591

3.9.1.180 4493 - pppd broken if serial driver can't handle big data

Id	4493
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-12T09:25:52.000Z
Updated	2025-09-19T01:03:42.389Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4493
Merges	0

Original author: Christian Mauderer

The current implementation of ppp assumes (in ppp_tty.c:pppstart) that sending characters via the termios device write function will send buffers of any length. That is not true for most drivers.

Devices that can only send one character at a time won't work with that at all. Devices that have a big enough FIFO might work most of the time. Devices that use a DMA for transmitting might work without problems.

Author: Trac Migrate 2022-02-11T07:37:27.000Z

Original author: Christian Mauderer

In [changeset:"7b5948d4d220ad33864a7b60d8133809908b0d2e/rtems" 7b5948d4/rtems]:

```
termios: Pass number of sent chars to l_start

At the moment the line discipline start function (l_start) has no
possibility to get feedback about the number of characters that have
been sent. This patch passes that information via an additional
parameter.

The change might trigger a warning on existing code because of a pointer
mismatch but it shouldn't break it. An existing function with the old
API will just ignore the additional parameter.

Update #4493
```

Author: Trac Migrate 2022-02-11T07:42:16.000Z

Original author: Christian Mauderer

In [changeset:"0b883f311edf588345a8c46a18dc966bd62b6903/rtems-libbsd" 0b883f3/rtems-libbsd]:

```
ppp: Fix transmitting data

The pppstart expected that a driver write would somehow magically
process all data passed to the write function. Because ppp disables all
buffering that originally has been in termios, that assumption is not
true for all but polled drivers.

With this patch, the pppstart now gets and processes the feedback that
is returned from the driver via rtems_termios_dequeue_characters.

Update #4493
```

Author: Trac Migrate 2022-02-11T07:42:50.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"17ac5a8cfe0bb0f6c2425dc4288363ba0d114e71/rtems-libbsd" 17ac5a8/rtems-libbsd]:

```
ppp: Fix transmitting data

The pppstart expected that a driver write would somehow magically
process all data passed to the write function. Because ppp disables all
buffering that originally has been in termios, that assumption is not
true for all but polled drivers.

With this patch, the pppstart now gets and processes the feedback that
is returned from the driver via rtems_termios_dequeue_characters.

Fixes #4493
```

Author: Trac Migrate 2022-04-28T07:51:04.000Z

Original author: Christian Mauderer

In [changeset:"d56d8a60695805d9a54bcc14fdaaae04e6c1ab53/rtems" d56d8a6/rtems]:

```
termios06: Fix warning

Update #4493.
```

Author: Chris Johns 2025-09-19T01:03:42.453Z

changed the description

Author: Chris Johns 2025-09-19T01:03:42.743Z

mentioned in issue #4494

3.9.1.181 4459 - Handling of unexpected traps is unreliable on SPARC

Id	4459
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-06-21T08:49:53.000Z
Updated	2025-09-19T01:03:42.280Z
Milestone	6.1
Labels	arch:sparc, priority::normal, qualification, resolution::fixed, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4459
Merges	0

Original author: sebastian.huber

Currently, all traps without special functions are handled by _ISR_Handler(). For traps which occur for example due to

- instruction access exception
- illegal instruction
- privileged instruction
- fp disabled
- memory address not aligned
- fp exception
- data access exception

errors the trap handling is unreliable since

1. the stack pointer of the context which caused the trap is used, and
2. writeable data structures are used (for example _ISR_Vector_table).

The trap table is initialized to “ta 0” which ends up in a system error mode. In this mode, the RTEMS fatal error handling is by passed and the initial fatal error handlers are not called.

The trap handling should be changed to invoke a statically initialized bad trap handler which performs the RTEMS fatal error procedure and uses a CPU-specific stack with minimum dependencies on the context which caused the trap.

Author: Trac Migrate 2021-06-24T10:30:30.000Z

Original author: sebastian.huber

In [changeset:”955c045b3c66c26899d65dde744d5647588ca91c/rtems” 955c045b/rtems]:

```
sparc: Move ISR handler install routines

Move _CPU_ISR_install_raw_handler() and _CPU_ISR_install_vector() to
↪separate
files.  The goal is to make their use optional.

Update #4458.
Update #4459.
```

Author: Trac Migrate 2021-06-24T10:30:33.000Z

Original author: sebastian.huber

In [changeset:"d73e657e063e3d34db16fa4bce6c2ab1e5e22ec4/rtems" d73e657e/rtems]:

```
sparc: More reliable bad trap handling

Statically initialize the trap table in start.S to jump to _SPARC_Bad_
↪trap()
for all unexpected traps.  This enables a proper RTEMS fatal error
↪handling
right from the start.  Do not rely on the stack and register settings
↪which
caused an unexpected trap.  Use the ISR stack of the processor to do
↪the fatal
error handling.  Save the full context which caused the trap.  Fatal
↪error
handler may use it for error logging.

Unify the _CPU_Exception_frame_print() implementations and move it to
↪cpukit.

Update #4459.
```

Author: Trac Migrate 2021-12-02T15:21:46.000Z

Original author: sebastian.huber

In [changeset:"87d1f4d762769c05e4fb950a739c57f610187665/rtems-docs" 87d1f4d/rtems-docs]:

```
cpu-supplement: Use ``REG`` for SPARC registers

Update #4459.
```

Author: Trac Migrate 2021-12-02T15:21:48.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"835ece14cca47f51d8f3e8088019f0ffa761e702/rtems-docs" 835ece1/rtems-docs]:

```
cpu-supplement: Update trap handling for SPARC

Close #4459.
```

Author: Amar Takhar 2024-04-25T20:49:08.907Z

changed the description

3.9.1.182 4450 - cpu/armv7m: MPU initialized incorrect

Id	4450
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-06-04T07:40:40.000Z
Updated	2025-09-19T01:03:42.077Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4450
Merges	0

Original author: Christian Mauderer

If regions are skipped due to a zero region size, currently the MPU code changes the settings of the previously set up region instead of skipping one entry.

Author: Trac Migrate 2021-06-21T14:12:42.000Z

Original author: Christian Mauderer

In [changeset:"5ad17be9307907eadc844ed8cd8f036baffddd67/rtems" 5ad17be9/rtems]:

```
cpu/armv7m: Avoid regions with negative size

Don't initialze regions that have a negative size (for example due to a
wrong calculation).

Update #4450
```

Author: Trac Migrate 2021-06-21T14:12:46.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"8476715a49073c913d44dadb9f57712e461450ee/rtems" 8476715a/rtems]:

```
cpu/armv7m: Fix initialization of MPU regions

The write to RBAR didn't have the valid flag set. Therefore the write to
RASR had an influence on the previously set region. That means for
example that if Region 0 had been enabled but 1 should be disabled due
to a size of 0, the previous code would have disabled region 0 instead.

This patch fixes that behaviour.

Close #4450
```

Author: Chris Johns 2025-09-19T01:03:42.162Z

changed the description

3.9.1.183 4446 - CID 1472578: Uninitialized scalar variable

Id	4446
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Gedare Bloom
Created	2021-05-26T23:41:36.000Z
Updated	2025-09-19T01:03:41.975Z
Milestone	6.1
Labels	old-indefinite, priority::normal, resolution::wontfix, tickettype::defect, version::6, version::7
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4446
Merges	0

Original author: hgerber

In jffs2_scan_eraseblock: Use of an uninitialized variable (CWE-457)

Author: Gedare Bloom 2022-10-31T14:52:54.000Z

Original author: hgerber

- **Milestone** changed from %”6.1” to %”Indefinite”
- **Resolution** set to ~”wontfix”
- **Status** changed from *assigned* to *closed*
- **Version** changed from ~”6” to ~”7”

JFFS2 code should be updated or fixed upstream.

Author: Amar Takhar 2025-09-05T02:57:50.633Z

changed the description

3.9.1.184 4440 - enhancement: Add missing rtems_mutex_try_lock() and rtems_recursive_mutex_try_lock()

Id	4440
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-26T09:26:22.000Z
Updated	2025-09-19T01:03:41.817Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4440
Merges	0

Original author: Christian Mauderer

There are no try_lock functions for the self contained mutexes.

Author: Trac Migrate 2021-05-28T06:26:00.000Z

Original author: Christian Mauderer

In [changeset:”156896526f0579b5021e90f026286c62c2340efb/rtems” 1568965/rtems]:

```
thread-API: Add rtems_*mutex_try_lock

This adds a rtems_mutex_try_lock and a rtems_recursive_mutex_try_lock.

Update #4440.
```

Author: Trac Migrate 2021-05-28T06:27:35.000Z

Original author: Christian Mauderer

- **Resolution** set to ~”fixed”

- **Status** changed from *assigned* to *closed*

In [changeset:"b05cecc7dac13fcbe5fd879c0c0dbd3cba57dff7/rtems-docs" b05cecc/rtems-docs]:

```
c-users: Add rtems_*mutex_try_lock

Closes #4440.
```

Author: Chris Johns 2025-09-19T01:03:41.872Z

changed the description

3.9.1.185 4436 - Libbsd needs ability to configure network task priority

Id	4436
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2021-05-20T23:33:02.000Z
Closed	2025-01-31T18:29:14.002Z
Updated	2025-09-19T01:03:41.655Z
Milestone	6.1
Labels	priority::normal, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4436
Merges	0

Original author: thelunatic

The libbsd currently doesn't support configuring network task priorities that can be used with network services that are used by all network stacks, an example of such network service is telnetd.

Author: Trac Migrate 2021-05-21T06:04:39.000Z

Original author: thelunatic

We have two function in libbsd which may be provided by the application to customize threads created by libbsd:

```
/**
* @brief Returns the initial priority for a task specified by its name.
*
* Applications may provide their own implementation of this function. For
* example they can define their implementation in the same module which calls
```

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```
 * rtems_bsd_initialize().
 *
 * @param[in] name The task name.
 *
 * @return The desired initial task priority.
 */
rtems_task_priority rtems_bsd_get_task_priority(const char *name);

/**
 * @brief Returns the stack size for a task specified by its name.
 *
 * Applications may provide their own implementation of this function. For
 * example they can define their implementation in the same module which calls
 * rtems_bsd_initialize().
 *
 * @param[in] name The task name.
 *
 * @return The desired task stack size.
 */
size_t rtems_bsd_get_task_stack_size(const char *name);
```

Author: Kinsey Moore 2025-01-31T18:29:14.133Z

moved to rtems/pkg/rtems-libbsd#31

Author: Chris Johns 2025-09-19T01:03:41.711Z

changed the description

3.9.1.186 4405 - ipsec-tools/setkey is leaking file descriptors (cloned)

Id	4405
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-07T12:06:57.000Z
Updated	2025-09-19T01:03:41.376Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4405
Merges	0

Original author: Christian Mauderer

Cloned from #4404:

The setkey command is opening sockets without closing them. With that it is leaking file descriptors.

Author: Trac Migrate 2021-05-11T06:48:55.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Fixed in

https://git.rtems.org/rtems-libbsd/commit/?h=6-freebsd-12&id=e5d5e097de85d56f1662493ccf0385125b85bec9

https://git.rtems.org/rtems-libbsd/commit/?id=e474ada48a2bb7ec4672622b279281560913e43d

Author: Chris Johns 2025-09-19T01:03:41.448Z

changed the description

3.9.1.187 5117 - Spelling of network configuration wrong

Id	5117
State	closed
Type	ISSUE
Author	Cedric Berger
Closed by	Chris Johns
Created	2024-08-13T15:13:10.806Z
Closed	2024-08-15T22:35:17.722Z
Updated	2025-09-19T01:02:12.364Z
Milestone	6.1
Labels	spellcheck
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5117
Merges	0

Configuration is spelt `configuraiton`

```
Cedrics-MBP:wks cedric$ cd rtems-libbsd/
Cedrics-MBP:rtems-libbsd cedric$ grep -R configuraiton .
Binary file ./__pycache__/waf_libbsd.cpython-312.pyc matches
./rtems_waf/rtems_bsd.py:            conf.fatal('network configuraiton \\'%s\\' not found' % (net_config))
./rtems_waf/rtems_bsd.py:            conf.fatal('network configuraiton \\'%s\\' read failed' % (net_config))
./rtems_waf/rtems_bsd.py:                    conf.fatal('network configuraiton \\'%s\\' ' + \\
```

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```
./waf_libbsd.py:            bld.fatal('network configuraiton \\'%s\\' not found' %
./waf_libbsd.py:            bld.fatal('network configuraiton \\'%s\\' read failed
↪' %
./waf_libbsd.py:                    bld.fatal('network configuraiton \\'%s\\' ' +␣
↪\\
```

Author: Chris Johns	2024-08-15T22:35:04.616Z

changed title from **network configura{-iton-}** to **{+Spelling of +}network configura{+tion wrong+}**

Author: Chris Johns	2024-08-15T22:35:04.645Z

changed the description

Author: Chris Johns	2024-08-15T22:35:17.858Z

moved to rtems/tools/rtems_waf#3

3.9.1.188 5110 - Work around STM32 H7 errata unsupported read access with unaligned address

Id	5110
State	closed
Type	ISSUE
Author	Karel Gardas
Closed by	Amar Takhar
Created	2024-08-08T09:48:54.747Z
Closed	2024-09-03T17:50:58.383Z
Updated	2025-09-19T01:02:12.269Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5110
Merges	3

Summary

ST in its errata doc for H7 family (ES0445) in version 3 from 18-Jul-2023 adds errata record:

Citation:

3.9.1.188.1.1 2.8.4 Unsupported read access with unaligned address

3.9.1.188.1.2 Description

Read access with unaligned address, such as a half-word read access starting at odd address, is not supported.

3.9.1.188.1.3 Workaround

Compile the software that accesses the fmc region with a compiler option that ensures data alignment, such as –no_unaligned_access

Citation ends here.

Clearly the workaround for this errata is missing from RTEMS yet.

Author: Karel Gardas 2024-08-09T13:41:40.189Z

mentioned in merge request !180

Author: Kinsey Moore 2024-08-09T14:24:32.515Z

This is missing the context that this only applies to the FMC peripheral. As such, applying this flag to the entirety of RTEMS is not necessary and is likely detrimental to performance.

Author: Karel Gardas 2024-08-11T18:56:59.423Z

Indeed, this is classical and well expected argument. Practice however shows that there is a single testcase from ~600 tests from RTEMS testsuite I compiled with and without the option which resulted in different binary completely. All others have the same text/bss/data sizes so assumption is do not differ or differ much. One different was tftpfs.

Anyway. AFIAK there is a no way how to decide if code is using FMC or it is not, besides looking into RTEMS configuration itself. E.g. once user set linkcmds.*sdram, then this is clear FMC is in use. On the other hand this is probably not easily detectable in ini itself. . . .

So would you like to have configure option like: `STM32H7_ERRATA_ENABLE_FMC_282 = False/True` in ini file which would drive addition of -mno-unaligned-access option? Fine by me, but what would be default? Here I would really appreciate `True` as this is about stability and even ST itself recommends that! Once someone feels a need to be brave, then she/he can switch to `False` of course, but he/she will/should understand consequences well.

Author: Kinsey Moore 2024-08-11T18:56:59.423Z

This is fine. I agree that stability is critical and I misread the errata initially. Thanks for taking the time to explain things.

Author: Joel Sherrill 2024-08-09T20:16:36.340Z

I'd support that approach. Default to conservative and user beware to change the setting. Be sure the comments for the setting are clear and include a reference to

STM material. Or write what you want in the Users Guide for this BSP and reference that with less detail for the ini file

Author: Kinsey Moore 2024-08-09T20:20:01.513Z

Oh... the errata is non-specific. I had assumed it meant the device memory itself and not the mapped memory. That is very unfortunate errata.

Author: Karel Gardas 2024-08-12T08:50:45.776Z

mentioned in merge request !184

Author: Karel Gardas 2024-08-31T16:19:25.754Z

mentioned in merge request !201

3.9.1.189 5109 - open: Race condition when called with O_TRUNC

Id	5109
State	closed
Type	ISSUE
Author	Loris Nardo
Closed by	Kinsey Moore
Created	2024-08-08T05:13:51.200Z
Closed	2024-08-11T18:59:06.067Z
Updated	2025-09-19T01:02:12.033Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5109
Merges	1

Summary

Checking the code of `open`, I noticed that when `O_TRUNC` is passed, the iop flag is updated to include `LIBIO_FLAGS_OPEN` and then ftruncate is called on the file descriptor of the iop. In doing so, there is a small time window in which the file descriptor can be accessed by other threads and can perform some operation on the file before the truncate has been completed or even started.

Steps to reproduce

Author: Loris Nardo 2024-08-08T05:23:14.323Z

mentioned in merge request !178

Author: Chris Johns 2024-08-11T01:43:18.176Z

Why would a thread have the descriptor if it has not been returned by open?

Author: Loris Nardo 2024-08-11T01:43:18.176Z

That is a good question..., currently the only way I can think of is because the fd number had been kept in some variable after a `close`, but it is questionable and also it seems like clutching at straws.

Feel also free to close the issue and the merge request

Author: Chris Johns 2024-08-11T01:43:18.176Z

There is a valid case you have shown but I am wondering if ithighlights the lack of locking around the `iop` references in `libio`?

The change in !178 looks OK. Which filesystems have you tested it on?

Author: Loris Nardo 2024-08-11T01:43:18.176Z

I usually run the testsuite of fstest and at work I use mostly the FAT32 file system.

About the first question, some issue with the way `iop` are currently handled exists, but they require far more changes and some discussion to fix them (at least is what I think). Example are the issue #2158 and #5045.

I'm not saying that these things needs to be addressed now, the code has been like that for many years and none has had any particular issue with it.

Author: Chris Johns 2024-08-11T01:43:18.176Z

Yes I agree there are issues and it is more work.

3.9.1.190 5082 - Change the default stack checker reporter to be a quiet reporter

Id	5082
State	closed
Type	ISSUE
Author	Mohamed Hassan
Closed by	Mohamed Hassan
Created	2024-08-01T20:29:09.306Z
Closed	2024-08-27T02:43:08.432Z
Updated	2025-09-19T01:02:11.930Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5082
Merges	0

Summary

3.9.1.190.1.1 Purpose

The current stack checker reporter provides a detailed description of stack usage. This proposed change aims to set the default reporter to a basic version that only performs one task: calling the fatal error handler. Users will have the option to configure the reporter to use the detailed version or even a custom, user-defined reporter through the application settings.

3.9.1.190.1.2 Result

This change will simplify the default reporting behavior, while also giving users the flexibility to choose a more detailed reporter if desired or to create their own custom reporter.

Details

This issue is related to merge request 86!

Author: Mohamed Hassan 2024-08-01T20:29:26.910Z

changed the description

3.9.1.191 5075 - Update STM32 H7 HAL implementation to the latest 1.11.2 release

Id	5075
State	closed
Type	ISSUE
Author	Karel Gardas
Closed by	Amar Takhar
Created	2024-07-26T20:48:44.718Z
Closed	2024-08-05T22:43:12.178Z
Updated	2025-09-19T01:02:11.813Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5075
Merges	1

ST released new H7 HAL so we should sync that with that we have in RTEMS source tree. The current latest release is v1.11.2 shown here: https://github.com/STMicroelectronics/STM32CubeH7/commit/abbf9ca1b36c9abdb9339e86f0b7b2f4e79edc35

Author: Karel Gardas 2024-07-30T19:04:21.617Z

mentioned in merge request !154

3.9.1.192 5096 - bsps/m68k/uC5282/README.md: Delete timing test results

Id	5096
State	closed
Type	ISSUE
Author	Joel Sherrill
Closed by	Amar Takhar
Created	2024-08-02T21:21:27.294Z
Closed	2024-08-05T22:01:17.775Z
Updated	2025-09-19T01:02:11.686Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5096
Merges	1

The following discussion from !155 should be addressed:

- [] @joel started a discussion:

  Delete timing test results

Author: Joel Sherrill 2024-08-05T15:29:42.350Z

  mentioned in merge request !166

3.9.1.193 5099 - Installation is broken by recent text to md file transition

Id	5099
State	closed
Type	ISSUE
Author	Karel Gardas
Assignee(s)	Amar Takhar
Closed by	Kinsey Moore
Created	2024-08-05T08:14:01.873Z
Closed	2024-08-05T13:44:55.605Z
Updated	2025-09-19T01:02:11.543Z
Milestone	6.1
Labels	doc, rtems::build
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5099
Merges	1

Summary

`./waf install` step is broken and fails with:

```
$ ./waf install
Waf: Entering directory `/export/home/rtems/git/rtems/gitlab/rtems-ref/build'
Waf: Leaving directory `/export/home/rtems/git/rtems/gitlab/rtems-ref/build'
'install' finished successfully (0.221s)
Waf: Entering directory `/export/home/rtems/git/rtems/gitlab/rtems-ref/build/arm/
```

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```
↪xilinx_zynq_a9_qemu'
Waf: Leaving directory `/export/home/rtems/git/rtems/gitlab/rtems-ref/build/arm/
↪xilinx_zynq_a9_qemu'
source not found: 'make/README' in bld(target='', idx=34, install_task=
{task 140121522535888: inst  -> }, dest='${PREFIX}/share/rtems${__RTEMS_MAJOR__}/
↪make', tg_idx_count=34, meths=['process_install_task', 'process_rule', 'process_
↪source'], source=[], install_to='${PREFIX}/share/rtems${__RTEMS_MAJOR__}/make',␣
↪path=/export/home/rtems/git/rtems/gitlab/rtems-ref, install_from=['make/lib.cfg
↪', 'make/host.cfg', 'make/directory.cfg', 'make/README'], posted=True, type=
↪'install_files', features=['install_task']) in /export/home/rtems/git/rtems/
↪gitlab/rtems-ref
```

Steps to reproduce

1) configure with –prefix

2) compile

3) and try to run `./waf install`

Author: Amar Takhar 2024-08-05T08:21:45.122Z

Thanks for pointing this out had no idea the `README` files were installed and it seems nobody else did, either!

Author: Amar Takhar 2024-08-05T08:21:50.691Z

assigned to @amar

Author: Karel Gardas 2024-08-05T08:22:36.130Z

mentioned in merge request !164

Author: Karel Gardas 2024-08-05T08:24:07.401Z

No problem, this is already fixed in !164 so if you can review that it may perhaps be merged? Thanks!

3.9.1.194 5097 - testsuites: some fstest on JFFS2 and RFS are being compiled and run even on target that should exclude them

Id	5097
State	closed
Type	ISSUE
Author	Loris Nardo
Closed by	Amar Takhar
Created	2024-08-05T04:49:17.180Z
Closed	2024-08-05T06:23:49.289Z
Updated	2025-09-19T01:02:11.405Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5097
Merges	1

Summary

After MR !80 the new testcases introduced for JFFS2 and RFS are not included in the exclusion list for the targets that do not want JFFS2 and RFS testcases to be compiled and run

Steps to reproduce

Author: Loris Nardo	2024-08-05T04:52:00.831Z

mentioned in merge request !162

3.9.1.195 5074 - getdents does not hold the IOP of the file descriptor

Id	5074
State	closed
Type	ISSUE
Author	Loris Nardo
Closed by	Kinsey Moore
Created	2024-07-25T16:45:29.936Z
Closed	2024-07-26T20:02:26.382Z
Updated	2025-09-19T01:02:11.080Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5074
Merges	1

Summary

`getdents` which is basically the same function as `read` does not hold the IOP while performing its operation; this can lead to the file descriptor to be closed by someone else while the `read_h` call is still executing.

Author: Loris Nardo	2024-07-25T16:51:08.107Z

mentioned in merge request !129

Author: Loris Nardo 2024-07-25T19:14:21.565Z

changed the description

3.9.1.196 4282 - pwdgrp.c: Unchecked return value from library error spotted by Coverity

Id	4282
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-02T15:01:37.000Z
Updated	2025-09-19T00:12:21.880Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4282
Merges	0

Original author: rlong

CID 1255518: Unchecked return value from library in pwdgrp_init().

```
65  /*
66   * Do the best to create this directory.
67   */
CID 1255518 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)1.␣
↪check_return: Calling mkdir("/etc", 493U) without checking return value. This␣
↪library function may fail and return an error code. [Note: The source code␣
↪implementation of the function has been overridden by a builtin model.]
68  mkdir("/etc", S_IRWXU | S_IRGRP | S_IXGRP | S_IROTH | S_IXOTH);
```

Author: Trac Migrate 2021-03-08T20:56:24.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"55ba229d228d1b7372256978828c573dd0af56d4/rtems" 55ba229/rtems]:

```
pwdgrp.c: Fix Unchecked return value from library (CID #1255518)

CID 1255518: Unchecked return value from library in pwdgrp_init().

Closes #4282
```

Author: Joel Sherrill 2021-03-23T13:45:55.000Z

Original author: rlong

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

It turns out that at least /etc can be created in multiple places depending on the RTEMS application structure. It was discussed that a standard mechanism is needed to address additional base file system directories. Ticket #4354 has been created for that which allows this issue to be strictly about the Coverity issue.

Changing the _Assert which was used to (void) mkdir should be sufficient to close this ticket again. Improvements to the base file system directory create can occur under #4354

Author: Trac Migrate 2021-03-23T17:02:15.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

In [changeset:"37fc6516d36e82e0a740b33cc2787b4d031411d9/rtems" 37fc651/rtems]:

```
pwdgrp.c: Remove _Assert. /etc may already exist

Removed the _Assert_unused_variable_equals macro due to /etc
having already been created by the network stack initialization
or an initial filesystem image.

Closes #4282
```

Author: Joel Sherrill 2025-09-19T00:12:21.844Z

mentioned in issue #4354

3.9.1.197 4143 - fileio - Stack too small for login with password

Id	4143
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-10-12T13:17:05.000Z
Updated	2025-09-05T02:57:45.485Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4143
Merges	0

Original author: frank_k

When I use the 'shell' from the fileio sample with the command below:

```
env QEMU_AUDIO_DRV="none" \\
qemu-system-arm -no-reboot -net none -nographic -M realview-pbx-a9 -m 256M \\
-kernel build/arm/realview_pbx_a9_qemu/testsuites/samples/fileio.exe
```

The executable crashes with an "BLOWN STACK!!!" as soon as I try to login as 'root' with password. (The logins without password work fine.) Increasing the stack size of the affected thread a bit (to 5 times RTEMS_MINIMUM_STACK_SIZE) solves the issue.

How to reproduce:

1. Start the fileio sample in QEMU with the above command.
2. Type a key to stop the timer.
3. Type "s" <return> to enter the shell.
4. Login as "root" with the password printed to the terminal.
5. In the line with the first shell prompt, the text "BLOWN STACK!!!" appears unexpectedly followed by further crash information.

```
[...]
/dev/foobar login: root
Password:

RTEMS Shell on /dev/foobar. Use 'help' to list commands.
SHLL [/] # BLOWN STACK!!!
task control block: 0x00205278
[...]
```

My config.ini was

[arm/realview_pbx_a9_qemu] RTEMS_DEBUG = True RTEMS_NETWORKING = True RTEMS_POSIX_API = True RTEMS_SMP = True BUILD_TESTS = True

RTEMS origin.master at 558a19d3adff6a3ecf678f94408b48beccbbc9fb

Author: Trac Migrate 2020-10-12T13:49:36.000Z

Original author: frank_k

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"ec13365d770f41a3d7ecda661a8844a47b4e1fb9/rtems" ec13365/rtems]:

```
testsuites/samples/fileio - Increase of stack size

When I use the 'shell' from the fileio sample with the command below:

env QEMU_AUDIO_DRV="none" \\
qemu-system-arm -no-reboot -net none -nographic -M realview-pbx-a9 \\
-m 256M \\
-kernel build/arm/realview_pbx_a9_qemu/testsuites/samples/fileio.exe

The executable crashes with an "BLOWN STACK!!!" as soon as I try to
↪login
as 'root' with password. (The logins without password work fine.)
Increasing the stack size of the affected thread a bit solves the issue.
Hence, I suggest this patch.

My config.ini was

[arm/realview_pbx_a9_qemu]
RTEMS_DEBUG = True
RTEMS_NETWORKING = True
RTEMS_POSIX_API = True
RTEMS_SMP = True
BUILD_TESTS = True

RTEMS origin.master at a479686c112144119866391ceb21c48be6a3eca9

Close #4143
```

Author: Amar Takhar 2025-09-05T02:57:45.451Z

mentioned in issue #4144

3.9.1.198 4052 - [libbsd] e1000 driver not working for i386 based BSP in current rtems-libbsd master

Id	4052
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-08-14T19:50:32.000Z
Updated	2025-09-05T02:57:43.980Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::wontfix, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4052
Merges	0

Original author: soja

Current rtems-libbsd master branch fails to compile the e1000 driver for i386 based BSPs.

The corresponding patches from the 5-freebsd-12 branch need to be ported to master.

Author: Chris Johns 2022-11-29T23:18:19.000Z

Original author: soja

- **Resolution** set to ~"wontfix"
- **Status** changed from *new* to *closed*

Please reopoen with suitable patches for `6-freebsd-12`

Author: Amar Takhar 2025-09-05T02:57:43.941Z

mentioned in issue #4053

3.9.1.199 2349 - Timecounter: Add PPS support

Id	2349
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2015-05-20T06:33:02.000Z
Updated	2025-09-05T02:57:38.373Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, tickettype::enhancement, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2349
Merges	0

Original author: sebastian.huber

The FreeBSD timecounter implementation supports the RFC 2783 PPS-API. This support is currently disabled in RTEMS.

Author: Chris Johns 2017-08-14T00:08:39.000Z

Original author: sebastian.huber

- **Milestone** changed from %”5.0” to %”Indefinite”
- **Version** ~”4.11” deleted

Author: Trac Migrate 2022-05-23T07:02:19.000Z

Original author: sebastian.huber

- **Milestone** changed from %”Indefinite” to %”6.1”

Author: Trac Migrate 2022-05-23T07:04:29.000Z

Original author: sebastian.huber

In [changeset:”9b4212c7b0d6b4b3c73c0a6ea582a72b16ccd374/rtems” 9b4212c7/rtems]:

```
kern_ntptime.c: Disable freebsd features

Update #2349.
```

Author: Trac Migrate 2022-05-23T07:04:31.000Z

Original author: sebastian.huber

In [changeset:”a3930e8c49b29fa4a98c4eeeddbdb7b18d371292/rtems” a3930e8c/rtems]:

```
kern_ntptime.c: Add lmax() qmin() definitions

Update #2349.
```

Author: Trac Migrate 2022-05-23T07:04:34.000Z

Original author: sebastian.huber

In [changeset:”bf61753a9209233119c8e5723463d2e21ef56e2a/rtems” bf61753a/rtems]:

```
kern_tc.c: Add atomic dependencies required by the PPS API

Update #2349.
```

Author: Trac Migrate 2022-05-23T07:04:36.000Z

Original author: sebastian.huber

In [changeset:"95c747d9e71d4d385cfed0554c9dadfa76c44491/rtems" 95c747d9/rtems]:

```
kern_tc.c: Replace FreeBSD event mechanism by adding pointers to␣
↪function

Update #2349.
```

Author: Trac Migrate 2022-05-23T07:04:39.000Z

Original author: sebastian.huber

In [changeset:"ac4ea5366482dad9150c5aaa652b71c00960741f/rtems" ac4ea53/rtems]:

```
score: Rename tc_getfrequency()

Rename tc_getfrequency() to _Timecounter_Get_frequency().

Update #2349.
```

Author: Trac Migrate 2022-05-23T07:04:41.000Z

Original author: sebastian.huber

In [changeset:"c34d3aecb19dd78c8204fcc9342aecdaedf38d38/rtems" c34d3ae/rtems]:

```
kern_tc.c: Add definitions required by PPS API

Update #2349.
```

Author: Trac Migrate 2022-05-23T07:04:43.000Z

Original author: sebastian.huber

In [changeset:"13513b810422fe181254cba32d61d85ad79d6cf2/rtems" 13513b81/rtems]:

```
kern_tc.c: Enable PPS API support

Update #2349.
```

Author: Trac Migrate 2022-05-23T07:04:45.000Z

Original author: sebastian.huber

In [changeset:"b304603b62e3c6d579bcad5ab6bd45b455cfa39f/rtems" b304603b/rtems]:

```
kern_ntptime.c: Add define in order to remove warning

Update #2349.
```

Author: Trac Migrate 2022-05-23T07:04:48.000Z

Original author: sebastian.huber

In [changeset:"b3e4f5809d4a3b4d235cd175f39d1d95a0c2b128/rtems" b3e4f58/rtems]:

```
timepps.h: PPS_SYNC defined by default

Update #2349.
```

Author: Trac Migrate 2022-05-23T07:04:50.000Z

Original author: sebastian.huber

In [changeset:"5ccf9605ddfd0a226f7f1c6c3ecde8623b82c837/rtems" 5ccf960/rtems]:

```
timecounter.h: Add _Timecounter_Discipline()

Update #2349.
```

Author: Trac Migrate 2022-05-23T07:04:52.000Z

Original author: sebastian.huber

In [changeset:"6553bf4ab60490134f362e3933023bb5bbceecdf/rtems" 6553bf4/rtems]:

```
testsuites/sptests: Add sppps01 test

Update #2349.
```

Author: Trac Migrate 2022-05-23T07:04:54.000Z

Original author: sebastian.huber

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"495f8363ded3ea881f0c5f960ff49baa59a2ac9b/rtems" 495f836/rtems]:

```
score: Reformat for code coverage

Close #2349.
```

Author: Trac Migrate 2022-05-27T09:25:53.000Z

Original author: sebastian.huber

In [changeset:"044e8b6b979cc8186b435ea60411789fe5cb7e87/rtems" 044e8b6/rtems]:

```
score: Fix pps_fetch()

Return early only if there was a timeout, otherwise return the PPS info.

Update #2349.
```

Author: Trac Migrate 2022-05-27T11:37:42.000Z

Original author: sebastian.huber

In [changeset:"34ba0e5a8e5d8f9c9ce2b10bcc4887b82130a0c1/rtems" 34ba0e5a/rtems]:

```
sppps01: Improve default handler test

Update #2349.
```

Author: Trac Migrate 2022-06-10T09:06:14.000Z

Original author: sebastian.huber

In [changeset:"11621c9c521f7d9fe5e090a06f469b5d41e6be17/rtems" 11621c9c/rtems]:

```
kern_tc.c: Update pps_event() for uniprocessor configurations

Since pps->capgen equal to zero is not a special value in uniprocessor
↪configurations, there is no need to check for this condition.

Update #2349
```

Author: Trac Migrate 2022-06-23T07:42:35.000Z

Original author: sebastian.huber

In [changeset:"94df3a7a6d7c778766ed30a41b55f700475f7e25/rtems" 94df3a7a/rtems]:

```
kern_tc.c: Provide a weak hardpps() implementation

The real implementation of hardpps() is defined in kern_ntptime.c.  Use
↪it only
if the NTP support is needed by the application.

Update #2349.
```

Author: Trac Migrate 2022-07-05T13:10:33.000Z

Original author: sebastian.huber

In [changeset:"eefaf0687c2af9f17c98f4f22fbb5a34642ea1d5/rtems" eefaf068/rtems]:

```
sppps01: Add test case for early returns of pps_event()

Update #2349.
```

Author: Trac Migrate 2022-07-13T13:58:58.000Z

Original author: sebastian.huber

In [changeset:"013e028f8742f547885a78dd4dab069a6984a26f/rtems" 013e028/rtems]:

```
sppps01: Fix test in SMP configurations

Update #2349.
```

Author: Amar Takhar 2024-04-25T20:44:46.705Z

changed the description

Author: Amar Takhar 2025-09-05T02:57:38.346Z

mentioned in issue #2870

3.9.1.200 4834 - close_editor problem of RTEMS4.13/5.1 (cloned)

Id	4834
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2023-01-30T03:43:51.000Z
Updated	2025-06-10T15:03:19.797Z
Milestone	6.1
Labels	cpukit::shell, priority::normal, resolution::fixed, rtems::shell, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4834
Merges	0

Original author: chenjin_zhong

Cloned from #4564:

Hi, I find when close editor in shell console.some errors will occur. I check and analyse the source code of medit.c. the code fragment is listed as follows.

if defined(__rtems__)

case ctrl('w'): ed = ed->env->current; close_editor(ed); break;

else

case ctrl('w'): close_editor(ed); ed = ed->env->current; break;

endif

static void close_editor(struct editor *ed) { struct env *env = ed->env; if (ed->dirty) { display_message(ed, "Close %s without saving changes (y/n)? ", ed->filename); if (!ask()) { ed->refresh = 1; return; } }

delete_editor(ed);

ed = env->current; if (!ed) { ed = create_editor(env); new_file(ed, ""); } ed->refresh = 1; }

static void delete_editor(struct editor *ed) { if (ed->next == ed) { ed->env->current = NULL; } else { ed->env->current = ed->prev; } ed->next->prev = ed->prev; ed->prev->next = ed->next; if (ed->start) free(ed->start); clear_undo(ed); * free(ed);** }

as seen above, if the macro **__rtems__** is defined. the delete_editor function will free **ed** pointer. Therefore, after the next loop, the **ed** is an invalid pointer.I have checked the code of https:

//github.com/ringgaard/sanos/blob/master/src/utils/edit/edit.c. the code is as follows. **case ctrl('w'): close_editor(ed); ed = ed->env->current; break;**

Author: Trac Migrate 2023-01-31T05:17:32.000Z

Original author: chenjin_zhong

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"3ad2789fc68308a48119d736c89c93f493d18013/rtems" 3ad2789/rtems]:

```
libmisc/shell/edit: Fix closing the editor

Closes #4834
```

Author: Gedare Bloom 2025-06-10T15:03:20.106Z

changed the description

3.9.1.201 4759 - TLS support is broken for ARMv6

Id	4759
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-11-14T00:31:55.000Z
Updated	2025-06-10T15:03:19.269Z
Milestone	6.1
Labels	arch:arm, cpukit::shell, priority::normal, resolution::fixed, rtems::shell, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4759
Merges	0

Original author: jkillelea

I have found two possible memory exceptions under `rtems_shell_init` when running on the raspberry pi 1 BSP.

First, a possible null pointer dereference from `getpwuid_r(0, &pwd, NULL, 0, &pwd_res);` in `rtems_shell_init_once`. The NULL pointer is never checked before it is used as a backing buffer for `pwd`.

Second, usage of `stdin`, `stdout`, and `stderr` cause memory exceptions in `rtems_shell_run` when used, for example `shell_env->parent_stdin = stdin;`.

- getpwuid_r_patch.txt

Author: Trac Migrate 2022-11-14T00:32:43.000Z

Original author: jkillelea

- **Attachment** getpwuid_r_patch.txt added

Author: Trac Migrate 2022-12-11T15:06:45.000Z

Original author: jkillelea

It appears that raspberry pi does not support _Thread_Local attributes. Rebuilding GCC with the flag `--without_newlib_tls` seems to fix most errors. The null pointer error in getpwuid_r is actually ok, it's the call to set errno later in the function that causes failures.

Author: Trac Migrate 2022-12-15T07:18:06.000Z

Original author: jkillelea

What happens if you run the sptls01, sptls02, and sptls03 tests on this BSP?

After a tool update, did you recompile everything?

Author: Trac Migrate 2022-12-18T18:03:05.000Z

Original author: jkillelea

I recompiled everything with the same `--without_newlib_tls` flag, yes. That seemed to fix most issues. Certain miscellaneous packages fail to compile, but the kernel, BSP, and libbsd all work. I can reach an interactive terminal inside qemu now, and can reach the terminal prompt over serial on real hardware (unclear why I can't type yet, but that feels unrelated).

Author: Trac Migrate 2022-12-19T06:43:45.000Z

Original author: jkillelea

Disabling the Newlib TLS configuration is really not a long term option. We should figure out why the TLS support is broken on this BSP. What happens if you run the sptls01, sptls02, and sptls03 tests on this BSP?

Author: Trac Migrate 2022-12-26T23:22:52.000Z

Original author: jkillelea

Hi there, sorry for the delay. Here's the result of running each test on real hardware. ` * **BEGIN OF TEST SPTLS 1** * **TEST VERSION: 6.0.0.240987228f7f7bab90c20efb8d219e26cf5f51c5** * TEST STATE: EXPECTED_PASS * **TEST BUILD: RTEMS_POSIX_API** * TEST TOOLS: 12.2.1

20221121 (RTEMS 6, RSB 65f83cf973d6f1f8974ea1818e653753b83eaea8, Newlib b9898fc)

* **FATAL** * fatal source: 9 (RTEMS_FATAL_SOURCE_EXCEPTION)

R0 = 0x0000007b R8 = 0x770e8bde R1 = 0x0000000a R9 = 0x5f4cdb15 R2 = 0x00000001 R10 = 0xe38f3ff7 R3 = 0x0024c068 R11 = 0xb1bc579f R4 = 0x00000000 R12 = 0x01010101 R5 = 0x0000007b SP = 0x00303998 R6 = 0x00000008 LR = 0x00200600 R7 = 0x002001e8 PC = 0x0020059c CPSR = 0x600001d3 VEC = 0x00000004 RTEMS version: 6.0.0.240987228f7f7bab90c20efb8d219e26cf5f51c5 RTEMS tools: 12.2.1 20221121 (RTEMS 6, RSB 65f83cf973d6f1f8974ea1818e653753b83eaea8, Newlib b9898fc) executing thread ID: 0x09010001 executing th`

` * **BEGIN OF TEST SPTLS 2 * * TEST VERSION: 6.0.0.240987228f7f7bab90c20efb8d219e26cf5f51c5** * TEST STATE: EXPECTED_PASS * **TEST BUILD: RTEMS_POSIX_API** * TEST TOOLS: 12.2.1 20221121 (RTEMS 6, RSB 65f83cf973d6f1f8974ea1818e653753b83eaea8, Newlib b9898fc) A::globalCounter() = 0

* **FATAL** * fatal source: 9 (RTEMS_FATAL_SOURCE_EXCEPTION)

R0 = 0x00000017 R8 = 0x00000000 R1 = 0x0000000a R9 = 0x00000000 R2 = 0x00003008 R10 = 0x00000000 R3 = 0x00000000 R11 = 0x00000000 R4 = 0x00226158 R12 = 0x00000000 R5 = 0x00302888 SP = 0x0030b290 R6 = 0x00000000 LR = 0x002006ac R7 = 0x00000000 PC = 0x00200ff0 CPSR = 0x20000153 VEC = 0x00000004 RTEMS version: 6.0.0.240987228f7f7bab90c20efb8d219e26cf5f51c5 RTEMS tools: 12.2.1 20221121 (RTEMS 6, RSB 65f83cf973d6f1f8974ea1818e653753b83eaea8, Newlib b9898fc) executing thread ID: 0x0a010001 executing th`

` * **BEGIN OF TEST SPTLS 3 * * TEST VERSION: 6.0.0.240987228f7f7bab90c20efb8d219e26cf5f51c5** * TEST STATE: EXPECTED_PASS * **TEST BUILD: RTEMS_POSIX_API** * TEST TOOLS: 12.2.1 20221121 (RTEMS 6, RSB 65f83cf973d6f1f8974ea1818e653753b83eaea8, Newlib b9898fc)

* **END OF TEST SPTLS 3** *

[RTEMS shutdown] `

GCC was compiled via `rsb` using the flag `--without_newlib_tls`, but the kernel was built from source. Couldn't find where to use the same flag for that.

Author: Trac Migrate 2023-01-03T07:49:36.000Z

Original author: jkillelea

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"f8cb1f483db81f7c99020032fe578e94d62d8bc5/rtems" f8cb1f48/rtems]:

```
arm: Enable thread ID register for ARMv6

Close #4759.
```

Author: Trac Migrate	2023-01-03T07:53:06.000Z

Original author: jkillelea

- **Summary** changed from *RPi: crashes when shell starts* to *TLS support is broken for ARMv6*

Author: Gedare Bloom	2025-06-10T15:03:19.439Z

changed the description

3.9.1.202 4751 - chmod problem in shell of RTEMS 6

Id	4751
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2022-11-10T00:49:30.000Z
Updated	2025-06-10T15:03:18.369Z
Milestone	6.1
Labels	cpukit::shell, priority::normal, resolution::fixed, rtems::shell, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4751
Merges	0

Original author: chenjin_zhong

Cloned from #4558:

Hi, I find one problem in rtems_shell_main_chmod function. the usage of this instruction is descripted as “chmod 0777 n1 n2... #change filemode”, .the src code is listed as follows. the bold part should be replaced with **chmod(argv[n], mode)**?

```
static int rtems_shell_main_chmod(
int argc,
char *argv[]
)
{
int           n;
mode_t        mode;
unsigned long tmp;

```

(continues on next page)

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```
if (argc < 2) {
fprintf(stderr,"%s: too few arguments\\n", argv[0]);
return -1;
}

/*
*  Convert arguments into numbers
*/
if ( rtems_string_to_unsigned_long(argv[1], &tmp, NULL, 0) ) {
printf( "Mode argument (%s) is not a number\\n", argv[1] );
return -1;
}
mode = (mode_t) (tmp & 0777);

/*
*  Now change the files modes
*/
for (n=2 ; n < argc ; n++)
chmod(argv[n++], mode); /* <<<< here */

return 0;
}
```

Author: Chris Johns 2022-11-30T00:05:18.000Z

Original author: chenjin_zhong

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2022-12-26T19:37:09.000Z

Original author: chenjin_zhong

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"c8c713c6bdd73aa1d491f0f42bb5236e927e5f03/rtems" c8c713c/rtems]:

```
rtems_shell_main_chmod: Correct argument indexing

Closes #4751
```

Author: Gedare Bloom 2025-06-10T15:03:18.620Z

changed the description

3.9.1.203 4629 - shell: Potential stack corruption in rtems_shell_init()

Id	4629
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-03-15T06:11:06.000Z
Updated	2025-06-10T15:03:17.953Z
Milestone	6.1
Labels	cpukit::shell, priority::normal, resolution::fixed, rtems::shell, ticket-type::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4629
Merges	0

Original author: sebastian.huber

The rtems_shell_init() passes the address of a stack variable (exit_code) to rtems_shell_run(). If wait == false, then the stack variable goes out of scope but may be accessed by the created shell thread.

Author: Trac Migrate 2022-03-15T06:11:35.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
- The rtems_shell_init() passes the address of a stack variable to rtems_shell_run(). If wait == false, then the stack variable goes out of scope but may be accessed by the created shell thread.
?                                                                 ^^

+ The rtems_shell_init() passes the address of a stack variable (exit_code) to rtems_shell_run(). If wait == false, then the stack variable goes out of scope but may be accessed by the created shell thread.
?                                                                 ^^^^^^^^ ^^^^^^
```

Author: Trac Migrate 2022-03-18T07:06:49.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"b837c8386954b2aff5ee563ffec4383cb4052a43/rtems" b837c83/rtems]:

```
shell: Avoid potential stack corruption

The rtems_shell_init() passed the address of a stack variable
(exit_code) to rtems_shell_run().  If wait == false, then the stack
variable goes out of scope but may be accessed by the created shell
thread.

The rtems_shell_script() was affected by the same problem.

Close #4629.
```

Author: Gedare Bloom 2025-06-10T15:03:18.027Z

changed the description

3.9.1.204 4763 - Detect terminal size

Id	4763
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2022-11-22T09:07:57.000Z
Updated	2025-06-10T15:03:17.090Z
Milestone	6.1
Labels	cpukit::shell, priority::normal, resolution::fixed, rtems::shell, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4763
Merges	0

Add support to set the rows and columns in the shell. RTEMS does not have a full tty system and does not carry `terminfo` so implement a shell based approach to let some commands manage the terminal size.

Update the `edit` command to support the terminal size.

Fix the help lines.

Author: Trac Migrate 2022-11-22T19:49:00.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"8425e679c149096a5d0a97990f6ebdbdd55ca522/rtems" 8425e67/rtems]:

```
libmisc/shell: Support terminal size as env variables

Closes #4763
```

Author: Gedare Bloom 2025-06-10T15:03:17.145Z

changed the description

3.9.1.205 1459 - Add rtems_shell_main_monitor to cpukit/libmisc/shell/shell.h?

Id	1459
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2009-10-29T06:18:16.000Z
Updated	2025-06-10T15:03:16.584Z
Milestone	6.1
Labels	cpukit::shell, priority::normal, resolution::fixed, rtems::shell, ticket-type::defect, version::4.10
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/1459
Merges	0

Original author: ralf.corsepius

rtems_shell_main_monitor is a private function of cpukit/libmisc/shell/cmds.c

However, the way testsuites/libtests/monitor02/init.c uses it (as a public/exported function) to me reads as a strong indication that rtems_shell_main_monitor() should be “made public” by declaring/prototyping it in cpukit/libmisc/shell/shell.h

Author: Chris Johns 2010-05-15T06:42:03.000Z

Original author: ralf.corsepius

- **Cc** added @vattam.santosh
- **Owner** set to @chrisj
- **Milestone** changed from %”4.10” to %”4.11”
- **Status** changed from *new* to *assigned*

Exporting this interface from the shell is a hack as well. The central issue is the purpose of the monitor now we have a shell. Should we consume the monitor into the shell and remove the duplicate code in RTEMS ? The monitor has stdin handling, terminal handling plus help formatting (which is much better than the shell’s). I think these can all be merged into the shell and the monitor goes away.

I think this should be moved to the 4.11 milestone, which I have done, and we live with the current code for 4.10.

Once issue this raises is the pressure on the shell with all the files that are starting to appear in it. Maybe the monitor command remain in its directory.

Author: Joel Sherrill 2014-11-23T17:37:06.000Z

Original author: ralf.corsepius

- **Description** changed

```
rtems_shell_main_monitor
is a private function of
cpukit/libmisc/shell/cmds.c

However, the way
testsuites/libtests/monitor02/init.c
uses it (as a public/exported function) to me reads as a strong
↪indication that
rtems_shell_main_monitor()
should be "made public" by declaring/prototyping it in
cpukit/libmisc/shell/shell.h
```

- **Milestone** changed from %”4.11” to %”5.0”
- **Summary** changed from *Add rtems_shell_main_monitor to cpukit/libmisc/shell/shell.h?* to *Make Monitor Commands first class citizens in shell,*

The monitor predates the shell. There is really no point in having two CLIs. The monitor commands are available in the shell but the integration is a hack. The monitor commands need to be made first class shell commands and the set for looking at objects enhanced to include more objects.

This may be a decent GSoC project.

Author: Trac Migrate 2017-11-09T06:26:42.000Z

Original author: ralf.corsepius

- **Milestone** changed from %”5.0” to %”6.1”

Milestone renamed

Author: Chris Johns 2022-11-29T21:49:38.000Z

Original author: ralf.corsepius

- **Description** changed

```
rtems_shell_main_monitor
is a private function of
cpukit/libmisc/shell/cmds.c

However, the way
testsuites/libtests/monitor02/init.c
uses it (as a public/exported function) to me reads as a strong
↪indication that
rtems_shell_main_monitor()
```

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```
should be "made public" by declaring/prototyping it in
cpukit/libmisc/shell/shell.h
```

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Fixed in 2011.

Author: Gedare Bloom 2025-06-10T15:03:16.658Z

changed the description

3.9.1.206 4835 - medit malloc problem of RTEMS (cloned)

Id	4835
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2023-01-30T03:46:07.000Z
Updated	2025-06-10T15:03:16.222Z
Milestone	6.1
Labels	cpukit::shell, priority::normal, resolution::fixed, rtems::shell, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4835
Merges	0

Original author: chenjin_zhong

Cloned from #4565:

I find malloc function is called by move_gap function in medit.c. The returned value does not check. At least 32KB of memory is allocated at each time, maybe more than. The returned value “start” should be check to avoid malloc failure. The move_gap function should return immediatelty when malloc failure. the code frament is listed as follows.

static void move_gap(struct editor *ed, int pos, int minsize) { int gapsize = ed->rest - ed->gap; unsigned char *p = text_ptr(ed, pos); if (minsize < 0) minsize = 0; if (minsize <= gapsize) { if (p != ed->rest) { if (p < ed->gap) { memmove(p + gapsize, p, ed->gap - p); } else { memmove(ed->gap, ed->rest, p - ed->rest); } ed->gap = ed->start + pos; ed->rest = ed->gap + gapsize; } } else { int newsize; unsigned char *start; unsigned char *gap; unsigned char *rest; unsigned char *end;

if (gapsize + MINEXTEND > minsize) minsize = gapsize + MINEXTEND; newsize = (ed->end - ed->start) - gapsize + minsize; ** start = (unsigned char *) malloc(newsize);* // TODO check for out of memory gap = start + pos; rest = gap + minsize; end = start + newsize;

if (p < ed->gap) { memcpy(start, ed->start, pos); memcpy(rest, p, ed->gap - p); memcpy(end - (ed->end - ed->rest), ed->rest, ed->end - ed->rest); } else { memcpy(start, ed->start, ed-

>gap - ed->start); memcpy(start + (ed->gap - ed->start), ed->rest, p - ed->rest); memcpy(rest, p, ed->end - p); }

free(ed->start); ed->start = start; ed->gap = gap; ed->rest = rest; ed->end = end; }

ifdef DEBUG

memset(ed->gap, 0, ed->rest - ed->gap);

endif

}

Author: Trac Migrate 2023-01-31T05:17:34.000Z

Original author: chenjin_zhong

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"edea93c40bd621d215d1ece07b9e43f255e8b420/rtems" edea93c/rtems]:

```
libmisc/shell/edit: Return if no memory in move_gap

Closes #4835
```

Author: Gedare Bloom 2025-06-10T15:03:16.303Z

changed the description

3.9.1.207 4097 - shell: CRTL-U sets the cursor to the wrong position (cloned)

Id	4097
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-09-28T12:13:46.000Z
Updated	2025-06-10T15:03:15.047Z
Milestone	6.1
Labels	cpukit::shell, priority::normal, resolution::fixed, rtems::shell, ticket-type::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4097
Merges	0

Original author: frank_k

Cloned from #4096:

This patch fixes a tiny bug in the command line editing of the RTEMS shell. Typing CTRL-U in the shell should remove all characters left of the cursor. After pressing CTRL-U, the current implementation does wrongly place the cursor at the end of the line instead at its beginning.

To reproduce the bug, start the shell and type 'abc123' (no <RETURN>):

{{{ ~/src/rtems $ qemu-system-arm -net none -nographic -M realview-pbx-a9 -m 256M -kernel build/arm/realview_pbx_a9_qemu/testsuites/libtests/dl10.exe * **BEGIN OF TEST libdl (RTL) 10** * * **TEST VERSION: 6.0.0.d9bdf166644f612dd628fe4951c12c6f8e94ba5f** * TEST STATE: USER_INPUT * **TEST BUILD: RTEMS_DEBUG RTEMS_NETWORKING RTEMS_POSIX_API RTEMS_SMP** * TEST TOOLS: 10.2.1 20200904 (RTEMS 6, RSB 31f936a7b74d60bda609a9960c6e1a705ba54974, Newlib a0d7982) RTL (libdl) commands: dl, rtl

RTEMS Shell on /dev/foobar. Use 'help' to list commands. SHLL [/] # abc123 }}}

Then move the cursor onto the '1' by hitting three times the <ARROW-LEFT> key. Next type <CTRL>-U:

{{{ SHLL [/] # 123 }}}

Note that the cursor is at the end of the line (after '3') instead of correctly at the beginning (on the '1'), now.

Continuing typing 'echo ' incorrectly results in the output:

{{{ SHLL [/] # 123echo 123 }}}

The patch changes this behavior so that the cursor in the second last step will be on the '1' and typing 'echo ' will then correctly reflected as:

{{{ SHLL [/] # echo 123 }}}

Author: Trac Migrate 2020-09-28T12:17:27.000Z

Original author: frank_k

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"ffc928b9a2a5e36e1aeb2872c3bef251e3b154da/rtems" ffc928b/rtems]:

```
Fixing bug in line editing of the shell with CTRL-U.

This patch fixes a tiny bug in the command line editing of the RTEMS shell.
Typing CTRL-U in the shell should remove all characters left of the cursor.
After pressing CTRL-U, the current implementation does wrongly place the cursor
at the end of the line instead at its beginning.

To reproduce the bug, start the shell and type 'abc123' (no <RETURN>):

```

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```
10
11
12  ~/src/rtems $ qemu-system-arm -net none -nographic -M realview-pbx-a9␣
↪\\
13  -m 256M -kernel build/arm/realview_pbx_a9_qemu/testsuites/libtests/
↪dl10.exe
14
15
16    *** BEGIN OF TEST libdl (RTL) 10 ***
17    *** TEST VERSION: 6.0.0.d9bdf166644f612dd628fe4951c12c6f8e94ba5f
18    *** TEST STATE: USER_INPUT
19    *** TEST BUILD: RTEMS_DEBUG RTEMS_NETWORKING RTEMS_POSIX_API RTEMS_
↪SMP
20    *** TEST TOOLS: 10.2.1 20200904 \\
21    (RTEMS 6, RSB 31f936a7b74d60bda609a9960c6e1a705ba54974, Newlib␣
↪a0d7982)
22
23
24      RTL (libdl) commands: dl, rtl
25      RTEMS Shell on /dev/foobar. Use 'help' to list commands.
26      SHLL [/] # abc123
27
28      Then move the cursor onto the '1' by hitting three times the
↪<ARROW-LEFT> key.
29      Next type <CTRL>-U:
30
31
32
33        SHLL [/] # 123
34
35        Note that the cursor is at the end of the line (after '3')␣
↪instead of correctly
36        at the beginning (on the '1'), now.
37
38        Continuing typing 'echo ' incorrectly results in the output:
39
40
41
42          SHLL [/] # 123echo 123
43
44          The patch changes this behavior so that the cursor in the␣
↪second last step will
45          be on the '1' and typing 'echo ' will then correctly␣
↪reflected as:
46
47
48
49            SHLL [/] # echo 123
50
```

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```
51          Close #4097.
```

Author: Gedare Bloom 2025-06-10T15:03:15.241Z

changed the description

3.9.1.208 4557 - medit problem in RTEMS6 (was 4.11/5.1)

Id	4557
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2021-12-02T14:41:23.000Z
Updated	2025-06-10T15:03:03.589Z
Milestone	6.1
Labels	cpukit::shell, priority::normal, resolution::fixed, rtems::shell, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4557
Merges	0

Original author: chenjin_zhong

Hi, I find when open medit editor in shell console, and then input **CTRL+E/CTRL+X** instructions in medit.the selected text cannot be cut. I review the code in main_medit file. First, when I input **CTRL+E** instruction, the function **select_toggle** is executed and selects the text. Second, when I input **CTRL+X**, the function **cut_selection** copies the selected text to clipboard. but after copy, the selected text is non-selected. Therefore, the **erase_selection** in **cut_selection** cannot take effect. the src code is listed as follows. I suggest that remove **select_toggle** in **copy_selection** function. and add after **copy_selection**. the code frament is marked in bold.

static void select_toggle(struct editor *ed) { ed->selecting = ed->selecting ? 0 : 1; update_selection(ed, ed->selecting); adjust(ed); }

static void cut_selection(struct editor *ed) { copy_selection(ed); erase_selection(ed); select_toggle(ed); }

static void copy_selection(struct editor *ed) { int selstart, selend; if (!get_selection(ed, &selstart, &selend)) return; ed->env->clipsize = selend - selstart; ed->env->clipboard = (unsigned char *) realloc(ed->env->clipboard, ed->env->clipsize); if (!ed->env->clipboard) return; copy(ed, ed->env->clipboard, selstart, ed->env->clipsize); select_toggle(ed); }

case ctrl('c'): copy_selection(ed); select_toggle; break;

Author: Joel Sherrill 2021-12-02T15:50:20.000Z

Original author: chenjin_zhong

First I think you mean main_edit.c ([https://github.com/RTEMS/rtems/blob/master/cpukit/libmisc/shell/main_edit.c])

Did you observe this on real hardware or a simulator? It is possible that the communications program (with hardware) or simulator is grabbing some characters.

It is also possible this is a bug. If this is the case, the code originated from https://github.com/ringgaard/sanos/tree/master/src/utils/edit. If it is a bug, we would like to work with the upstream to get it fixed and then update the code in RTEMS.

The code at the original repository can be compiled natively and you can check the behavior on that. The RTEMS derived version probably can be compiled similarly if that didn't get broken in the merge. Please try to follow up and let's see what is needed.

Author: Trac Migrate 2021-12-05T13:34:32.000Z

Original author: chenjin_zhong

Thank you! I have observed this on real hardware. then, I have checked https://github.com/ringgaard/sanos/tree/master/src/utils/edit. This Bug has been fixed. the code fragment is listed as follows. The erase_selection function is called by the cut_selection function and is able to delete selected characters.

void copy_selection(struct editor *ed) { int selstart, selend; if (!get_selection(ed, &selstart, &selend)) return; ed->env->clipsize = selend - selstart; ed->env->clipboard = (unsigned char *) realloc(ed->env->clipboard, ed->env->clipsize); if (!ed->env->clipboard) return; copy(ed, ed->env->clipboard, selstart, ed->env->clipsize); }

void cut_selection(struct editor *ed) { copy_selection(ed); erase_selection(ed); }

Author: Chris Johns 2022-11-10T00:45:58.000Z

Original author: chenjin_zhong

- **Milestone** changed from %"5.1" to %"6.1"
- **Summary** changed from *medit problem in RTEMS4.11/5.1* to *medit problem in RTEMS6 (was 4.11/5.1)*
- **Version** set to ~"6"

This should check in 6.

Author: Chris Johns 2022-11-29T23:49:49.000Z

Original author: chenjin_zhong

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-02-15T21:00:22.000Z

Original author: chenjin_zhong

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"809e34e52777d3ba17e66cea7796fff71c3372cb/rtems" 809e34e5/rtems]:

```
libmisc/shell/main_edit.c: User cannot cut using ctrl e and x

Closes #4557
```

Author: Gedare Bloom 2025-06-10T15:03:03.828Z

changed the description

3.9.1.209 5152 - RTEMS FDT Add read/write handler support to the shell command

Id	5152
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-11-16T05:54:59.058Z
Closed	2024-11-16T06:50:48.000Z
Updated	2025-06-10T15:03:02.789Z
Milestone	6.1
Labels	cpukit::shell, rtems::shell
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5152
Merges	0

Summary

Provider calls to set a read and write handler for the `rd` and `wr` shell commands. The set calls will return the existing handler.

This change lets a user provide calls to access indirection devices with FDT blobs.

Author: Chris Johns 2024-11-16T05:54:59.157Z

assigned to @chris

Author: Chris Johns 2024-11-16T05:55:39.976Z

See https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/316

Author: Chris Johns 2024-11-16T05:56:01.657Z

mentioned in merge request !316

3.9.1.210 4131 - “fdisk DISK_NAME mount” in bdpart-mount.c uses non-existing file system type “msdos”

Id	4131
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-10-07T14:27:18.000Z
Updated	2025-06-10T15:03:02.011Z
Milestone	6.1
Labels	cpukit::shell, priority::normal, resolution::fixed, rtems::shell, ticket-type::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4131
Merges	0

Original author: frank_k

The function rtems_bdpart_mount() seems to be only used by the ‘fdisk’ shell command to mount all partitions of a disk with a single command:

```
fdisk DISK_NAME mount
mounts the file system of each partition of the disk

fdisk DISK_NAME unmount
unmounts the file system of each partition of the disk
```

The whole command does not work because in file cpukit/libblock/src/bdpart-mount.c line 103 specifies the file system type of each partition to be “msdos”. Yet, “msdos” does not exist. The name must be “dosfs”.

Beside of this fundamental problem, there are more issues with the code in bdpart-mount.c:

1) The function returns RTEMS_SUCCESSFUL despite the mount always fails.

2) The reason for errors is not written to the terminal.

3) The directory ‘/mnt’ is created but not deleted later on (failure or not).

3) There is no documentation about this special ‘fdisk’ feature in the RTEMS Shell Guide. (‘fdisk’ is mentioned but its documentation is a bit short).

4) Only “msdos” formatted partitions can be mounted and all partitions are mounted read only. This is hard coded and cannot be changed by options. Moreover, there is no information about this to the user of the shell (i.e. using ‘fdisk’ mount requires insider knowledge).

How to reproduce:

1) For testing I use the ‘testsuites/samples/fileio/init.c’ sample and since I do not know the ‘root’ password, the password must be removed from that file to login as ‘root’ without password:

```
index 86b34b99dd..51507f9a53 100644
--- a/testsuites/samples/fileio/init.c
+++ b/testsuites/samples/fileio/init.c
@@ -563,8 +563,7 @@ static void fileio_start_shell(void)
writeFile(
"/etc/passwd",
0644,
-    "root:$6$$FuPOhnllx6lhW2qqlnmWvZQLJ8Thr/09I7ESTdb9VbnTOn5.65"
-      "/Vh2Mqa6FoKXwT0nHS/O7F0KfrDc6Svb/sH.:0:0:root::/:/bin/sh\\n"
+    "root::0:0:root::/:/bin/sh\\n"
"rtems::1:1:RTEMS Application::/:/bin/sh\\n"
"test:$1$$oPu1Xt2Pw0ngIc7LyDHqu1:2:2:test account::/:/bin/sh\\n"
"tty:*:3:3:tty owner::/:/bin/false\\n"
```

2) I run the fileio sample using qemu:

```
cd rtems
env QEMU_AUDIO_DRV="none" qemu-system-arm -net none -nographic -M realview-pbx-a9␣
↪-m 256M -kernel build/arm/realview_pbx_a9_qemu/testsuites/samples/fileio.exe
```

3) Type any key to stop the timer and enter the sample tool. Type ‘s’ to enter the shell, login as ‘root’ with empty password.

4) Type the following shell commands (they create a RAM disk, partition it, regsiter it, format it and try to mount it):

```
mkrd
fdisk /dev/rda fat32 16 write mbr
fdisk /dev/rda register
mkdos /dev/rda1
fdisk /dev/rda mount
```

5) The last line above is the command which fails - without an error message. There exists a ‘/mnt’ directory but no ‘/mnt/rda1’ directory as it shoud be:

```
ls -la /mnt
```

6) If you change line 103 of ‘cpukit/libblock/src/bdpart-mount.c’ from “msdos” to “dosfs”, compile and build the executable and re-run the above test, ‘/mnt/rda1’ exists (but the file system is mounted read-only).

Author: Trac Migrate 2020-10-12T11:19:08.000Z

Original author: frank_k

- **Owner** set to Frank Kühndel <frank.kuehndel@embedded-brains.de>
- **Resolution** set to ~”fixed”
- **Status** changed from *assigned* to *closed*

In [changeset:”a479686c112144119866391ceb21c48be6a3eca9/rtems” a479686/rtems]:

```
shell: Remove not functioning fdisk mount/unmount

The shell has an 'fdisk' command which has sub-commands 'mount' and
↪'unmount'.
These two sub-commands have a bug which causes them to be not able
to mount anything. This proposed patch removes the buggy file
cpukit/libblock/src/bdpart-mount.c and the mount/unmount commands
from 'fdisk' as bug fix. The 'fdisk' command itself is not removed.
The reasons for removing the sub-commands (instead of fixing the issue)␣
↪are:

1) The bug has been introduced on 2010-May-31 with commit
29e92b090c8bc35745aa5c89231ce806bcb11e57. Since ten years no one
can use this feature, nor has anybody complained about it.

2) Besides of the 'fdisk' 'mount' sub-command, the shell has the
usual 'mount' and 'unmount' commands which can serve as
substitutes.

3) There are additional minor issues (see further down) which needed to
be addressed when the file will be kept.

What follows below is the precise bug description.

The bug is in function rtems_bdpart_mount() which is only be used
by the 'fdisk' shell command to mount all partitions of a disk with a
single command:



  fdisk DISK_NAME mount
  mounts the file system of each partition of the disk
  fdisk DISK_NAME unmount
  unmounts the file system of each partition of the disk

  The whole command does not work because in file
  cpukit/libblock/src/bdpart-mount.c line 103 specifies the file system␣
↪type
  of each partition to be "msdos". Yet, "msdos" does not exist. The name
  must be "dosfs".

  Beside of this fundamental problem, there are more issues with the␣
↪code
  in bdpart-mount.c:

  1) The function returns RTEMS_SUCCESSFUL despite the mount always␣
↪fails.

  2) The reason for errors is not written to the terminal.

```

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```
  3) The directory '/mnt' is created but not deleted later on (failure
↪or not).

  3) There is no documentation about this special 'fdisk' feature in the
  RTEMS Shell Guide ('fdisk' is mentioned but its documentation is a
  bit short):
  https://docs.rtems.org/branches/master/shell/
  file_and_directory.html#fdisk-format-disk

  4) Only "msdos" formatted partitions can be mounted and all partitions
  are mounted read-only. This is hard coded and cannot be changed by
  options. Moreover, there is no information about this to the user of
  the shell (i.e. using 'fdisk' mount requires insider knowledge).

  How to reproduce:

  1) For testing, I use the 'testsuites/samples/fileio.exe' sample with
↪qemu:



    cd rtems
    env QEMU_AUDIO_DRV="none" qemu-system-arm -net none -nographic \\
    -M realview-pbx-a9 -m 256M -kernel \\
    build/arm/realview_pbx_a9_qemu/testsuites/samples/fileio.exe

    2) Type any key to stop the timer and enter the sample tool.
    Type 's' to enter the shell, login as 'root' with the password
    shown in the terminal.

    3) Type the following shell commands (they create a RAM disk,
    partition it, register it, format it and try to mount it):



      mkrd
      fdisk /dev/rda fat32 16 write mbr
      fdisk /dev/rda register
      mkdos /dev/rda1
      fdisk /dev/rda mount

      4) The last line above is the command which fails - without an
↪error
      message. There exists a '/mnt' directory but no '/mnt/rda1'
↪directory
      as it should be:



```

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```
91          ls -la /mnt
92
93          5) If you change line 103 of 'cpukit/libblock/src/bdpart-mount.c
    ↪'
94          from "msdos" to "dosfs", compile and build the executable and
95          re-run the above test, '/mnt/rda1' exists (but the file system
96          is mounted read-only).
97
98          Close #4131
```

Author: Amar Takhar 2024-04-25T20:48:21.436Z

changed the description

3.9.1.211 5159 - SMP: Race condition in thread priority changes

Id	5159
State	closed
Type	ISSUE
Author	Sebastian Huber
Assignee(s)	Sebastian Huber
Closed by	Chris Johns
Created	2024-11-20T01:11:31.738Z
Closed	2025-01-08T22:39:01.313Z
Updated	2025-04-14T05:39:43.958Z
Milestone	6.1
Labels	qualification, release, smp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5159
Merges	5

Summary

In SMP configurations, explicit thread priority changes (for example rtems_task_set_priority()) and thread priority changes carried out by thread queues (locking protocols such as priority inheritance) are not properly serialized. This leads to a data corruption of the thread control blocks and unpredictable system behaviour.

Explicit thread priority changes are issued by the following operations:

- rtems_task_set_priority()
- rtems_task_restart()
- EDF job deadlines
- Obtaining or releasing a priority ceiling mutex
- pthread_setschedparam()
- pthread_setschedprio()

If one of these operations is carried out while the thread priority is changed in parallel through priority inheritance the error may get triggered. Applications setting the thread priorities only during thread initialization are not affected by the bug.

Steps to reproduce

Applications using the POSIX sporadic server and priority inheritance mutexes have a higher probability to observe the faulty system behaviour.

Author: Sebastian Huber 2024-11-20T01:11:31.842Z

assigned to @sebhub

Author: Sebastian Huber 2024-11-20T01:34:32.208Z

mentioned in merge request !320

Author: Chris Johns 2025-01-08T01:51:47.948Z

MR !320 has broken RTEMS with `RTEMS_DEBUG` enabled and it effects the release:

```
In file included from ../../../cpukit/include/rtems/score/isrlevel.h:44,
from ../../../cpukit/include/rtems/score/isr.h:41,
from ../../../cpukit/include/rtems/config.h:65,
from ../../../cpukit/include/rtems.h:59,
from ../../../bsps/include/bsp/default-initial-extension.h:40,
from ../../../bsps/powerpc/motorola_powerpc/include/bsp.h:29,
from ../../../bsps/shared/start/bspfatal-default.c:38:
../../../cpukit/include/rtems/score/priorityimpl.h: In function '_
↪Priority_Set_action_node':
../../../cpukit/include/rtems/score/priorityimpl.h:338:31: error:
↪'struct <anonymous>' has no member named 'next'
338 |   _Assert( aggregation->Action.next == NULL );
|                               ^
../../../cpukit/include/rtems/score/assert.h:81:12: note: in definition␣
↪of macro '_Assert'
81 |        ( ( _e ) ? \\
|            ^~
../../../cpukit/include/rtems/score/priorityimpl.h: In function '_
↪Priority_Set_action_type':
../../../cpukit/include/rtems/score/priorityimpl.h:353:31: error:
↪'struct <anonymous>' has no member named 'next'
353 |   _Assert( aggregation->Action.next == NULL );
|                               ^
../../../cpukit/include/rtems/score/assert.h:81:12: note: in definition␣
↪of macro '_Assert'
81 |        ( ( _e ) ? \\
|            ^~
```

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```
../../../cpukit/include/rtems/score/priorityimpl.h: In function '_
↪Priority_Set_action':
../../../cpukit/include/rtems/score/priorityimpl.h:371:31: error:
↪'struct <anonymous>' has no member named 'next'
371 |   _Assert( aggregation->Action.next == NULL );
|                               ^
../../../cpukit/include/rtems/score/assert.h:81:12: note: in definition␣
↪of macro '_Assert'
81 |        ( ( _e ) ? \\
|            ^~
```

A non-SMP build with `RTEMS_DEBUG` exposed the incorrect addition of debug assert statements in https://gitlab.rtems.org/rtems/rtos/rtems/-/commit/1c120470984c846f13ea7fb6c40c2e9e87c1784e.

Author: Chris Johns 2025-01-08T01:52:03.465Z

Author: Sebastian Huber 2025-01-08T05:42:48.127Z

mentioned in merge request !354

Author: Kinsey Moore 2025-01-14T03:03:51.924Z

mentioned in merge request !357

Author: Sebastian Huber 2025-02-11T05:38:22.922Z

mentioned in commit 34ba74f4f492030ea33fc23adfd21e20959ba9f8

Author: Sebastian Huber 2025-04-14T05:39:44.121Z

changed the description

3.9.1.212 5072 - JFFS2 rtime decompression bug

Id	5072
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Chris Johns
Created	2024-07-22T18:35:06.731Z
Closed	2024-11-22T02:22:11.318Z
Updated	2025-02-15T05:42:48.580Z
Milestone	6.1
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5072
Merges	5

Summary

The rtime decompressor appears to have a bug when handling corrupted/bad compressed data. The repeat while loop doesn't verify it has space to write out data when handling repeats.

This was observed to cause memory corruption when using multiple JFFS2 partitions set to use the same compression buffer (which is itself a bug/incorrect configuration).

Steps to reproduce

Configure a system with multiple JFFS2 filesystems configured to use the same rtime compression buffer and access them from multiple threads. RAM and flash corruption occur quickly.

Author: Kinsey Moore 2024-07-22T18:35:06.856Z

assigned to @opticron

Author: Kinsey Moore 2024-07-23T14:38:12.764Z

mentioned in merge request !123

Author: Sebastian Huber 2024-11-12T04:47:10.438Z

The change introduced test failures (jffs2_fsrdwr.exe and jffs2nand_fsrdwr.exe):

```
*** BEGIN OF TEST FSRDWR JFFS2 ***
*** TEST VERSION: 6.0.0.177a8c57ea
*** TEST STATE: EXPECTED_PASS
*** TEST BUILD: RTEMS_DEBUG
*** TEST TOOLS: 13.3.0 20240521 (RTEMS 6, RSB␣
↪46a5bfdc3fc95d503a63f9bee515e73d9198aa71, Newlib 1b3dcfd)
Initializing filesystem JFFS2
```

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```
test case: read_write_test
<4>JFFS2: Error: jffs2_decompress returned 1
../../../testsuites/fstests/fsrdwr/init.c: 140 n == len
```

Author: Kinsey Moore 2024-11-22T01:01:59.291Z

mentioned in merge request !327

Author: Chris Johns 2024-11-22T02:22:35.118Z

mentioned in commit c529694656cdea9b92332c61fad7fd23026beb23

Author: Chris Johns 2024-11-22T02:23:18.111Z

mentioned in merge request !328

Author: Sebastian Huber 2024-11-27T03:48:53.253Z

mentioned in merge request !332

Author: Sebastian Huber 2025-02-15T05:34:22.571Z

mentioned in merge request !423

Author: Sebastian Huber 2025-02-15T05:42:48.447Z

mentioned in merge request !424

Author: Kinsey Moore 2025-09-23T19:37:41.673Z

mentioned in merge request !743

Author: Kinsey Moore 2025-09-29T16:45:04.526Z

mentioned in merge request !758

3.9.1.213 5171 - Allow relocateable installations for legacy Makefile support

Id	5171
State	closed
Type	ISSUE
Author	Sebastian Huber
Closed by	Gedare Bloom
Created	2024-12-05T03:09:50.581Z
Closed	2024-12-05T06:42:51.458Z
Updated	2025-02-11T05:38:23.618Z
Milestone	6.1
Labels	backport, qualification, rtems::build
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5171
Merges	4

Summary

For the legacy Makefile support, let the user provide RTEMS_ROOT to use relocated BSP installations.

3.9.1.213.1.1 Pre-set options

Author: Sebastian Huber 2024-12-05T03:09:50.676Z

cloned from #5170

Author: Sebastian Huber 2024-12-05T03:10:07.674Z

Author: Sebastian Huber 2024-12-05T03:12:07.605Z

mentioned in merge request !342

Author: Sebastian Huber 2025-02-11T05:38:23.012Z

mentioned in commit a357119bd62a4fac383b12a790fabde24b8829da

3.9.1.214 5185 - Waf version support breaks if the version has no version label

Id	5185
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-01-22T02:46:38.653Z
Closed	2025-01-22T04:06:27.832Z
Updated	2025-02-11T05:38:23.103Z
Milestone	6.1
Labels	rtems::build
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5185
Merges	4

In a release there is no version label. The variable is `None` and that breaks the code with:

```
+ ./waf configure '--prefix=/opt/rtems/deploy' '--rtems-config=config.ini'
Setting top to                           : /opt/work/chris/rtems/releases/rtems-deployment-6.1/build/rtems-kernel-bsps-1/rtems-kernel-bsps-1-6.1/rtems-6.1
Setting out to                           : /opt/work/chris/rtems/releases/rtems-deployment-6.1/build/rtems-kernel-bsps-1/rtems-kernel-bsps-1-6.1/rtems-6.1/build
Traceback (most recent call last):
File "/opt/work/chris/rtems/releases/rtems-deployment-6.1/build/rtems-kernel-bsps-1/rtems-kernel-bsps-1-6.1/rtems-6.1/.waf3-2.1.4-72787ce48f227ac42c4b0da24e780694/waflib/Scripting.py", line 122, in waf_entry_point
run_commands()
File "/opt/work/chris/rtems/releases/rtems-deployment-6.1/build/rtems-kernel-bsps-1/rtems-kernel-bsps-1-6.1/rtems-6.1/.waf3-2.1.4-72787ce48f227ac42c4b0da24e780694/waflib/Scripting.py", line 185, in run_commands
ctx=run_command(cmd_name)
^^^^^^^^^^^^^^^^^^^^
File "/opt/work/chris/rtems/releases/rtems-deployment-6.1/build/rtems-kernel-bsps-1/rtems-kernel-bsps-1-6.1/rtems-6.1/.waf3-2.1.4-72787ce48f227ac42c4b0da24e780694/waflib/Scripting.py", line 176, in run_command
ctx.execute()
File "/opt/work/chris/rtems/releases/rtems-deployment-6.1/build/rtems-kernel-bsps-1/rtems-kernel-bsps-1-6.1/rtems-6.1/.waf3-2.1.4-72787ce48f227ac42c4b0da24e780694/waflib/Configure.py", line 86, in execute
super(ConfigurationContext,self).execute()
File "/opt/work/chris/rtems/releases/rtems-deployment-6.1/build/rtems-kernel-bsps-1/rtems-kernel-bsps-1-6.1/rtems-6.1/.waf3-2.1.4-72787ce48f227ac42c4b0da24e780694/waflib/Context.py", line 92, in execute
self.recurse([os.path.dirname(g_module.root_path)])
File "/opt/work/chris/rtems/releases/rtems-deployment-6.1/build/rtems-kernel-bsps-1/rtems-kernel-bsps-1-6.1/rtems-6.1/.waf3-2.1.4-72787ce48f227ac42c4b0da24e780694/waflib/Context.py", line 133, in recurse
user_function(self)
```

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```
File "/opt/work/chris/rtems/releases/rtems-deployment-6.1/build/rtems-kernel-bsps-1/rtems-kernel-bsps-1-6.1/rtems-6.1/wscript", line 1604, in configure
configure_version(conf)
File "/opt/work/chris/rtems/releases/rtems-deployment-6.1/build/rtems-kernel-bsps-1/rtems-kernel-bsps-1-6.1/rtems-6.1/wscript", line 1442, in configure_version
v_str += "." + version_label
~~~~^~~~~~~~~~~~~~~
TypeError: can only concatenate str (not "NoneType") to str
shell cmd failed: /bin/sh -ex  /opt/work/chris/rtems/releases/rtems-deployment-6.1/build/rtems-kernel-bsps-1/do-build
error: building rtems-kernel-bsps-1
```

Author: Chris Johns 2025-01-22T02:46:38.995Z

assigned to @chris

Author: Chris Johns 2025-01-22T02:46:39.443Z

Author: Chris Johns 2025-01-22T02:46:53.216Z

cloned to #5186

Author: Amar Takhar 2025-01-22T02:51:56.240Z

changed title from **Waf v{-a-}rsion support breaks if the version has no version label** to **Waf v{+e+}rsion support breaks if the version has no version label**

Author: Chris Johns 2025-01-22T02:56:59.804Z

mentioned in merge request !362

Author: Chris Johns 2025-02-11T05:38:22.598Z

mentioned in commit 0a46769ba42d3476b0f37a85db49b3276658d293

3.9.1.215 5183 - On some platforms, linking requires ABI flags

Id	5183
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Gedare Bloom
Created	2025-01-17T01:02:30.430Z
Closed	2025-01-19T20:38:11.670Z
Updated	2025-01-19T20:38:11.682Z
Milestone	6.1
Labels	rtems::build
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5183
Merges	4

Summary

For at least the rv64imafdc and likely others, the linking step when building an application externally requires ABI flags when linking separately or it will generate an error complaining of mismatches.

Steps to reproduce

3.9.1.215.2.1 Pre-set options

Author: Kinsey Moore 2025-01-17T01:02:30.617Z

assigned to @opticron

Author: Kinsey Moore 2025-01-17T01:02:31.085Z

Author: Kinsey Moore 2025-01-17T01:04:53.653Z

mentioned in merge request !359

Author: Gedare Bloom 2025-01-19T20:37:49.397Z

mentioned in commit f7de6d5425f1867dbfe90715288f839cb740d6a8

3.9.1.216 5147 - Clean up projects list

Id	5147
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Gedare Bloom, Joel Sherrill
Closed by	Gedare Bloom
Created	2024-11-09T01:31:35.504Z
Closed	2025-01-18T02:26:00.627Z
Updated	2025-01-18T02:26:00.638Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5147
Merges	0

Summary

On our new projects website needs a review we need to either close issue or remove the project:: tag from it so it doesn't show up for instance we have one for the x86_64 BSP which already exists.

We should have this for %6.1 because when we have the new release we'll get more attention and it will be an easy way for them to contribute if they wish.

Steps to reproduce

https://projects.rtems.org

3.9.1.216.2.1 Pre-set options

Author: Amar Takhar 2024-11-09T19:15:51.068Z

@chris @gedare @joel .. can we go through the list and figure it out? I'm going to add the project:: tags now and we will use those the gsoc ones will remain.

Author: Gedare Bloom 2024-11-09T18:40:03.092Z

I usually go through this list as part of preparing the GSoC Application. I don't see a need to align this activity with a release milestone.

A different problem is more important to me on the Projects page, which is that it has somehow merged what used to be small GCI-like tasks in with small GSoC tasks, e.g., https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/3913

I guess I'll have to go through all those project ideas and filter them so we have a clean set of GSoC-appropriate tasks and sizes with correct labels, and also have additional project ideas that may not be ready or eligible for GSoC.

Author: Gedare Bloom 2024-11-09T18:42:16.402Z

I think I know what happened. We used to have separate tags for project size, and for gsoc. It looks like they got merged together in a single label during the gitlab transition. It should mostly only be affecting the small sizes.

Author: Amar Takhar 2024-11-09T18:52:08.104Z

Yeah I just looked and this is what most likely happened. I think I recall we merged a bunch of labels together.

We can have a project::simple or something for those tasks? No reason to not identify them for being completed.

Author: Gedare Bloom 2024-11-09T18:53:33.052Z

I'm not sure what you mean by `package::` tags. We had ticket keywords before to help us sort the projects. They were in the set of `BSP`, `testing`, `ecosystem`, `kernel`, `API`, `statistics`, `libbsd`

We should just remove the `gsoc` labels and keep the size?

Author: Amar Takhar 2024-11-09T19:17:14.700Z

That's a typo on my parent meant to type project:: it was late.

We can remove the gsoc labels yes. I can re-add missing labels to issues if they were in trac.

Do we want a project::tiny tag to move the GCI tasks there or identify any other tiny projects?

Author: Gedare Bloom 2024-11-09T19:24:59.077Z

I would for now stick with having small/medium/large sizes, and a GSoC identifier. if we need to add a size below small for non-GSoC projects we can come up with that later.

Author: Amar Takhar 2024-11-09T19:50:57.973Z

I think that's a bad idea if we kick them out of project::small then they will go into the wind of all the other tickets we have to go though we've already identified it as something needing to be done so we should identify it it somehow. We can always delete the project::tiny label later if we don't think it's worthwhile but I don't want to just have random open tickets floating we have 600 of those already.

Author: Gedare Bloom 2024-11-09T20:03:36.966Z

Maybe I wasn't clear. Keep them as `project::small` but remove any `gsoc` or `gsoc::` labels. I should be able to do this, if the decision isn't clear to you.

Author: Amar Takhar 2024-11-09T20:05:35.776Z

Ohh I see it's a different issue nevermind I thought you were talking about getting rid of the ``project::small`` tag so they don't show up on the website.

Author: Amar Takhar 2024-11-09T20:06:37.566Z

If your intention is to not have the two labels overlap then the code can just be made to work on multiple pages and you can have list on the /gsoc/ page as well.

Author: Gedare Bloom 2024-11-09T21:57:52.790Z

My thought is to organize all projects by size, but then have other ways to filter, such as by GSoC, or by project tags (bsp, kernel, etc). Whether we do that filtering by making pages, or by making separate sections, or by presenting the label information in the web site, is something still to be determined.

Author: Amar Takhar 2024-11-09T22:41:51.607Z

Okay well we can have any permutation we want on the website but we must organise them using labels on the issues. We decided that issues were defacto in their respective repositories but we can make the webpage pull off the issues using the labels that way both always match. Happy to create whatever labels are required.

Author: Gedare Bloom 2024-11-10T00:51:32.740Z

ok. i think I want project::{size} and then gsoc::{tag} for tag in the list above (bsp, testing, ecosystem, ...) as those are gsoc-specific filters we created. This way, we can pull those tags and sort them by size for GSoC, while we can have an overall open projects page with all sizes listed?

Author: Amar Takhar 2024-11-10T01:03:47.520Z

Okay so can you give me a list of gsoc tags you want? Do you put more than 1 on an issue? If they are scoped you can only use 1.

Author: Kinsey Moore 2024-11-14T23:26:34.640Z

assigned to @joel

Author: Chris Johns 2024-11-22T00:48:34.656Z

changed the description

Author: Chris Johns 2024-11-22T00:54:40.362Z

Can the bot be fixed to not show closed issues with projects labels?

Author: Gedare Bloom 2024-12-04T21:39:40.832Z

Author: Chris Johns 2025-01-16T23:38:20.504Z

assigned to @gedare

Author: Gedare Bloom 2025-01-18T02:25:39.129Z

added 2h of time spent

3.9.1.217 4767 - Add rtems-lwip to release packages

Id	4767
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2022-11-30T20:56:56.000Z
Closed	2024-11-22T01:06:31.466Z
Updated	2024-11-22T01:06:31.534Z
Milestone	6.1
Labels	priority::normal, tickettype::enhancement, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4767
Merges	0

The rtems-lwip repository is young but mature enough now to include in the release package. Please add it.

This should primarily related to the rtems-release repository.

Author: Joel Sherrill 2023-01-04T22:39:43.000Z

- **Description** changed

```
The rtems-lwip repository is young but mature enough now to include in␣
↪the release package. Please add it.
+
+ This should primarily related to the [rtems-release](https://git.
↪rtems.org/rtems-release/) repository.
```

Author: Chris Johns	2024-10-18T00:17:14.984Z

It is in the `sources` but it is not listed in the front page. Add to the coverpage of the release.

Author: Chris Johns	2024-11-22T01:06:31.589Z

moved to rtems-release#6

3.9.1.218 4929 - RTEMS tools installs into $PREFIX/share/rtems and not $PREFIX/share/rtems6

Id	4929
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2023-07-19T21:17:53.000Z
Closed	2024-11-22T01:04:23.284Z
Updated	2024-11-22T01:04:23.295Z
Milestone	6.1
Labels	priority::normal, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4929
Merges	0

Should these path be aligned?

At the moment it creates confusion if the user enters the wrong prefix when building RTEMS.

Author: Chris Johns	2024-05-02T23:17:26.558Z

changed the description

Author: Chris Johns	2024-05-02T23:17:26.595Z

assigned to @chris and unassigned @tracmigrate

Author: Chris Johns	2024-11-22T01:04:22.900Z

Closing this because the Python C++ pretty printer integration has coded the `rtems` path here https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/cpukit/sapi/src/exinit.c?ref_type=heads#L77 and this change would break that code.

3.9.1.219 5144 - libdl and related shell extensions are not supported on RISC-V

Id	5144
State	closed
Type	ISSUE
Author	Pavel Pisa
Assignee(s)	Chris Johns, Pavel Pisa
Closed by	Kinsey Moore
Created	2024-11-06T08:28:23.303Z
Closed	2024-11-22T00:17:08.693Z
Updated	2024-11-22T00:17:08.766Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5144
Merges	1

Summary

The build of my template rtems-omk-template fails when libdl test aplication is enabled for riscv-beaglevfire and riscv-mpfs64imafdc and I expect that problem is related to all RISC-V targets.

The include file is not installed

The build end with error message:

```
fatal error: rtems/rtl/dlfcn-shell.h: No such file or directory
```

The problem seems to be cause by missing build spec file

```
spec/build/cpukit/objdlriscv.yml
```

The related RISC-V relocation support seems to be present in the CPU kit libdl sources

```
cpukit/libdl/rtl-mdreloc-riscv.c
```

But it is not referenced by any `.yml` files at all.

Steps to reproduce

Configure RTEMS for any of RISC-V targets, i.e.:

```
!/bin/sh

MY_DIR="$(cd "$(dirname "$0")" ; pwd -L )"

RTEMS_DIR=../../../git/rtems

$RTEMS_DIR/waf bspdefaults --rtems-bsps=riscv/beaglevfire -t "$RTEMS_DIR" -o "$MY_
↪DIR" --prefix "/opt/rtems/6" >config.ini || exit 1

mv config.ini config.ini.default
sed <config.ini.default >config.ini \\
```

(continues on next page)

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```
-e 's/^RTEMS_POSIX_API .*$/RTEMS_POSIX_API = True/' \\
-e 's/^RTEMS_SMP .*$/RTEMS_SMP = True/' \\

$RTEMS_DIR/waf configure -t "$RTEMS_DIR" -o "$MY_DIR" --rtems-config "$MY_DIR/
↪config.ini" --prefix "/opt/rtems/6" || exit 1
$RTEMS_DIR/waf || exit 1
$RTEMS_DIR/waf install || exit 1
```

and file

```
riscv-rtems6/beaglevfire/lib/include/rtems/rtl/dlfcn-shell.h
```

is missing in the `/opt/rtems/6`

It can be found there for other architectures

```
arm-rtems6/csb336/lib/include/rtems/rtl/dlfcn-shell.h
arm-rtems6/lpc40xx_ea_ram/lib/include/rtems/rtl/dlfcn-shell.h
arm-rtems6/tms570ls3137_hdk_intram/lib/include/rtems/rtl/dlfcn-shell.h
arm-rtems6/tms570ls3137_hdk_sdram/lib/include/rtems/rtl/dlfcn-shell.h
arm-rtems6/xilinx_zynq_a9_qemu/lib/include/rtems/rtl/dlfcn-shell.h
arm-rtems6/xilinx_zynq_zedboard/lib/include/rtems/rtl/dlfcn-shell.h
i386-rtems6/pc686/lib/include/rtems/rtl/dlfcn-shell.h
```

3.9.1.219.2.1 Pre-set options

Author: Chris Johns 2024-11-08T00:05:23.570Z

assigned to @ppisa and @chris

Author: Chris Johns 2024-11-08T00:05:53.463Z

Please add the YML files to support RISCV.

Author: Pavel Pisa 2024-11-08T07:48:42.476Z

I have tried to add RISCV into libdl build, see patch libdl-riscv.diff, but there are more warnings

```
../../../../../git/rtems/cpukit/libdl/rtl-mdreloc-riscv.c: In function
↪'rtems_rtl_elf_reloc_rela':
../../../../../git/rtems/cpukit/libdl/rtl-mdreloc-riscv.c:169:9:␣
↪warning: assignment to 'Elf64_Word *' {aka 'unsigned int *'} from␣
↪incompatible pointer type 'Elf64_Addr *' {aka 'long unsigned int *'}␣
↪[-Wincompatible-pointer-types]
169 |   where = (Elf_Addr *)(sect->base + rela->r_offset);
|         ^
```

(continues on next page)

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```
../../../../../git/rtems/cpukit/libdl/rtl-mdreloc-riscv.c:172:36: warning: cast from pointer to integer of different size [-Wpointer-to-int-cast]
172 |   Elf_Word pcrel_val = symvalue - ((Elf_Word) where);
|                                    ^
../../../../../git/rtems/cpukit/libdl/rtl-mdreloc-riscv.c:307:15: warning: cast to pointer from integer of different size [-Wint-to-pointer-cast]
307 |               (void *) * (where), where, rtems_rtl_obj_oname (obj));
|               ^
../../../../../git/rtems/cpukit/libdl/rtl-mdreloc-riscv.c:374:61: warning: format '%ld' expects argument of type 'long int', but argument 4 has type 'unsigned int' [-Wformat=]
374 |                           "%s: Unsupported relocation type %ld "
|                                                            ~~^
|                                                              |
|                                                              long int
|                                                            %d
../../../../../git/rtems/cpukit/libdl/rtl-mdreloc-riscv.c:166:12: warning: variable 'local' set but not used [-Wunused-but-set-variable]
166 |   Elf_Word local = 0;
|            ^~~~~
../../../../../git/rtems/cpukit/libdl/rtl-mdreloc-riscv.c:165:12: warning: unused variable 'addend' [-Wunused-variable]
165 |   Elf_Word addend = (Elf_Word) rela->r_addend;
|            ^~~~~~
../../../../../git/rtems/cpukit/libdl/rtl-mdreloc-riscv.c:164:13: warning: unused variable 'tmp' [-Wunused-variable]
164 |   Elf_Word  tmp;
|             ^~~
```

I try to analyze what is right, but it would need real testing to be sure that there is not something missed.

I am curious even about `libdl` for x86_64, because that architecture is missing in `cpukit/libdl/rtl-elf.h` to select 64-bit `ELFSIZE`

```
#if defined(__powerpc64__) || defined(__aarch64__) || (__riscv_xlen == 64)
#define ELFSIZE 64
#else
#define ELFSIZE 32
#endif
```

Author: Chris Johns 2024-11-14T09:37:48.710Z

The `libdl` support for RISCV does not build as the following symbols are missing:

- `rtems_rtl_elf_arch_parse_section`

- `rtems_rtl_elf_arch_section_alloc`
- `rtems_rtl_elf_arch_section_free`
- `rtems_rtl_elf_rel_resolve_sym`
- `rtems_rtl_elf_relocate_rel`
- `rtems_rtl_elf_relocate_rel_tramp`
- `rtems_rtl_elf_relocate_rela`
- `rtems_rtl_elf_relocate_rela_tramp`
- `rtems_rtl_elf_relocate_tramp_max_size`
- `rtems_rtl_elf_section_flags`
- `rtems_rtl_elf_unwind_deregister`
- `rtems_rtl_elf_unwind_parse`
- `rtems_rtl_elf_unwind_register`
- `rtems_rtl_obj_tramp_alignment`

These calls will need to be provided for RISCV for it to be added to the build.

Author: Chris Johns 2024-11-14T09:40:09.995Z

It could be my spec foo is rubbish. Checking some more.

Author: Chris Johns 2024-11-14T09:44:52.426Z

Yeap my spec changes were broken. Back on track.

Author: Chris Johns 2024-11-14T10:05:50.435Z

mentioned in merge request !312

Author: Pavel Pisa 2024-11-14T20:09:42.197Z

My test code with my libdl-riscv.diff builds completely but I have stuck on some sane setup of BeagleV-Fire for testing. May it be, I try QEMU the first. As for the code, there are warnings and I do not like how `Elf_Word *where;` is assigned `where = (Elf_Addr *)(sect->base + rela->r_offset);` and used in the function `rtems_rtl_elf_reloc_rela()`. It would wort to check all relocation cases what should be the length of modified address in the binary image. I expect that it should be sometimes 32-bit Elf_Word for 32-bit targets but 64-bit for 64-bit targets. It should be of native endianning for constants acessed by LW but it should be little-endian when code is modified, because even big-endian RISC-V reads code in little-endian to allow variable length instructions. There rules seems to be mostly followed by the `rtl-mdreloc-riscv.c` code but I am not 100% confident and warnings make me even more unsure. So it should be check against spec.

Author: Chris Johns 2024-11-14T20:10:38.728Z

Can you please try the MR I have posted? It is !312. Thanks

3.9.1.220 5120 - Refactor xilinx_zynqmp_lp64_cfc400x BSP watchdog disable

Id	5120
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Kinsey Moore
Closed by	Amar Takhar
Created	2024-08-18T01:29:25.544Z
Closed	2024-11-22T00:08:09.288Z
Updated	2024-11-22T00:08:09.373Z
Milestone	6.1
Labels	bsp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5120
Merges	1

The `xilinx_zynqmp_lp64_cfc400x` BSP requires a special console sequence sent over the NS1550 UART driver in the PL to the board hardware to disable the board watchdog. This is needed to run the tests in the testsuite or they watchdog.

This issue to move the sequence send into a BSP specific C file that SYSINITs after the console driver has been registered to send the disable sequence. This removes the code from a shared driver placing it into a BSP specific source file linked only into that BSP.

Author: Chris Johns 2024-08-18T01:29:25.642Z

assigned to @opticron

Author: Chris Johns 2024-08-27T03:50:20.081Z

The refactor should move the MMU LPD HP AXI entry to the BSP and remove it from the general table. Some systems have requirements to not have unmapped addresses open. I do not know what happens to an access not mapped? It may lock up a system as there tends to be no bus error timers running.

Author: Kinsey Moore 2024-08-27T15:13:09.950Z

Thanks for creating this issue. I'll remove the entry from the general table. Currently, accesses not mapped at the MMU level will generate a data abort and accesses that don't have a real AXI target will hang the system.

Author: Kinsey Moore 2024-10-18T03:23:34.660Z

mentioned in issue #5119

Author: Kinsey Moore 2024-11-15T22:56:59.211Z

mentioned in merge request !315

3.9.1.221 5118 - confdefs/libio.h references librtemsNfs.h which does not exist

Id	5118
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Joel Sherrill, Gedare Bloom, Vijay Banerjee
Closed by	Kinsey Moore
Created	2024-08-14T03:34:51.153Z
Closed	2024-11-22T00:03:37.687Z
Updated	2024-11-22T00:03:37.767Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5118
Merges	1

The header rtems/confdefs/libio.h includes `librtemsNfs.h` which no longer exists in `rtems.git`. The define `CONFIGURE_FILESYSTEM_NFS` is defined if `CONFIGURE_FILESYSTEM_ALL` is defined.

Should references to NFS be removed from `confdefs` since NFS depends on a networking stack which is a separate package?

At the moment defining `CONFIGURE_FILESYSTEM_ALL` is broken and I suppose not used so should it also be removed?

Author: Chris Johns 2024-10-17T23:58:42.724Z

assigned to @joel

Author: Chris Johns 2024-10-17T23:58:51.323Z

assigned to @gedare

Author: Chris Johns 2024-10-17T23:58:56.518Z

assigned to @vijay

Author: Joel Sherrill 2024-10-24T22:32:06.271Z

I can remove the include but I do not know how to properly replace this with an alternative.

It may make sense to have something like networking/confdefs.h which the USER can include before rtems/confdefs.h. The networking/confdefs.h could then define some macros used by the main confdefs.h but unavailable unless the user does the right thing. FWIW this is the pattern used with the Deos+RTEMS BSPs

Author: Chris Johns 2024-10-24T22:32:06.271Z

Should this be punted off to 7?

Author: Gedare Bloom 2024-11-16T21:54:29.606Z

Should we just remove `CONFIGURE_FILESYSTEM_NFS` from the `CONFIGURE_FILESYSTEM_ALL` and add documentation that configuring network filesystems requires separate/explicit configuration by the user application?

Author: Chris Johns 2024-11-16T21:54:29.572Z

Sounds good and add a note to the v6 release notes that users may need to add it?

Author: Gedare Bloom 2024-11-17T00:13:31.455Z

Yes. It seems to be the least intrusive solution at the moment.

Author: Gedare Bloom 2024-11-17T00:18:39.388Z

mentioned in merge request !317

Author: Kinsey Moore 2024-11-22T00:00:18.773Z

mentioned in merge request rtems-release!17

3.9.1.222 5157 - Add interface between Flashdev and JFFS2

Id	5157
State	closed
Type	ISSUE
Author	Aaron Nyholm
Closed by	Amar Takhar
Created	2024-11-19T01:09:09.261Z
Closed	2024-11-21T23:46:17.471Z
Updated	2024-11-21T23:46:17.675Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5157
Merges	1

Summary

Add an interface that can mount a flashdev device as a JFFS2 filesystem. This increases the functionality of using the flashdev API and removes the need for individual JFFS2 wrappers for each flash driver.

Author: Kinsey Moore 2024-11-19T01:41:41.342Z

mentioned in merge request !319

Author: Aaron Nyholm 2024-11-19T03:34:42.129Z

We should add support for compression control. I've attached a patch which would do that. 0001-bsp-shared-flash-JFFS2-flashdev-support-compression-.patch

Author: Aaron Nyholm 2024-11-19T14:07:19.659Z

Not sure how to update the existing MR as I didn't open it. I can open a new MR if that is easier then applying the patch.

Author: Kinsey Moore 2024-11-19T14:07:19.626Z

As far as I've attempted it, you just grab the repo reference from the MR's code button and you can push to it. I'll apply the patch and update the MR.

Author: Gedare Bloom 2024-11-19T20:51:52.487Z

I think this may be role restricted.

Author: Amar Takhar 2024-11-19T16:15:50.183Z

Only people who can approve MRs can push to them.

3.9.1.223 5161 - Zynq QSPI Flash erases two sectors when requested erase is the sector size.

Id	5161
State	closed
Type	ISSUE
Author	Aaron Nyholm
Closed by	Chris Johns
Created	2024-11-21T05:53:41.205Z
Closed	2024-11-21T23:41:54.037Z
Updated	2024-11-21T23:41:54.099Z
Milestone	6.1
Labels	arch:arm, device
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5161
Merges	1

Summary

The QSPI flash driver for the Zynq currently erases two sectors instead of one when making a call to erase that is aligned to the sector boundary and of sector length.

3.9.1.223.1.1 Pre-set options

Author: Aaron Nyholm 2024-11-21T05:55:39.548Z

mentioned in merge request !325

3.9.1.224 4925 - Deal with GR740 errata: Level-2 Cache Issues H1 2023 (GRLIB-TN-0021)

Id	4925
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Sebastian Huber
Closed by	Kinsey Moore
Created	2023-07-12T04:21:04.000Z
Closed	2024-11-20T15:12:14.483Z
Updated	2024-11-20T15:12:14.560Z
Milestone	6.1
Labels	arch:sparc, priority::normal, qualification, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4925
Merges	1

Original author: sebastian.huber

Evaluate, document, implement workarounds and validate the workarounds for the GR740 errata: Level-2 Cache Issues H1 2023 (GRLIB-TN-0021):

https://gaisler.com/doc/antn/GRLIB-TN-0021.pdf

Author: Amar Takhar 2024-04-25T20:50:48.331Z

changed the description

Author: Amar Takhar 2024-05-17T00:41:07.759Z

assigned to @sebhub

Author: Amar Takhar 2024-05-17T00:41:12.802Z

unassigned @tracmigrate

Author: Amar Takhar 2024-05-17T00:41:28.511Z

Hi Sebastian can this be moved to the %6.2 milestone?

Author: Sebastian Huber 2024-07-02T07:35:23.403Z

mentioned in commit 49310c75121e1be1cadd7c95cf16fc8eaffba92a

Author: Sebastian Huber 2024-11-20T03:31:21.676Z

mentioned in merge request !322

3.9.1.225 4875 - LEON3FT - Power-down workaround

Id	4875
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Sebastian Huber
Closed by	Kinsey Moore
Created	2023-03-09T12:42:53.000Z
Closed	2024-11-20T15:07:54.743Z
Updated	2024-11-20T15:07:54.814Z
Milestone	6.1
Labels	arch:sparc, priority::normal, qualification, tickettype::defect, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4875
Merges	1

Original author: dppinto

Within bspssparcleon3startbspidle.S there is the attached code snapshot, on which line 26 seems to contradict GR712RC board User Manual section 1.7.8 (Errata # 8 - LEON3FT Cache Controller: Incorrect Bus Access After Power-Down):

“1.7.8 LEON3FT Cache Controller: Incorrect Bus Access After Power-Down

A LEON with support for clock gating has one clock that is kept running and one clock that is gated off in power-down mode. Due to a design error, the gated clock was used for logic that keeps track of the state of the AMBA bus. Due to this error, the first instruction or data (whichever is first) access to the bus after leaving power-down might be performed incorrectly.

. . .

Note that the stack pointer or other cachable memory should never be used as the source operand, even if using ASI 1, since this may lead to faulty data being loaded into the data cache.“

One has asked Gaisler’s opinion and this has been the response: _“The errata is perhaps a bit too strongly worded. There is a risk that the load instruction used in the workaround will lead to fetching in incorrect data that gets cached if the address is in a cacheable area but that in itself is not a problem. In order for that to propagate into a real problem there has to be a subsequent load from that address that hits in the Dcache and uses the invalid data before that cache line is either flushed or the data is overwritten by stores. If you know that the address (and the same cache line) will not be loaded from this does not happen. In this case it is reading from the stack of the idle task which is never read from once the idle task is running. So I do not see that this can create a real issue.”_

Either way, we wanted the RTEMS community to double-check that indeed there is not a real problem and eventually place additional comments on the code to better contextualize it w.r.t. the GR712RC User Manual errata # 8.

(Image attached)

Additional Notes:

This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). The original ISVV reference for this issue is RTEMS-SMP-CODE-VER-073.

- Screenshot 2023-03-09 125938.jpg

Author: Trac Migrate 2023-03-09T12:43:34.000Z

Original author: dppinto

- **Attachment** Screenshot 2023-03-09 125938.jpg added

Code

Author: Trac Migrate 2023-03-09T13:01:31.000Z

Original author: dppinto

- **Milestone** set to %”6.1”
- **Version** set to ~”6”

Author: Joel Sherrill 2023-06-22T21:03:07.000Z

Original author: dppinto

- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*
- **Summary** changed from *Power-down workaround* to *LEON3FT - Power-down workaround*

Author: Amar Takhar 2024-04-25T20:50:40.284Z

changed the description

Author: Amar Takhar 2024-05-17T00:45:19.797Z

unassigned @tracmigrate

Author: Amar Takhar 2024-05-17T00:45:25.877Z

assigned to @sebhub

Author: Amar Takhar 2024-05-17T00:45:50.425Z

Hi there Sebastian can this be moved to %6.2?

Author: Sebastian Huber 2024-11-20T02:46:27.829Z

mentioned in merge request !321

3.9.1.226 5150 - record-server.c: CID 1634787: Error handling issues

Id	5150
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Sebastian Huber
Closed by	Amar Takhar
Created	2024-11-13T17:52:30.979Z
Closed	2024-11-13T23:07:25.551Z
Updated	2024-11-13T23:07:25.602Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5150
Merges	1

Summary

The `rtems_record_server()` may attempt to `close()` an unsuccessful `socket()` or it may attempt to close an invalid descriptor (initialized to `-1`) in case the `rtems_timer_create()` failed. The `error` handling section needs to be refactored.

```
*** CID 1634787:  Error handling issues  (NEGATIVE_RETURNS)
/cpukit/libtrace/record/record-server.c: 251 in rtems_record_server()
245         (void) close( cd );
246       }
247
248     error:
249
250       free( items );


      CID 1634787:  Error handling issues  (NEGATIVE_RETURNS)
      "sd" is passed to a parameter that cannot be negative. [Note: The source code implementation of the function has been overridden by a builtin model.]
      251       (void) close( sd );
      252       (void) rtems_timer_delete( timer );
      253     }
      254
      255     typedef struct {
      256       rtems_id       task;


  Steps to reproduce
  ..................



  Pre-set options
  ~~~~~~~~~~~~~~~
```

Author: Gedare Bloom 2024-11-13T17:52:31.177Z

assigned to @sebhub

Author: Sebastian Huber 2024-11-13T22:27:03.025Z

mentioned in merge request !309

3.9.1.227 3707 - Assign each code file to a Doxygen group

Id	3707
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-02-26T13:28:28.000Z
Updated	2024-11-13T01:02:44.585Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3707
Merges	0

Original author: sebastian.huber

Assign each code file (header, C source, assembler) to a Doxygen group. Exclude the legacy network stack and test suites. For third-party code decide case by case. Use this template and place it at the top of the file:

```
/**
* @file
*
* @ingroup RTEMSClassicTasks
*/
```

Do not use @brief and a file description.

Author: Trac Migrate 2019-02-26T13:30:45.000Z

Original author: sebastian.huber

- **Status** changed from *assigned* to *accepted*

Author: Trac Migrate 2019-02-28T10:48:03.000Z

Original author: sebastian.huber

In [changeset:"feea03b625fecc507deab8dbaaafc6b19045e3f1/rtems" feea03b6/rtems]:

```
Remove explicit file names from @file

This makes the @file documentation independent of the actual file name.

Update #3707.
```

Author: Trac Migrate 2019-03-04T06:55:05.000Z

Original author: sebastian.huber

In [changeset:"9d41fca725ed6df5aab84ab6304e21cf1fa04de0/rtems" 9d41fca/rtems]:

```
bsp/altera-cyclone-v: Adjust Doxygen file groups

Update #3707.
```

Author: Trac Migrate 2022-10-24T11:23:06.000Z

Original author: sebastian.huber

In [changeset:"468f21ed4fa7d1742dcba0f94f825448d5dc18d2/rtems" 468f21e/rtems]:

```
bsps: Add Cache Manager implementation group

Update #3707.
```

Author: Trac Migrate 2022-11-30T08:53:00.000Z

Original author: sebastian.huber

- **Milestone** changed from %"6.1" to %"7.1"

Author: Trac Migrate 2023-02-16T07:11:35.000Z

Original author: sebastian.huber

In [changeset:"bb465c8548aaf3c82c0eefb7b386a2fd0dda09f9/rtems" bb465c8/rtems]:

```
doxygen: Add Doxygen files to a group

Update #3707.
```

Author: Trac Migrate 2023-07-21T05:33:09.000Z

Original author: sebastian.huber

In [changeset:"5fb9ebfc9b36cb7af16dcfd75e00bc8e0ffd2b31/rtems" 5fb9ebfc/rtems]:

```
doxgen: Document build system provided files

Update #3707.
```

Author: Trac Migrate 2023-07-26T04:56:38.000Z

Original author: sebastian.huber

In [changeset:"f99f5cec85d3074d83f422656fa0745e87ba5f6d/rtems" f99f5ce/rtems]:

```
libtest: Place files into a Doxygen group

Canonicalize the file headers.

Update #3707.
```

Author: Trac Migrate 2023-07-26T04:56:40.000Z

Original author: sebastian.huber

In [changeset:"58840ffbb0c04dd19f0f532bf5b6e496159e070b/rtems" 58840ffb/rtems]:

```
rtems: Add files to Doxygen groups

Provide basic Doxygen comments.

Update #3706.
Update #3707.
```

Author: Trac Migrate 2023-07-26T04:56:42.000Z

Original author: sebastian.huber

In [changeset:"3e1521eea111a2a8126856c2522bcfdfc0e93b32/rtems" 3e1521ee/rtems]:

```
bsps/sparc: Add files to Doxygen groups

Update #3707.
```

Author: Trac Migrate 2023-07-26T04:56:44.000Z

Original author: sebastian.huber

In [changeset:"233c21a232da05a08ce8cfed1984f6e272822c3d/rtems" 233c21a/rtems]:

```
score: Add files to Doxygen groups

Update #3707.
```

Author: Trac Migrate 2023-07-26T04:56:46.000Z

Original author: sebastian.huber

In [changeset:"5ba465c03b52e817f9bae45bb27afff3e0438df0/rtems" 5ba465c0/rtems]:

```
libcsupport: Add file to Doxygen group

Update #3707.
```

Author: Trac Migrate 2023-07-26T04:56:48.000Z

Original author: sebastian.huber

In [changeset:"d3fe128d67d19fd5bdf77e3d20cb89f0fc9d9b3c/rtems" d3fe128d/rtems]:

```
posix: Add files to Doxygen group

Canonicalize brief descriptions.

Update #3707.
```

Author: Trac Migrate 2023-07-26T04:56:50.000Z

Original author: sebastian.huber

In [changeset:"ec1e500f4f149632404d1dddbb5d29de91bfb035/rtems" ec1e500f/rtems]:

```
timecounter: Add files to Doxygen group

Update #3707.
```

Author: Trac Migrate 2023-07-26T04:56:52.000Z

Original author: sebastian.huber

In [changeset:"1bc5d3e4817f041b79fe71d8af830c4114fd0d2a/rtems" 1bc5d3e4/rtems]:

```
sys: Add files to Doxygen group

Canonicalize brief descriptions.

Update #3707.
```

Author: Trac Migrate 2023-07-26T05:09:40.000Z

Original author: sebastian.huber

- **Milestone** changed from %”7.1” to %”6.1”

For RTEMS 6, the group assignment of files is good enough.

Author: Trac Migrate 2023-07-28T14:39:53.000Z

Original author: sebastian.huber

- **Resolution** set to ~”fixed”
- **Status** changed from *accepted* to *closed*

Author: Trac Migrate 2024-01-15T09:36:58.000Z

Original author: sebastian.huber

In [changeset:”8e8b9bc0b727c9d35b3ac1ef27f90b2f81aefb4c/rtems” 8e8b9bc0/rtems]:

```
bsp/tms570: Relicense to BSD-2-Clause

Change license to BSD-2-Clause according to file history and contributor
agreements.  Add Doxygen file comments.

Update #3053.
Update #3707.
Update #4982.
```

Author: Amar Takhar 2024-04-25T20:47:08.009Z

mentioned in issue #3701

Author: Amar Takhar 2024-04-25T20:47:11.165Z

changed the description

Author: Sebastian Huber 2024-11-13T01:02:44.404Z

mentioned in merge request !306

3.9.1.228 5149 - arm/xilinx_zynq_microzed: Microzed timer is running 3 times the required frequency

Id	5149
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Gedare Bloom
Created	2024-11-12T05:00:36.578Z
Closed	2024-11-12T16:16:35.600Z
Updated	2024-11-12T16:16:35.815Z
Milestone	6.1
Labels	arch:arm, bsp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5149
Merges	1

The BSP default for the Micorzed BSP is:

```
$ ./waf bspdefaults --rtems-bsps=arm/xilinx_zynq_microzed | grep BSP_ARM_A9MPCORE_
↪PERIPHCLK
BSP_ARM_A9MPCORE_PERIPHCLK = 100000000
```

Building a FSBL with Linux using Vivado 2019-2 and the Avnet BSP then using it to boot RTEMS results in 3 times the requested frequency.

The following code gets the correct frequency:

```
uint32_t a9mpcore_clock_periphclk(void) {
return 333333333;
}
```

The BSP should default to the settings provided by the Avnet BSP for Viviado.

Author: Chris Johns 2024-11-12T05:00:36.781Z

assigned to @chris

Author: Chris Johns 2024-11-12T05:19:47.373Z

mentioned in merge request !305

3.9.1.229 5148 - Release notes needed from “Improve event record handling”

Id	5148
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Sebastian Huber
Closed by	Sebastian Huber
Created	2024-11-09T19:48:44.938Z
Closed	2024-11-12T06:01:44.001Z
Updated	2024-11-12T06:01:44.061Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5148
Merges	0

The following discussion from !282 should be addressed:

- [] @gedare started a discussion: (+2 comments)

  The API changes I noticed: * new function `rtems_record_fetch_recommended_item_count()` * new function `rtems_record_fetch_initialize()` * new function `rtems_record_fetch()` * new structure `rtems_record_fetch_control` * new type (enum) `rtems_record_fetch_status` * structure name change `uptime` to `rtems_record_client_uptime` (this is an improvement to avoid polluting the global namespace) * return type change for `rtems_record_client_init` * increment the `RTEMS_RECORD_THE_VERSION` with associated restructuring of the `rtems_record_event` structure And the deprecated and obsoleted call: * `rtems_record_drain` * `rtems_record_writev` It is unusual to directly deprecate and obsolete an API call, but, it seems this function was not documented and was not being used by the external tooling, so I’m willing to let that slide. It should still be noted and treated as a deprecation, even if it was a “hidden interface” just on the chance someone happened to be using it for something.

  Author: Gedare Bloom 2024-11-09T19:48:45.064Z

  assigned to @sebhub

  Author: Sebastian Huber 2024-11-12T06:00:02.771Z

  mentioned in commit sebhub/rtems-release@fa40edb9f8d28cc71fc33e7ae47d2d8548d2e92c

3.9.1.230 5037 - Waf does not handle VERSION file

Id	5037
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-06-13T04:20:39.732Z
Closed	2024-10-30T22:43:38.879Z
Updated	2024-11-03T23:57:01.617Z
Milestone	6.1
Labels	tool::waf
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5037
Merges	1

Summary

Releases add a `VERSION` file that defines the release. This is not working

Steps to reproduce

Add a suitable `VERSION` file then check the version.

Author: Chris Johns 2024-06-13T04:20:39.803Z

assigned to @chris

Author: Chris Johns 2024-06-13T04:20:52.457Z

changed the description

Author: Sebastian Huber 2024-10-11T04:19:17.418Z

The wscript of RTEMS uses a VERSION file. For example:

```
[RTEMS_VERSION]
__RTEMS_MAJOR__ = 1
__RTEMS_MINOR__ = 2
__RTEMS_REVISION__ = 3
RTEMS_VERSION_CONTROL_KEY = 4
```

Author: Chris Johns 2024-10-11T04:19:17.418Z

Yes and thanks. I have a patch to fix this in my queue and I need to find the time to finish testing it.

Author: Chris Johns 2024-10-11T04:22:41.298Z

mentioned in merge request !257

Author: Chris Johns 2024-10-21T00:44:42.187Z

I have updated !257 to resolve the issues raised in the that MR and bring together the various pieces. Once merged I will update the engineering manual with the documentation added to the `wscript`.

The current VC key interface can remain for RTEMS 6 and be removed in RTEMS 7 as we are close to the 6 release. I have provided the replacement interface to aid migration for those who may depend on the interface. Internally some parts have moved to release label from VC key.

Author: Sebastian Huber 2024-10-28T21:04:41.970Z

Why don't we discuss and document the procedure and API changes first? Once this is settled, the implementation can be adjusted.

It seems you want to deprecate `rtems_version_control_key()` and `rtems_version_control_key_is_valid()`. What is the reason for this?

What is a release label?

Author: Chris Johns 2024-10-28T21:04:41.970Z

I have provided updated documentation for review that defines this.

Author: Chris Johns 2024-10-22T23:33:28.967Z

mentioned in commit chris/rtems-docs@e6deaaedf02d7b799dd2e75d5e1d65b9eafde2a1

Author: Chris Johns 2024-10-22T23:34:52.971Z

mentioned in merge request rtems/docs/rtems-docs!62

Author: Chris Johns 2024-10-24T05:42:46.555Z

mentioned in commit chris/rtems-docs@459e942893f9c652b279240da00a1c81ff49b2a4

Author: Sebastian Huber 2024-11-03T23:57:01.522Z

mentioned in merge request !288

3.9.1.231 4338 - rtems_clock_set(): Cannot set future dates later than approximately 2105

Id	4338
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-12T13:52:51.000Z
Updated	2024-11-01T18:04:28.675Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4338
Merges	0

Original author: frank_k

Short Problem Description

RTEMS Classic API Guide says:

> RTEMS can represent time points of this clock in nanoseconds ranging from 1988-01-01T00:00:00.000000000Z to 2514-05-31T01:53:03.999999999Z.
>
> - Yet, years larger than roughly 2105 to 2110 cannot be set
>
> (or at least the date should be wrong but this never occured in my tests).
>
> The possible RETURN VALUES are RTEMS_SUCCESSFUL, RTEMS_INVALID_ADDRESS, RTEMS_INVALID_CLOCK
>
> - Yet, rtems_clock_set() can return status RTEMS_INVALID_NUMBER, too.
>
> (Only for such dates in the far future.)
>
> Call rtems_clock_set() with this time_of-day: { year = 2514, month = 5, day = 31, hour = 1, minute = 53, second = 3, ticks = 995 } The return value will be RTEMS_INVALID_NUMBER.
>
> cpukit/rtems/src/clockset.c: rtems_clock_set() calls
>
> - cpukit/rtems/src/clocktodvalidate.c: _TOD_Validate() and
> - cpukit/rtems/src/clocktodtoseconds.c: _TOD_To_seconds() and
> - cpukit/score/src/coretodset.c: _TOD_Set()
>
> First issue:
>
> _TOD_To_seconds() converts the time_of_day structure into seconds using a variable `time` of type `uint32_t`. This simply overflows when in comes close to year 2110.
>
> Debugger output at the end of _TOD_To_seconds():

```
(gdb) print the_tod->year
$16 = 2104
(gdb) print time
$17 = 4233686400
```

with a higher year:

```
(gdb) print the_tod->year
$28 = 2514
(gdb) print *the_tod
$31 = {
year = 2514,
month = 5,
day = 31,
hour = 1,
minute = 53,
second = 3,
ticks = 995
}
(gdb) print time
$29 = 192272
```

Second issue:

_TOD_To_seconds() can (most likely) not handle the leap year issues of the years 2200, 2300, 2400, 2500 because it has dedicated code for the 2100 case only:

```
  /* The year 2100 is not a leap year */
  if ( time


    = (TOD_SECONDS_AT_2100_03_01_00_00 - TOD_SECONDS_1970_
↪THROUGH_1988)) {
    time -= TOD_SECONDS_PER_DAY;
    }




_TOD_Check_time_of_day_and_run_hooks() causes STATUS_INVALID_
↪NUMBER
.....
↪.....


cpukit/score/src/coretodset.c: _TOD_Set() calls

* cpukit/score/src/coretodset.c:
_TOD_Check_time_of_day_and_run_hooks()

```

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```
in this code snippet (note ``return status``):


.. code-block::

    status = _TOD_Check_time_of_day_and_run_hooks( tod );
    if ( status != STATUS_SUCCESSFUL ) {
    _TOD_Release( lock_context );
    return status;
    }


_TOD_Check_time_of_day_and_run_hooks( tod ) can return status␣
↪STATUS_INVALID_NUMBER which is not documented for rtems_
↪clock_set(). The small time in seconds value 192272 from␣
↪the integer overrun discussed above triggers the middle␣
↪``if`` clause:


.. code-block::

    static Status_Control _TOD_Check_time_of_day_and_run_
↪hooks(
    const struct timespec *tod
    )
    {
    if ( !_Watchdog_Is_valid_timespec( tod ) ) {
    return STATUS_INVALID_NUMBER;
    }

    if ( tod->tv_sec < TOD_SECONDS_1970_THROUGH_1988 ) {
    return STATUS_INVALID_NUMBER;
    }

    if ( _Watchdog_Is_far_future_timespec( tod ) ) {
    return STATUS_INVALID_NUMBER;
    }

    return _TOD_Hook_Run( TOD_ACTION_SET_CLOCK, tod );
    }



Final Notes
...........


* I found `#2665 <https://gitlab.rtems.org/rtems/rtos/rtems/-/
↪issues/2665>`_ and #2548 but I do not say these are␣
```

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```
↪relevant here.
64 * ``#define WATCHDOG_MAX_SECONDS 0x3fffffff`` in cpukit/
↪include/rtems/score/watchdogimpl.h covers 17179869183␣
↪seconds which are some 544 years
65 * _TOD_Check_time_of_day_and_run_hooks() seems to be only␣
↪used by _TOD_Set() but _TOD_Set() has three users.
66 * I did not check whether the invers conversation (rtems_
↪clock_get_tod()) works for dates which are centuries in the␣
↪future.
```

Author: Joel Sherrill 2021-03-12T14:02:46.000Z

Original author: frank_k

Will switching to time_t instead of uint32_t largely resolve this?

I think you might have missed some Classic API methods which might overflow. I think anything using uint32_t or rtems_interval related to seconds or ticks over long intervals is suspect. I spotted these:

- rtems_clock_get_seconds_since_epoch() uses rtems_interval.
- rtems_clock_get_ticks_since_boot() also uses rtems_interval but I think this overflows sooner than we'd like

I think the Classic API time of day structure is OK.

Author: Trac Migrate 2021-03-12T15:30:38.000Z

Original author: frank_k

- `time_t` - I presume 64 bit - will avoid the overflow in _TOD_To_seconds() but
- ... there are still the not correctly handled far away leap years.
- ... there is STATUS_INVALID_NUMBER (Should not occur when the overflow is fixed. Yet, I do not like such incorrect code even if it should not trigger.)
- Overruns in rtems_clock_get_ticks_since_boot() are OK because the Classic API Guide says:

  With a 1ms clock tick, this counter overflows after 50 days since boot. This is the historical measure of uptime in an RTEMS system. The newer service rtems_clock_get_uptime() is another and potentially more accurate way of obtaining similar information.

  – At other functions like rtems_clock_get_seconds_since_epoch() I had not have a look, yet.

Author: Joel Sherrill 2021-03-12T15:51:58.000Z

Original author: frank_k

OK. I was unclear but I was asking if it is time to move rtems_interval to 64-bits. This would address the historical ticks since boot and other intervals being 32 bits. The limit also applied to rtems_task_wake_after() and other APIs using rtems_interval for number of ticks.

Author: Trac Migrate 2021-03-12T16:25:14.000Z

Original author: frank_k

Could we please separate the 32-bit rtems_interval issues from this ticket.

If we need a 64-bit division we should think about limiting the time of day to the year 2104. If it is just a multiplication and a couple of leap year fixes, then we should keep the full watchdog range.

Author: Trac Migrate 2021-04-21T05:19:03.000Z

Original author: frank_k

In [changeset:"7bbbe4225c92b646faa14e5f5800ed2feba09899/rtems" 7bbbe42/rtems]:

```
clock:_TOD_To_seconds(): Fix year 2514 overflow

This patch fixes issue #4338 by changing _TOD_Validate()
to only accept years till 2105. This requires another patch
to change the documentation of rtems_clock_set() and other
affected API functions (indicating the end date is 2105 not 2514).

I tried to support till year 2514 but it turned out that
this needs changing the Timer Manager too. That in turn
would mean to change _TOD_Seconds_since_epoch( void )
from 32 to 64 bit. Sebastian pointed out that a naive extension
leads to trouble with 32 bit processors. He deemed a safe
re-implementation too costly performance wise considering
that year 2106 is far away and current binaries using RTEMS
Classic API are unlikely to be in use by 2106.

The constant TOD_SECONDS_AT_2100_03_01_00_00 in
cpukit/rtems/src/clocktodtoseconds.c happens to be wrong by
1 hour. When setting the date 2100-Feb-28 23:59:59 and then
reading the date again you will find yourself in 2100-Feb-27.

Update #4338
```

Author: Trac Migrate 2021-05-06T13:20:56.000Z

Original author: frank_k

Update on status:

This is fixed in code. What is missing is to update the documentation (i.e. removing the 2514-05-31T01:53:03.999999999Z in favor of 2104-12-31T23:59:59.999999999Z in Classic API and may be explaining that the internal clock will run beyond this limit and POSIX API can work with dates beyond 2105). A colleague of mine promised to do that.

Author: Trac Migrate 2021-09-06T10:25:56.000Z

Original author: frank_k

In [changeset:"ad41c17933e40f277d78b0f9d36b691c00bb8ca5/rtems" ad41c179/rtems]:

```
score: Change TOD_LATEST_YEAR to 2099

This simplifies the implementation a bit.  Declare _TOD_Days_to_date[]␣
↪in
<rtems/score/todimpl.h>.  Make _TOD_Days_per_month[] and
_TOD_Days_since_last_leap_year[] static.

Update #4338.
```

Author: Trac Migrate 2021-09-06T10:27:18.000Z

Original author: frank_k

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"081ec5d5e975c8295c768193af7f2e00129885d3/rtems-docs" 081ec5d/rtems-docs]:

```
c-user: Document time of day constraints

Close #4338.
```

Author: Trac Migrate 2021-09-06T10:40:03.000Z

Original author: frank_k

In [changeset:"c0435b5eb2f625356b42f9e35b897ac4cd1b21b4/rtems" c0435b5e/rtems]:

```
rtems: Document time of day constraints

Update #4338.
```

Author: Trac Migrate 2022-07-20T07:39:37.000Z

Original author: frank_k

In [changeset:"d4c21e516a1aee288fbefb79f9eba49be65517b7/rtems" d4c21e5/rtems]:

```
ada/sp09: The year 2100 cannot be set

Update #4338.
```

Author: Amar Takhar 2024-04-25T20:48:43.654Z

changed the description

Author: Joel Sherrill 2024-11-01T18:04:28.619Z

mentioned in issue #5143

Author: Frank Kuehndel 2026-02-16T17:49:12.247Z

mentioned in merge request !339

3.9.1.232 5139 - RISC-V: hello.exe crashes since 2024-Oct-26

Id	5139
State	closed
Type	ISSUE
Author	Frank Kuehndel
Closed by	Amar Takhar
Created	2024-10-28T10:42:31.185Z
Closed	2024-10-31T23:14:23.503Z
Updated	2024-10-31T23:14:23.606Z
Milestone	6.1
Labels	arch:riscv
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5139
Merges	1

Summary

We have a CI job which executes the exact instructions from the rtems user manual: Bare Metal Rust with RTEMS and therefore runs `hello.exe` from the RTEMS samples. This executable crashes when executed. The Ticker sample crashes too.

This is **not** a Rust bug! This is just RTEMS without any Rust involved!

Basically, it does:

1. Run RSB for Risc-V to install Tools.
2. Build for Risc-V

3. Run the `hello.exe` sample

The output looks like:

```
+ qemu-system-riscv64 -M virt -nographic -bios build/riscv/rv64imafdc/testsuites/samples/hello.exe

*** FATAL ***
fatal source: 9 (RTEMS_FATAL_SOURCE_EXCEPTION)
mstatus 0x8000000a00007800
mcause  0x0000000000000007
mepc    0x0000000080005d66
ra      0x0000000080005d36
sp      0x0000000080057a40
gp      0x0000000080053800
tp      0x0000000000000000
t0      0x000000008000b56e
t1      0x000000000000000f
t2      0x0000000000000000
s0      0x000000008005c470
s1      0x0000000000000010
a0      0x0000000080055010
a1      0x0000000000000000
a2      0xffffff788005c480
a3      0x0000000800550b0
a4      0x0000000100000000
a5      0x0000000000000000
a6      0x0000000000000000
a7      0x0000000000000008
s2      0x000000877ffa3b80
s3      0x0000000000000011
s4      0x00000087fffffff0
s5      0x0000000000000020
s6      0x000000877ffa3b91
s7      0x0000008800000000
s8      0x000000008005c46f
s9      0x0000000000000000
s10     0x0000000000000000
s11     0x0000000000000000
t3      0x00000000000000f6
t4      0x0000000000000000
t5      0x0000000000000000
t6      0x0000000000000000
fcsr    0x00000000
RTEMS version: 6.0.0.eaaeebedda43a9e9886078389b3af05d0c267a7a
RTEMS tools: 13.3.0 20240521 (RTEMS 6, RSB 78680c889c2458f26170fe6e4a05c37791aacc87, Newlib 1b3dcfd)
executing thread is NULL
```

The first known buggy build was:

Date:	2024-10-26T02:33:07+02:00
rtems-docs:	a3cfaea265cb6b5af8f0eb6cb5f4ace32873ecf3
rtems-source-builder:	78680c889c2458f26170fe6e4a05c37791aacc87
rtems:	eaaeebedda43a9e9886078389b3af05d0c267a7a

The last known good build was:

Date:	2024-10-25T02:33:14+02:00
rtems-docs:	2cafea3f43db17f7f0355078449acd77527e2dd3
rtems-source-builder:	d7870131e4de88f35ed137e62c83874597ccee82
rtems:	e0f1c8fe0b20ae486f5b99c3a9155686bc3a11f2

By the way, the build of `hello.exe` for SPARC (which is also part of the RTEMS user manual instructions) is not affected and works fine.

Steps to reproduce

Follow the instructions in Bare Metal Rust with RTEMS

3.9.1.232.2.1 Pre-set options

Author: Frank Kuehndel 2024-10-28T13:22:55.971Z

Re-testing shows the problem is in the RTEMS repo beween commits `e0f1c8fe` and `eaaeebed`. Therefore, one of these commits is responsible:

```
commit eaaeebedda43a9e9886078389b3af05d0c267a7a
Author: Purva Yeshi <purvayeshi550@gmail.com>
Date:   Sun Aug 25 18:34:46 2024 +0530

riscv/beaglevfire: Rename 'bvf' to 'beaglevfire'

commit 9d45cf1b44f9d931309618c3a31e949b0c7b9cb0
Author: Francescodario Cuzzocrea <bosconovic@gmail.com>
Date:   Tue Dec 19 22:22:25 2023 +0100

riscv: add bsp for beagle v fire

Signed-off-by: Francescodario Cuzzocrea <bosconovic@gmail.com>

commit 0e3792edbf38580f5be1feefc6ee9543c369e184
Author: Francescodario Cuzzocrea <bosconovic@gmail.com>
Date:   Thu Nov 9 12:38:09 2023 +0100

riscv: Work area size based on /memory node in fdt
```

(continues on next page)

(continued from previous page)

```
20
21 * It is not granted that we will always access to natually aligned
22 access. So, before handling endianess do byte-a-byte load using
23 the appropriate libfdt function to avoid unaligned access issues
24
25 Signed-off-by: Francescodario Cuzzocrea <bosconovic@gmail.com>
26
27 commit 0d15487401d735d2873a83bb5cdb09529fd3d3d3
28 Author: Gedare Bloom <gedare@rtems.org>
29 Date:   Wed Oct 23 14:40:14 2024 -0600
30
31 riscv/niosv: use default values that compile
32
33 commit e9957cd8e37e4e8a1f4e1651abd641c09f9a237d
34 Author: Kevin Kirspel <kirspkt@gmail.com>
35 Date:   Wed Aug 7 15:28:23 2024 -0400
36
37 riscv/niosv: Adding a new NIOS V BSP to RISC-V
38
39 commit d0e9ec85b067dbda19fc50e66830c3e1d92fb232
40 Author: Kinsey Moore <kinsey.moore@oarcorp.com>
41 Date:   Thu Oct 24 21:24:44 2024 -0500
42
43 cpukit/libmisc/shell: Remove shell prompt carriage return
44
45 This removes the carriage return printed before the shell prompt as it
46 can cause other output to be overwritten unexpectedly. This was
47 discovered when using the "cat" shell command on a file whose content
48 contained no trailing \\n\\r and was short enough to be entirely␣
   ↪swallowed
49 by the prompt.
```

Author: Amar Takhar 2024-10-28T19:39:03.215Z

Hi @gedare can you reproduce this? I'm not setup to test this right now thank you.

Author: Gedare Bloom 2024-10-28T19:39:03.179Z

Yes, I reproduced.

Author: Amar Takhar 2024-10-28T19:44:22.365Z

Thank you for checking!

Author: Gedare Bloom 2024-10-28T19:37:58.059Z

This is probably the bad commit: https://gitlab.rtems.org/rtems/rtos/rtems/-/commit/0e3792edbf38580f5be1feefc6ee9543c369e184

Author: Gedare Bloom 2024-10-28T19:40:48.032Z

```
$ git revert 0e3792edbf38580f5be1feefc6ee9543c369e184
$ waf
$ qemu-system-riscv64 -M virt -nographic -bios build/riscv/rv64imafdc/
↪testsuites/samples/hello.exe


*** BEGIN OF TEST HELLO WORLD ***
*** TEST VERSION: 6.0.0.82974c5d5e5dd21f3b15dadd76f3ba2c8d3cbe64
*** TEST STATE: EXPECTED_PASS
*** TEST BUILD:
*** TEST TOOLS: 13.3.0 20240521 (RTEMS 6, RSB␣
↪8fc070bc4a6b4382e4fefbe5872aebb009f976e9, Newlib 1b3dcfd)
Hello World

*** END OF TEST HELLO WORLD ***
```

Author: Gedare Bloom 2024-10-28T19:51:32.792Z

`mepc 0x0000000080005d66`

`` 80005d66: 012a3023 sd s2,0(s4)``

This is in `_Heap_Initialize`. It is a bit odd.

`mcause 0x0000000000000007`

Store/AMO access fault

Non-naturally aligned store access attempt to an I/O region. Store-Conditional or Atomic Memory Operation (AMO) attempt to region without atomic support. Store attempt with address failing PMP check.

Author: Gedare Bloom 2024-10-28T20:06:27.136Z

I think the problem is that both `fdt32_ld` and `fdt32_to_cpu` perform endianness byte swapping.

Author: Gedare Bloom 2024-10-28T20:14:40.991Z

mentioned in merge request !279

3.9.1.233 4695 - Automatic version numbers in the documentation

Id	4695
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Amar Takhar, Chris Johns
Closed by	Amar Takhar
Created	2022-08-03T03:42:50.000Z
Closed	2024-10-31T22:53:47.852Z
Updated	2024-10-31T22:53:47.864Z
Milestone	6.1
Labels	priority::high, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4695
Merges	0

There is no easy means to add the current version number to the documentation using the Sphinx. The supported directives and variables are fine in the documentation however they are no applied in the code blocks.

Provide a means to support a version number that can be used in the documentation and code blocks.

We should also review the documentation code blocks and find ways to include content that does not vary from version to version.

Author: Trac Migrate 2022-08-04T21:50:09.000Z

In [changeset:"c935a2c918e9310233a43a287fdd361a36baab91/rtems-docs" c935a2c/rtems-docs]:

```
building: Add support for an RTEMS version number

- Support using a version number for RTEMS documentation

Updates #4695
```

Author: Trac Migrate 2022-08-04T21:50:11.000Z

In [changeset:"e551cc743527b43de5559d4635b85c32b8d29d27/rtems-docs" e551cc7/rtems-docs]:

```
versions: Update aarch64

Updates #4695
```

Author: Trac Migrate 2022-08-04T21:50:12.000Z

In [changeset:"f028448e5f21f4317a0a7b9b336d7e492ebea6c7/rtems-docs" f028448/rtems-docs]:

```
versions: Update arm

Updates #4695
```

Author: Trac Migrate 2022-08-04T21:50:14.000Z

In [changeset:"3859073d5be52c7161e734067748d5dba9a67bc4/rtems-docs" 3859073/rtems-docs]:

```
versions: Update microblaze, powerpc, riscv and x86_64

Updates #4695
```

Author: Trac Migrate 2022-08-04T21:50:15.000Z

In [changeset:"1d6dcf811f6c7a54da6b214ddd6d3ca8a372bd47/rtems-docs" 1d6dcf8/rtems-docs]:

```
versions: Update user manual

Updates #4695
```

Author: Chris Johns 2022-11-29T22:50:56.000Z

We need to complete this to make a 6.1 release.

Author: Chris Johns 2022-11-29T22:52:11.000Z

- **Priority** changed from ~"normal" to ~"high"

Author: Trac Migrate 2023-12-19T20:41:52.000Z

In [changeset:"e4a0de61e2810ebca2bc8259a952eca43c34208f/rtems-docs" e4a0de6/rtems-docs]:

```
user: Automatic version number fixes

Updates #4695
```

Author: Amar Takhar 2024-05-17T02:05:31.801Z

marked this issue as related to #4648

Author: Chris Johns 2024-10-18T00:20:57.358Z

changed the description

Author: Chris Johns 2024-10-18T00:20:57.399Z

assigned to @amar

Author: Amar Takhar 2024-10-18T20:33:12.465Z

@chris do you have any examples you can point me to? I tried looking do they all need updating with random version numbers?

Author: Chris Johns 2024-10-18T20:33:12.413Z

```
command -v sparc-rtems@rtems-ver-major@-gcc && echo "found" || echo
↪"not found"
```

You can use:

1. `@rtems-ver-major@`
2. `@rtems-ver-minor@`
3. `@rtems-ver-revision@`
4. `@rtems-ver-majminrev@`

Author: Amar Takhar 2024-10-31T22:53:47.497Z

This was fixed in https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/73

3.9.1.234 5142 - Xilinx Zynq devcfg driver changes.

Id	5142
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Amar Takhar
Created	2024-10-30T22:15:05.869Z
Closed	2024-10-31T03:40:33.706Z
Updated	2024-10-31T03:40:33.770Z
Milestone	6.1
Labels	bsp, device
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5142
Merges	1

This issue captures review comments by @gedare in !283. The MR is the patches posted by Patrick to the `devel@rtems` list in 2017.

1. Change the mutex resources to be self-contained
2. Make debug printing conditional code and guard including `stdtio.h` on debug output being enabled
3. Use `printk` for debug output
4. Add SPDX tags to the start of the sources

Author: Gedare Bloom 2024-10-30T22:16:15.877Z

mentioned in merge request !283

Author: Chris Johns 2024-10-31T02:21:54.373Z

The use of `malloc` and `free` is to handle the case of a supplied bit image not aligned at a 64 byte boundary which the PCAP DMA engine requires. If an aligned buffer is written or read there are no heap allocations. The use of `malloc` and `free` could be removed and an alignment error return or we leave the code as is?

I think the SMC call used for loading the PL on a ZynqMP and Versal require alignment. I also notice the DMA alignment value is in the registers header file which is not installed. I will move it to the installed header.

Author: Chris Johns 2024-10-31T03:00:59.633Z

The `WARN()` macros means there are always print statements present so the warnings should not be made conditional on debug.

I will change the `printf` statements to `printk`.

Author: Chris Johns 2024-10-31T03:02:42.444Z

assigned to @chris

Author: Chris Johns 2024-10-31T03:07:20.674Z

mentioned in merge request !286

3.9.1.235 5133 - README.md does not reference the main branch

Id	5133
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Joel Sherrill
Closed by	Amar Takhar
Created	2024-10-05T23:36:04.581Z
Closed	2024-10-28T21:17:18.087Z
Updated	2024-10-28T21:17:18.179Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5133
Merges	0

The README test has `master` are now using `main`. The URLs need to be reviewed and updated.

Author: Chris Johns 2024-10-05T23:36:04.688Z

assigned to @joel

Author: Amar Takhar 2024-10-06T01:14:08.064Z

The only two references to `master` I see in the readme point to the docs which need to be fixed so an issue should be opened there, too.

Author: Amar Takhar 2024-10-28T21:17:32.816Z

Which I opened 3 months back btw: https://gitlab.rtems.org/rtems/docs/rtems-docs/-/issues/17

Author: Chris Johns 2024-10-28T21:17:32.816Z

The issue you linked is not on the 6.1 milestone. Should be on that milestone and this issue closed as a duplicate?

Author: Amar Takhar 2024-10-28T21:17:32.816Z

I just did that thanks

Author: Amar Takhar 2024-10-06T01:17:32.791Z

marked this issue as blocking rtems/docs/rtems-docs#17

Author: Amar Takhar 2024-10-06T01:17:39.379Z

removed the relation with rtems/docs/rtems-docs#17

Author: Amar Takhar 2024-10-06T01:18:00.391Z

marked this issue as blocked by rtems/docs/rtems-docs#17

Author: Amar Takhar 2024-10-28T21:17:17.980Z

marked this issue as a duplicate of rtems/docs/rtems-docs#17

3.9.1.236 4648 - Documentation Needs to Use Version Variables not Hard-Coded Numbers

Id	4648
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Amar Takhar
Closed by	Kinsey Moore
Created	2022-05-08T11:11:42.000Z
Closed	2024-10-25T12:38:32.799Z
Updated	2024-10-25T12:38:32.955Z
Milestone	6.1
Labels	priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4648
Merges	1

This ticket is to track all the documentation changes for the RTEMS 6 releases.

Author: Chris Johns 2022-05-08T11:18:31.000Z

Update the build system to support substitution in areas of the text with:

- `@rtems-version@`
- `@rtems-ver-major@`
- `@rtems-ver-minor@`
- `@rtems-ver-revision@`

The support allows the source to contain in any area:

```
$ sparc-rtems@rtems-ver-major@-gdb app.exe
```

Author: Chris Johns 2022-05-08T11:20:39.000Z

Update to `waf` configure

https://docs.rtems.org/branches/master/user/bsps/bsps-powerpc.html#topaz-hypervisor-guest

Author: Chris Johns 2022-05-08T11:22:58.000Z

No configure command line with `waf`.

https://docs.rtems.org/branches/master/user/bsps/bsps-riscv.html#build-configuration-options

Author: Chris Johns 2022-05-08T11:25:57.000Z

Configure options

https://docs.rtems.org/branches/master/user/bsps/bsps-x86_64.html#build-configuration-options

Author: Chris Johns 2022-05-09T11:45:45.000Z

The use of `.. include::` in the nested `index.rst` files breaks the parsing of Sphinx. I have discovered the read in source that passes through the `source-read` hook is not in the some of the generated HTML pages. I cannot tell if this is a bug in Sphinx, the theme or something else but using the `.. toctree::` works.

We need to change the use includes and update the `README.txt`.

Author: Joel Sherrill 2023-06-22T21:01:23.000Z

- **Summary** changed from *User manual documentation updates* to *User manual documentation updates for RTEMS 6 release*

Author: Joel Sherrill 2023-06-22T21:56:19.000Z

We need to use this extension:

https://github.com/adamtheturtle/sphinx-substitution-extensions

And then a documentation working session to switch the hard-coded versions and lengthy version specific output. Also remove the current hacked [per Chris :)] solution.

Author: Joel Sherrill 2023-06-22T21:57:22.000Z

- **Summary** changed from *User manual documentation updates for RTEMS 6 release* to *Documentation Needs to Use Version Variables not Hard-Coded Numbers*

Author: Amar Takhar 2024-05-17T02:05:31.765Z

marked this issue as related to #4695

Author: Chris Johns 2024-10-18T00:21:20.001Z

changed the description

Author: Chris Johns 2024-10-18T00:21:20.040Z

assigned to @amar and unassigned @tracmigrate

Author: Amar Takhar 2024-10-25T07:10:28.207Z

mentioned in commit amar/rtems-docs@ea559f4475ead95defbbfced743e80fcd4b44bc5

Author: Amar Takhar 2024-10-25T07:11:11.387Z

mentioned in merge request rtems/docs/rtems-docs!68

Author: Amar Takhar 2024-10-25T07:13:09.324Z

mentioned in issue rtems/docs/rtems-docs#41

Author: Amar Takhar 2024-10-25T07:13:21.369Z

marked this issue as related to rtems/docs/rtems-docs#41

Author: Amar Takhar 2024-10-25T12:38:16.936Z

mentioned in commit amar/rtems-docs@a3cfaea265cb6b5af8f0eb6cb5f4ace32873ecf3

3.9.1.237 5067 - Remove essentially dead code from _Terminate()

Id	5067
State	closed
Type	ISSUE
Author	Sebastian Huber
Assignee(s)	Sebastian Huber
Closed by	Sebastian Huber
Created	2024-07-15T14:00:31.234Z
Closed	2024-08-24T08:45:34.991Z
Updated	2024-10-22T20:00:02.824Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5067
Merges	0

Summary

The system termination procedure is implemented like this:

```
void _Terminate(
Internal_errors_Source the_source,
Internal_errors_t      the_error
)
{
_User_extensions_Fatal( the_source, the_error );
_System_state_Set( SYSTEM_STATE_TERMINATED );
_SMP_Request_shutdown();
_CPU_Fatal_halt( the_source, the_error );
}
```

However, the `_User_extensions_Fatal()` should not return for properly configured applications. The `_Terminate()` implementation should be simplified to ease testing and code coverage.

```
void _Terminate(
Internal_errors_Source the_source,
Internal_errors_t      the_error
)
{
_User_extensions_Fatal( the_source, the_error );

/*
* Everything after invoking the fatal extensions is essentially dead code.
* At least one fatal extension of the initial extension sets should not
* return and for example reset the system.  See section "System Termination
* Procedure" in the RTEMS Classic API Guide.
*
* The following code is only executed in badly applications.
*/
_CPU_Thread_Idle_body( 0 );
}
```

Author: Sebastian Huber 2024-07-15T14:00:31.438Z

assigned to @sebhub

Author: Sebastian Huber 2024-07-15T14:46:29.743Z

mentioned in issue #5010

Author: Sebastian Huber 2024-07-15T14:47:18.578Z

mentioned in issue #5011

Author: Sebastian Huber 2024-07-17T17:07:52.549Z

mentioned in merge request !121

Author: Amar Takhar 2024-07-23T02:31:25.373Z

mentioned in merge request rtems/docs/rtems-docs!30

Author: Sebastian Huber 2024-09-19T02:36:30.348Z

mentioned in merge request !225

Author: Sebastian Huber 2024-10-22T20:00:01.546Z

mentioned in commit hongran86/rtems-rh@002c6067baaf0b123aeae30645739d626222ef6e

Author: Sebastian Huber 2024-10-22T20:00:02.007Z

mentioned in commit hongran86/rtems-rh@2128201616e81f4262002c7ade29de0966bb6eff

Author: Sebastian Huber 2024-10-22T20:00:02.048Z

mentioned in commit hongran86/rtems-rh@e2ce9d426a76ddd75e57dc475e4a696931e546aa

Author: Sebastian Huber 2024-10-22T20:00:02.091Z

mentioned in commit hongran86/rtems-rh@cd748d5f6b710b72248c62b69f157abd10b2ab36

3.9.1.238 5119 - AMD (Xilinx) ZymqMP BSP Review

Id	5119
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Gedare Bloom
Closed by	Amar Takhar
Created	2024-08-18T01:17:45.873Z
Closed	2024-10-21T02:26:22.977Z
Updated	2024-10-21T02:26:23.064Z
Milestone	6.1
Labels	arch:aarch64, bsp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5119
Merges	1

Summary

The `rtems-bsps` command for the Xilinx ZymqMP shows:

```
$ ./rtems-bsps --family xilinx-zynqmp
RTEMS 6 Board Support Packages

Architectures: 18
BSP Families: 93
BSPs: 220

aarch64: (families:5 bsps:14)
xilinx_zynqmp_ilp32_qemu     xilinx-zynqmp
xilinx_zynqmp_ilp32_zu3eg    xilinx-zynqmp
xilinx_zynqmp_lp64_a53       xilinx-zynqmp
xilinx_zynqmp_lp64_cfc400x   xilinx-zynqmp
xilinx_zynqmp_lp64_qemu      xilinx-zynqmp
xilinx_zynqmp_lp64_zu3eg     xilinx-zynqmp

arm: (families:25 bsps:76)
xilinx_zynqmp_ultra96        xilinx-zynqmp
```

AMD documents the processing elements on the ZynqMP as APU MP Cores and RPU. The names we have for the BSP do not reflect this. We should use follow the labels AMDs documentation uses.

Duplicate BSPs

The BSP `xilinx_zynqmp_lp64_zu3eg` and `xilinx_zynqmp_lp64_a53` only differ by the console driver from my analysis. We should not have two very similar BSPs that only different with a console driver. It is confusing to users and also makes fixing console driver issues more complex.

The `xilinx_zynqmp_lp64_cfc400x` BSP is special as it has a DTB and a specific sequence to disable a board specific watchdog in the console driver.

The console driver for `xilinx_zynqmp_lp64_zu3eg` is the `xilinx_zynqmp` driver and all BSPs in this family should either use this BSP given the name of the console or all BSPs in this family should use the shared driver. There is no need for a difference and we should resolve this before we release.

The use of A53 in the naming is an implementation detail for the SoC family. If the R5 BSP is named RPU it would be consistent with the documentation. If this path is taken we should add issues to the Zynq and Versal BSPs to bring them in line with this change.

Proposals

1. Rename `xilinx_zynqmp_lp64_zu3eg` to `xilinx_zynqmp_lp64_apu` and remove `xilinx_zynqmp_lp64_a53`
2. Rename `xilinx_zynqmp_lp64_a53` to `xilinx_zynqmp_lp64_apu` and change the console driver in `xilinx_zynqmp` to be `xilinx_zynqmp_lp64_cfc400x` specific.

Author: Chris Johns 2024-10-17T23:55:52.873Z

assigned to @gedare

Author: Amar Takhar 2024-10-18T03:24:34.672Z

This sounds old a good change to me it follows POLA - Principle of least astonishment.

Author: Kinsey Moore 2024-10-18T02:32:16.095Z

I think as part of this we also want to strip the **xilinx_** from the BSP names as was done for the RPU BSPs to shorten them a bit.

Author: Kinsey Moore 2024-10-18T02:32:16.061Z

I would also say that xilinx_zynqmp_mercuryxu5_rpu is ready to be retired since the other explicit options now exist.

Author: Sebastian Huber 2024-10-18T10:27:50.116Z

I would also strip the **xilinx_** to be in line with the new RPU BSPs.

Do we really need the _lp64_ for the aarch64 BSPs? I would assume that this is the default for a 64-bit architecture.

Author: Sebastian Huber 2024-10-18T10:29:50.789Z

Do we need the Qemu variants? I simply use the xilinx_zynqmp_lp64_a53 BSP for my test runs on Qemu and the ZCU104 evaluation board.

Author: Kinsey Moore 2024-10-18T12:25:51.054Z

We need the QEMU variants because QEMU doesn't support all the hardware that is available and things that aren't supported in QEMU are only compiled in for hardware BSPs. The A53 BSP you reference actually uses the generic grp.yml instead of grp_zu3eg.yml which I'm renaming to grp_hardware.yml shortly. I'll switch that to grp_hardware.yml when I do the renaming.

Author: Kinsey Moore 2024-10-18T13:17:23.329Z

```
In regard to the lp64 specifiers, I'd agree that it is the default for␣
↪AArch64 and that we can dispense with it. I'll handle that when I␣
↪strip off

@chris Do you have opinions on removal of
```

```
 from the versal BSPs as well?
xilinx_
```

Author: Kinsey Moore 2024-10-18T02:38:06.698Z

mentioned in merge request !259

Author: Kinsey Moore 2024-10-18T03:23:34.150Z

```
is an unrelated issue that is being handled in #5120
```

Author: Kinsey Moore 2024-10-18T14:32:04.738Z

mentioned in merge request !262

Author: Kinsey Moore 2024-10-19T03:26:11.349Z

mentioned in merge request rtems/pkg/rtems-lwip!6

Author: Kinsey Moore 2024-10-19T03:42:34.304Z

mentioned in merge request !264

Author: Sebastian Huber 2024-10-20T07:55:59.977Z

mentioned in merge request !265

Author: Kinsey Moore 2024-10-21T00:30:07.683Z

As far as I can tell, this issue is now resolved.

Author: Chris Johns 2024-10-21T00:30:07.646Z

Did `rtems-tools` get updated? If not should an issue in that project be opened?

Author: Sebastian Huber 2024-10-21T02:12:01.061Z

The zynqmp_apu_ilp32 variant doesn't build:

```
In file included from /home/EB/sebastian_h/src/rtems/bsps/include/dev/
↪spi/xqspipsu_hw.h:48,
from /home/EB/sebastian_h/src/rtems/bsps/include/dev/spi/xqspipsu.h:185,
from /home/EB/sebastian_h/src/rtems/bsps/shared/dev/spi/xqspipsu.c:84:
/home/EB/sebastian_h/src/rtems/bsps/include/xil/xil_io.h:55:10: fatal␣
↪error: xpseudo_asm.h: No such file or directory
55 | #include "xpseudo_asm.h"
|          ^~~~~~~~~~~~~~~
```

Author: Kinsey Moore 2024-10-21T02:12:01.029Z

I've created !266 to address this build issue, thanks.

Author: Kinsey Moore 2024-10-21T02:11:34.913Z

mentioned in merge request !266

3.9.1.239 4231 - MVME 2600/2700 has no console output

Id	4231
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2021-02-06T19:33:47.000Z
Updated	2024-10-18T01:07:01.647Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4231
Merges	0

A single character is output then nothing further. Tests output using the `printk` but `spconsole01` fails.

It seems there is a problem with the UART driver interrupts.

Author: Chris Johns 2021-02-06T23:07:27.000Z

The issue is the wrong `BSP_PCI_ISA_BRIDGE_IRQ` value was being passed to the `openpic_enable_irq()` call in `bsps/powerpc/shared/irq/openpic_i8259_irq.c`. The define is offset by the max ISA bus IRQ value and the `openpic` call expects IRQ values relative to its signals, ie 0.

Author: Trac Migrate 2021-02-07T23:26:16.000Z

- **Resolution** set to ~"fixed"

- **Status** changed from *assigned* to *closed*

In [changeset:"450e238bc6dde7caa221fad1a8339b3cf0dbd0c2/rtems" 450e238/rtems]:

```
powerpc/shared: ISA bus bridge fails to enable the openpic irq

- The call to enable the openpic irq for the ISA bridge fails
because the IRQ used is offset by the ISA bus signals and
the openpic call expects an IRQ relative to its signals.

- Add the MVME 2600/2700 to the list of boards with an ISA bridge.

Closes #4231
```

Author: Amar Takhar 2024-10-18T01:07:01.615Z

mentioned in issue #4235

3.9.1.240 4921 - Tool versions for RTEMS 6.1 release

Id	4921
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Sebastian Huber
Closed by	Sebastian Huber
Created	2023-07-03T07:11:02.000Z
Closed	2024-10-18T00:15:13.051Z
Updated	2024-10-18T00:15:13.068Z
Milestone	6.1
Labels	priority::normal, tickettype::task, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4921
Merges	0

Original author: sebastian.huber

- GCC 13.2
- Binutils 2.41
- GDB 13.2
- Newlib TBD

Author: Trac Migrate 2023-07-03T07:11:47.000Z

Original author: sebastian.huber

- **Owner** set to chris.johns
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-07-03T07:12:51.000Z

Original author: sebastian.huber

- **Owner** set to @chrisj

Author: Trac Migrate 2023-07-25T05:14:55.000Z

Original author: sebastian.huber

In [changeset:"fd3ab606c75818fea3f625e77b4d11d378a8b813/rtems-source-builder" fd3ab60/rtems-source-builder]:

```
6: Use GDB 13.2

Prepare for RTEMS 6.1 release.

Update #4921.
```

Author: Trac Migrate 2023-07-25T05:14:56.000Z

Original author: sebastian.huber

In [changeset:"96b114089204112399d079c406cc91a5974a9b5b/rtems-source-builder" 96b1140/rtems-source-builder]:

```
6: Use libexpat 2.5.0

This version contains security fixes.  Prepare for RTEMS 6.1 release.

Update #4921.
```

Author: Trac Migrate 2023-11-23T06:25:26.000Z

Original author: sebastian.huber

In [changeset:"df6908068602b43edefba253f19d48e4f2b9ba6d/rtems-source-builder" df69080/rtems-source-builder]:

```
6: Use GCC 13.2

Prepare for RTEMS 6.1 release.

Update #4921.
```

Author: Trac Migrate 2023-11-23T06:25:28.000Z

Original author: sebastian.huber

In [changeset:"d4d085059336e913c63f0ce3f3bcaa04d73bbbd0/rtems-source-builder" d4d0850/rtems-source-builder]:

```
6: Use Binutils 2.41

Prepare for RTEMS 6.1 release.

Update #4921.
```

Author: Trac Migrate 2023-11-28T22:24:49.000Z

Original author: sebastian.huber

In [changeset:"9e57632befb687e0d5306af47dabcec19cb5d50e/rtems-source-builder" 9e57632/rtems-source-builder]:

```
6: Fix gcc-13 support for MacOS

Update #4921
```

Author: Chris Johns 2024-10-18T00:13:46.717Z

changed the description

Author: Chris Johns 2024-10-18T00:13:46.755Z

assigned to @sebhub and unassigned @chris

Author: Chris Johns 2024-10-18T00:14:02.082Z

Can we closed this?

Author: Sebastian Huber 2024-10-18T00:15:12.638Z

There is nothing left to do from my point of view.

3.9.1.241 4768 - Use tarballs for stable versions development tools

Id	4768
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2022-11-30T21:00:46.000Z
Closed	2024-10-18T00:14:35.310Z
Updated	2024-10-18T00:14:35.324Z
Milestone	6.1
Labels	priority::normal, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4768
Merges	0

Currently many of the individual tools in the development toolchain are using versions specified in the RSB using git hashes and not release versions. This is an issue for stable tool versions (e.g. 6) and release branches. Using git hashes is necessary for picking up bug fixes in some cases and should likely be the preference for the forward leaning tools (e.g. 7) but released versions with patches should be given preference.

Note: Newlib is acknowledged as likely always being a hash.

Author: Chris Johns 2022-11-30T21:02:25.000Z

I agree with this. Should the Eng doco be updated to reflect this as a policy?

Author: Joel Sherrill 2023-02-20T20:43:23.000Z

- **Resolution** set to ~"worksforme"
- **Status** changed from *new* to *closed*

Confirming that the RSB lists all tools as released versions except rtems-tools and newlib. See https://git.rtems.org/rtems-source-builder/tree/rtems/config/6/rtems-default.bset for details.

Author: Chris Johns 2024-06-14T18:30:31.151Z

- **Resolution** ~"worksforme" deleted
- **Status** changed from *closed* to *reopened*

I am reopening this ticket. The severity is blocker and if a release is not to use upstream released tarball files we need a clear reason why.

The RSB is not using GCC released sources and the current rtems/config/tools/rtems-gcc-10-newlib-head.cfg shows this.

If you look at the 5.3 sources you will see gcc tarballs are used, eg `gcc-9.3.0.tar.xz`. As things are an RTEMS 6 release will end up with a file called

`gnu-mirror-gcc-92b44cf,tar.gz`.

Where is the repo this comes from?

The name `gnu-mirror-gcc` is confusing unless you understand what is going on?

How do you track the integrity of the repo used once you manage to find it?

I think we should be using a GCC release tarball of code in releases.

Author: Kinsey Moore 2024-06-14T18:29:31.177Z

changed the description

Author: Gedare Bloom 2024-10-06T21:03:02.509Z

assigned to @chris and unassigned @tracmigrate

Author: Chris Johns 2024-10-18T00:14:34.896Z

We have moved to released tar files.

3.9.1.242 4982 - Add support for TMS570LC4357 for the arm/tms570 BSP

Id	4982
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Sebastian Huber
Closed by	Amar Takhar
Created	2024-01-15T09:31:59.000Z
Closed	2024-10-16T04:34:15.289Z
Updated	2024-10-16T04:34:15.339Z
Milestone	6.1
Labels	arch:arm, priority::normal, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4982
Merges	1

Original author: sebastian.huber

Add support for TMS570LC4357 chip variant using the TMS570LS43x Hercules Development Kit from TI.

Author: Trac Migrate 2024-01-15T09:36:50.000Z

Original author: sebastian.huber

In [changeset:"7427caa1ae0fdbe1c71c947df401d998223c767f/rtems" 7427caa/rtems]:

```
bsps/arm: Use shared empty bsp_start_hook_0()

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:36:52.000Z

Original author: sebastian.huber

In [changeset:"222c98903f3319b189169e621cb1f5c1f684530e/rtems" 222c989/rtems]:

```
bsp/tms570: Remove empty <bsp/tms570-rti.h>

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:36:54.000Z

Original author: sebastian.huber

In [changeset:"72ec63e7d863f5f8e4aeb1e81d4700df1233ced5/rtems" 72ec63e7/rtems]:

```
bsp/tms570: Remove empty <bsp/tms570-sci.h>

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:36:56.000Z

Original author: sebastian.huber

In [changeset:"58521f15f3aadbaec73a764604815567b0844cb0/rtems" 58521f1/rtems]:

```
bsp/tms570: Remove empty <bsp/tms570-vim.h>

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:36:58.000Z

Original author: sebastian.huber

In [changeset:"8e8b9bc0b727c9d35b3ac1ef27f90b2f81aefb4c/rtems" 8e8b9bc0/rtems]:

```
bsp/tms570: Relicense to BSD-2-Clause

Change license to BSD-2-Clause according to file history and contributor
```

(continues on next page)

(continued from previous page)

```
agreements.  Add Doxygen file comments.

Update #3053.
Update #3707.
Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:00.000Z

Original author: sebastian.huber

In [changeset:"600bd56543281db1bf96489eb6527779e4972153/rtems" 600bd565/rtems]:

```
bsp/tms570: Use new pin define

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:02.000Z

Original author: sebastian.huber

In [changeset:"2110125f7c4cb281f370d6a18eeb9c509f872546/rtems" 2110125/rtems]:

```
bsp/tms570: Add bsp_restart()

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:05.000Z

Original author: sebastian.huber

In [changeset:"8240caecc8ce785ae5b7411c8f193e1f518ae1e0/rtems" 8240cae/rtems]:

```
bsp/tms570: Rename tms570_initialize_and_clear()

Rename tms570_initialize_and_clear() in
tms570_pom_initialize_and_clear().

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:07.000Z

Original author: sebastian.huber

In [changeset:"849210fff615e78d0f88d6b1359ebf464c5bbd53/rtems" 849210f/rtems]:

```
bsp/tms570: Fix bsp_reset()

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:09.000Z

Original author: sebastian.huber

In [changeset:"27e0abbdb5a9c91ffd0276a5ea84ed41d359d490/rtems" 27e0abb/rtems]:

```
bsp/tms570: Avoid errno for debug console

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:11.000Z

Original author: sebastian.huber

In [changeset:"a6482ebfaa6f25307c098aaa1ad9d5e393cbdbc0/rtems" a6482eb/rtems]:

```
bsp/tms570: Implement set/get interrupt priority

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:13.000Z

Original author: sebastian.huber

In [changeset:"8753604ed550da3c4ff7f3824e163ff5dd2aa892/rtems" 8753604e/rtems]:

```
bsp/tms570: Implement interrupt is enabled/pending

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:15.000Z

Original author: sebastian.huber

In [changeset:"cf01329e244fa9d96a42d0385d577225718e54aa/rtems" cf01329e/rtems]:

```
bsp/tms570: Avoid spurious interrupts

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:17.000Z

Original author: sebastian.huber

In [changeset:"df067e5b69e61c36f623f7896c5246b49a1c1107/rtems" df067e5/rtems]:

```
bsp/tms570: Add TM27 support

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:20.000Z

Original author: sebastian.huber

In [changeset:"1dae4f9560949d712d47c528c14edc941c0736a8/rtems" 1dae4f95/rtems]:

```
bsp/tms570: Remove obsolete build option

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:21.000Z

Original author: sebastian.huber

In [changeset:"285d1a4056c760aeb527689e023cf8df185d9d5d/rtems" 285d1a4/rtems]:

```
bsp/tms570: Avoid vector overlay memory region

Reserve the space in a section.  This makes it possible to use a common
memory region definition.

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:23.000Z

Original author: sebastian.huber

In [changeset:"1b7a8af57522e7d06ab991d4744e54765a608f9e/rtems" 1b7a8af5/rtems]:

```
bsp/tms570: Add variant enable to build

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:26.000Z

Original author: sebastian.huber

In [changeset:"437da01f80cb2368beeed2aef69a5e8339caf2c5/rtems" 437da01/rtems]:

```
bsp/tms570: Add linkcmds.memory

Remove obsolete tms570ls3137_hdk_with_loader BSP variant.  With the new
memory origin/size build options this variant is no longer required.

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:28.000Z

Original author: sebastian.huber

In [changeset:"eb97cd148c3fa993fcac5640da4fe316aa5f5a97/rtems" eb97cd1/rtems]:

```
bsp/tms570: Add TMS570LC4357 BSP variants

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:30.000Z

Original author: sebastian.huber

In [changeset:"36192165e2b7d9ec4192c339af8611a81e3aed4e/rtems" 36192165/rtems]:

```
bsp/tms570: Fix PBIST clock enable

Bit 1 of the PACT is reserved (writes have no effect).

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:32.000Z

Original author: sebastian.huber

In [changeset:"048d81a0764a68d2af48433f170cd26c829711a8/rtems" 048d81a0/rtems]:

```
bsp/tms570: Add TMS570LC4357 PBIST support

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:34.000Z

Original author: sebastian.huber

In [changeset:"8569f0181bd123fd489358bb332dab2dbf5fbc2e/rtems" 8569f01/rtems]:

```
bsp/tms570: Enable hardware init for some variants

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:36.000Z

Original author: sebastian.huber

In [changeset:"b995211907aee43d0b23c3764cd342aae2afd10f/rtems" b995211/rtems]:

```
bsp/tms570: Add tms570_pbist_run_and_check()

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:38.000Z

Original author: sebastian.huber

In [changeset:"39fd4b142ef9dced7522dcd18c9995133684ae1b/rtems" 39fd4b1/rtems]:

```
bsp/tms570: Remove double pin configuration

Do not set pins to the default function before the actual setting is
applied.  If a pin setting needs to be done in a certain order, then
this should be done explicitly through multiple calls to
tms570_bsp_pinmmr_config().

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:41.000Z

Original author: sebastian.huber

In [changeset:"4f6fa9746da0e1a4b9643325fa55e0056d1de304/rtems" 4f6fa974/rtems]:

```
bsp/tms570: Add TMS570LC4357 pin config support

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:43.000Z

Original author: sebastian.huber

In [changeset:"c14efe493b68554ab2e4fb074cae24eb9264b196/rtems" c14efe49/rtems]:

```
bsp/tms570: Add TMS570LC4357 power support

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:45.000Z

Original author: sebastian.huber

In [changeset:"eeaa318dc6235c32cda2908046ac5f1c29f794f1/rtems" eeaa318/rtems]:

```
bsp/tms570: Simplify expression

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:47.000Z

Original author: sebastian.huber

In [changeset:"4d9c9c52aed44558c7a828ab5c95b3112a8ea202/rtems" 4d9c9c52/rtems]:

```
bsp/tms570: Conditionalize TMS570LS3137 errata

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:49.000Z

Original author: sebastian.huber

In [changeset:"75dd82407980a227a39aef70b383090778361f70/rtems" 75dd824/rtems]:

```
bsp/tms570: Add errata SSWF021#45 handling

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:51.000Z

Original author: sebastian.huber

In [changeset:"2bbacdb557c74a513ecc6f3b2f581ac6b6344c4e/rtems" 2bbacdb/rtems]:

```
bsp/tms570: TMS570LC4x Errata DEVICE#60

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:53.000Z

Original author: sebastian.huber

In [changeset:"ec79400503ab196ea1a668badfb569fcc7917fdc/rtems" ec79400/rtems]:

```
bsp/tms570: Add HCLKCNTL register

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:55.000Z

Original author: sebastian.huber

In [changeset:"b99013e58014aba6db48c9adaadddab5bcdd5efd/rtems" b99013e/rtems]:

```
bsp/tms570: Remove reset source handling

Do not clear SYSESR and let the application handle the reset source.

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:37:58.000Z

Original author: sebastian.huber

In [changeset:"f7530be75c64bbe7818fdffe0ccc536ca425954c/rtems" f7530be/rtems]:

```
bsp/tms570: Honor DBGRST for TMS570LC4357

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:00.000Z

Original author: sebastian.huber

In [changeset:"23ba8d2c2c56d0e5375e3ebb61fd66d7f05843b2/rtems" 23ba8d2c/rtems]:

```
bsp/tms570: Use asm code for tms570_memory_init()

Make sure that we do not use the stack for this function.

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:02.000Z

Original author: sebastian.huber

In [changeset:"2db0844b873665ea474501ef8c72c8254e39e94f/rtems" 2db0844/rtems]:

```
bsp/tms570: Initialize SRAM on demand

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:04.000Z

Original author: sebastian.huber

In [changeset:"3f75b58d462beace76bd0a68bac1c5f5b077d650/rtems" 3f75b58/rtems]:

```
bsp/tms570: The TMS570LC4357 has no TCRAM modules

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:06.000Z

Original author: sebastian.huber

In [changeset:"e9634471d9478090bccec2c01342bfcc063adde0/rtems" e963447/rtems]:

```
bsp/tms570: Add header guards

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:08.000Z

Original author: sebastian.huber

In [changeset:"d4c6def68bb8f62b6f80e2329ec1f00e7bf6afdf/rtems" d4c6def/rtems]:

```
bsp/tms570: Use shared bsp_start_hook_1()

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:10.000Z

Original author: sebastian.huber

In [changeset:"663bedd59ed44f76b1346e7585a3bccfb590889a/rtems" 663bedd/rtems]:

```
bsp/tms570: Use bsp_start_copy_sections_compact()

There is no need to relocate the text and read-only data.

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:12.000Z

Original author: sebastian.huber

In [changeset:"5a2f64cf3451a98bc77ce3620ce9829c36917d9e/rtems" 5a2f64cf/rtems]:

```
bsp/tms570: Initialize and enable caches on demand

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:14.000Z

Original author: sebastian.huber

In [changeset:"65831d71ed25b1c1e2daa92a317c82c4aeabbf96/rtems" 65831d7/rtems]:

```
bsp/tms570: Optimize tms570_debug_console_out()

Reduce number of interrupt disable/enable actions.

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:16.000Z

Original author: sebastian.huber

In [changeset:"53cbe74878813a9e92e6e6f3ca9c08fafd2a9bf3/rtems" 53cbe748/rtems]:

```
bsp/tms570: Initialize MPU

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:18.000Z

Original author: sebastian.huber

In [changeset:"b300b967eefe0b628dacb6b9f651dbe77359c09f/rtems" b300b967/rtems]:

```
bsp/tms570: Board-specific tms570_pll_init()

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:20.000Z

Original author: sebastian.huber

In [changeset:"42e013a5dda75ba03f17f0b70dedca46a3cd8021/rtems" 42e013a/rtems]:

```
bsp/tms570: Board-specific tms570_map_clock_init()

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:23.000Z

Original author: sebastian.huber

In [changeset:"87be7eaba206e94cc00329104846caa3ddc69fb6/rtems" 87be7eab/rtems]:

```
bsp/tms570: Board-specific tms570_pinmux_init()

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:25.000Z

Original author: sebastian.huber

In [changeset:"449d83680009d5a7253cb31b7d3da44da5153d05/rtems" 449d836/rtems]:

```
bsp/tms570: Board-specific tms570_emif_sdram_init()

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:27.000Z

Original author: sebastian.huber

In [changeset:"b47c8188bf7e467df9960440715c07184fba6be0/rtems" b47c818/rtems]:

```
bsp/tms570: Update README

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:29.000Z

Original author: sebastian.huber

In [changeset:"9a961eec67c4f06e65edb7e23d4bf51084499841/rtems" 9a961eec/rtems]:

```
bsp/tms570: Remove unused BSP options

Update #4982.
```

Author: Trac Migrate 2024-01-15T09:38:31.000Z

Original author: sebastian.huber

In [changeset:"df378641e68fcd9f27797fb998b7a46e2f54f731/rtems" df37864/rtems]:

```
bsp/tms570: Use TMS570_OSCILLATOR_MAIN

This option replaces BSP_OSCILATOR_CLOCK.  It may be used in PLL setup
calculatios.

Update #4982.
```

Author: Trac Migrate 2024-01-25T07:17:19.000Z

Original author: sebastian.huber

In [changeset:"9fdaa4e7c7577710405dab0da828ff9d0710a2d0/rtems-tools" 9fdaa4e/rtems-tools]:

```
config: Update BSPs

Update #4982.
```

Author: Trac Migrate 2024-02-01T06:57:06.000Z

Original author: sebastian.huber

In [changeset:"b1fdf753387189afe720d3fa1ac13af5fb9943c2/rtems" b1fdf75/rtems]:

```
bsp/tms570: Fix console receive interrupts

`tms570_sci_interrupt_handler()` is called when an RX interrupt fires. It checks
in the register `FLR`, the `RXRDY` bit (Receiver ready flag - indicate that the
SCIRD contains new data). If it is set, it calls
`tms570_sci_read_received_chars()`.

`tms570_sci_read_received_chars()` checks the register `RD` against 0. If it is
non zero, it returns 1 to indicate that one byte was read.

In the old behavior, if it is zero, the function returns 0 to indicate that no
data was read.

The new behavior is to not silently drop 0x00 bytes. Ignoring 0x00 bytes is fine
when working with printable text (which, I assume, is how this driver was
tested), but as soon as the UART is used in non canonical (raw) mode, with
potentially 0x00 bytes, these bytes will be silently dropped, causing issues in
the data/protocol layer above.

Update #4982.
```

Author: Sebastian Huber 2024-05-02T12:51:11.701Z

mentioned in merge request !16

Author: Chris Johns 2024-10-07T00:54:45.869Z

@sebhub what is the status of this issue?

Author: Sebastian Huber 2024-10-07T00:54:45.869Z

This is still work in progress, see !16. Once this patch set is merged, there are two issues left:

1. The PBIST checks need to move before the SRAM initialization.
2. The MPU initialization should to move to shared code.

Author: Sebastian Huber 2024-10-07T00:54:45.869Z

Moved to #5134.

Author: Chris Johns 2024-05-02T23:18:54.140Z

changed the description

Author: Chris Johns 2024-05-02T23:18:54.175Z

assigned to @sebhub and unassigned @tracmigrate

Author: Sebastian Huber 2024-06-25T08:47:00.711Z

mentioned in merge request !93

Author: Sebastian Huber 2024-10-07T01:03:34.853Z

mentioned in commit sebhub/rtems-docs@e59731a53cd62a0a30082447389f5931b7a3f41f

Author: Sebastian Huber 2024-10-07T01:12:54.432Z

mentioned in commit sebhub/rtems-docs@b6f2509782e7ca0b63bf642e18864ffddbd262aa

Author: Sebastian Huber 2024-10-16T04:33:58.307Z

mentioned in commit sebhub/rtems-docs@8e56d1b2bcd5ef8d8d3ef8ae831dd852822bb42f

Author: Pavel Pisa 2026-04-06T01:51:03.137Z

mentioned in issue #5547

3.9.1.243 5030 - Deprecate Multiple m68k BSPs in rtems6

Id	5030
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Chris Johns
Created	2024-06-06T14:31:01.168Z
Closed	2024-10-08T21:00:25.955Z
Updated	2024-10-08T21:57:34.857Z
Milestone	6.1
Labels	bsp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5030
Merges	2

The following m68k BSPs are deprecated in 6.1 and will be removed before 7.

- `m68k/csb360`
- `m68k/gen68340`
- `m68k/gen68360`
- `m68k/gen68360_040`
- `m68k/pgh360`
- `m68k/mcf5206elite`
- `m68k/mcf52235`
- `m68k/mcf5225x`
- `m68k/mrm332`
- `m68k/mvme147`
- `m68k/mvme147s`
- `m68k/mvme162`
- `m68k/mvme162lx`
- `m68k/mvme167`

Note: Availability and use for the `m68k/mrm332` was confirmed from robominds.com.

Author: Joel Sherrill 2024-10-06T18:51:35.664Z

changed title from **Deprecate mrm332 BSP in rtems6{- and remove in 7-}** to **Deprecate mrm332 BSP in rtems6**

Author: Joel Sherrill 2024-10-08T15:33:55.123Z

changed title from **Deprecate {-mrm332-} BSP in rtems6** to **Deprecate {+Multiple m68k+} BSP{+s+} in rtems6**

Author: Joel Sherrill 2024-10-08T15:33:55.152Z

changed the description

Author: Chris Johns 2024-10-08T20:55:40.491Z

mentioned in merge request rtems-release!6

Author: Chris Johns 2024-10-08T20:57:53.985Z

assigned to @joel

Author: Chris Johns 2024-10-08T20:59:39.174Z

changed the description

Author: Chris Johns 2024-10-08T20:59:52.413Z

changed the description

Author: Chris Johns 2024-10-08T21:57:34.834Z

mentioned in merge request rtems-release!7

3.9.1.244 5020 - Deprecate lm32 port in rtems6

Id	5020
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Chris Johns
Created	2024-05-29T15:46:30.444Z
Closed	2024-10-08T21:00:25.901Z
Updated	2024-10-08T21:00:26.045Z
Milestone	6.1
Labels	arch:lm32
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5020
Merges	1

This port appears to be unused. No one has been testing it or reporting issues/success with it.

On top of that, this is a port which is still under the old GPL v2 w/exception license and we have been unable to locate the authors to obtain permission to relicense it.

Deprecate for RTEMS 6.x Remove in RTEMS 7.x

Author: Joel Sherrill 2024-10-06T18:51:53.233Z

changed title from **Deprecate lm32 port in rtems6{- and remove in 7-}** to **Deprecate lm32 port in rtems6**

Author: Chris Johns 2024-10-08T20:55:40.460Z

mentioned in merge request rtems-release!6

Author: Chris Johns 2024-10-08T20:57:38.240Z

assigned to @joel

3.9.1.245 5019 - Deprecate bfin port in rtems6

Id	5019
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Chris Johns
Created	2024-05-29T15:46:17.906Z
Closed	2024-10-08T21:00:25.903Z
Updated	2024-10-08T21:00:26.040Z
Milestone	6.1
Labels	arch:bfin
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5019
Merges	1

This port appears to be unused. No one has been testing it or reporting issues/success with it.

On top of that, this is a port which is still under the old GPL v2 w/exception license and we have been unable to locate the authors to obtain permission to relicense it.

Deprecate for RTEMS 6.x Remove in RTEMS 7.x

Author: Joel Sherrill 2024-10-06T18:52:09.322Z

changed title from **Deprecate bfin port in rtems6{- and remove in 7-}** to **Deprecate bfin port in rtems6**

Author: Chris Johns 2024-10-08T20:55:40.418Z

mentioned in merge request rtems-release!6

Author: Chris Johns 2024-10-08T20:56:18.915Z

assigned to @joel

3.9.1.246 4931 - User manual RSB BSP build examples need updating

Id	4931
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Gedare Bloom
Created	2023-07-25T02:33:00.000Z
Closed	2024-10-07T20:21:20.671Z
Updated	2024-10-07T20:21:20.756Z
Milestone	6.1
Labels	priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4931
Merges	0

Author: Gedare Bloom 2024-10-06T19:11:51.794Z

changed the description

Author: Gedare Bloom 2024-10-06T19:11:51.834Z

assigned to @chris and unassigned @tracmigrate

Author: Gedare Bloom 2024-10-07T20:21:20.824Z

moved to rtems/tools/rtems-source-builder#39

3.9.1.247 5103 - libdebugger: Add SPDX annotation

Id	5103
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Chris Johns
Closed by	Joel Sherrill
Created	2024-08-07T15:37:19.066Z
Closed	2024-10-06T18:04:56.050Z
Updated	2024-10-06T18:32:37.787Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5103
Merges	0

@chris chris noted that all of libdebugger is missing SPDX annotation – not just the newly added PowerPC.

The following discussion from !163 should be addressed:

- [] @joel started a discussion:

  Missing SPDX line.

Author: Joel Sherrill 2024-08-07T15:37:19.173Z

  assigned to @chris

Author: Joel Sherrill 2024-10-06T18:04:55.784Z

  Duplicate of #5115.

Author: Amar Takhar 2024-10-06T18:32:37.749Z

  @joel if you do /duplicate #5115 as a command it will mark it as a duplicate

3.9.1.248 5126 - poll.h is in both rtems and newlib

Id	5126
State	closed
Type	ISSUE
Author	Joel Sherrill
Closed by	Joel Sherrill
Created	2024-09-10T21:45:45.794Z
Closed	2024-09-12T17:08:48.237Z
Updated	2024-09-12T17:08:48.253Z
Milestone	6.1
Labels	api::posix
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5126
Merges	0

Summary

poll.h should only come from one place.

```
$ find tools rtems/cpukit/include/ -name poll*.h
tools/6/sparc-rtems6/include/sys/poll.h
tools/6/sparc-rtems6/include/poll.h
rtems/cpukit/include/poll.h
rtems/cpukit/include/sys/poll.h
```

Steps to reproduce

Author: Sebastian Huber 2024-09-11T03:44:03.213Z

I would remove poll.h from RTEMS.

Author: Chris Johns 2024-09-11T04:16:36.538Z

There is no networking in rtems.git any more. Maybe it is left over?

I see no reason or use case for it being in ether place. Why is it part of newlib?

Author: Chris Johns 2024-09-11T04:24:05.762Z

Is this due to poll?

Author: Sebastian Huber 2024-09-11T04:29:09.423Z

Most of the network header files belong to POSIX and having them in Newlib enables for example the Ada and C++ support in GCC to use them.

Author: Chris Johns 2024-09-11T04:48:17.821Z

If there is standards and newlib is happy then that works.

I did not know C++ had networking support and I cannot find anything here ... https://en.cppreference.com/w/cpp ? I know nothing about Ada.

Author: Sebastian Huber 2024-09-11T04:48:17.782Z

GCC supports more than the current standard revisions and has also stuff for future revisions in the pipeline.

Author: Joel Sherrill 2024-09-11T13:57:45.043Z

poll.h is from POSIX and was already there by the mid-90s (Issue 4, Version 2).

There is a proposal which has been around a while for C++ networking "extensions". This is supposed to be on track for C++23 or the next version per some discussion I found.

https://en.cppreference.com/w/cpp/experimental/networking

Ultimately, including as many POSIX headers as possible in newlib lets us build runtimes and support packages without building the BSP first. We used to have to do that for some GNU languages.

It also has a maintenance benefit as, in some cases, we end up sharing the header with Cygwin.

I will post an MR to remove poll.h from RTEMS before the end of the week.

Author: Joel Sherrill 2024-09-11T16:44:17.858Z

mentioned in merge request !212

Author: Joel Sherrill 2024-09-12T17:08:47.944Z

https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/212 included the fix.

3.9.1.249 5123 - ZynqMP Cortex-R5 RPU BSP broken

Id	5123
State	closed
Type	ISSUE
Author	Kinsey Moore
Closed by	Kinsey Moore
Created	2024-08-28T19:42:10.009Z
Closed	2024-08-29T02:19:52.524Z
Updated	2024-08-29T02:19:52.543Z
Milestone	6.1
Labels	arch:arm, regression
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5123
Merges	0

Summary

The RPU BSP fails to build since rtems/rtos/rtems!111 was merged with errors on the libdl tests:

```
/tmp/ccssa9iP.s: Assembler messages:
/tmp/ccssa9iP.s:2027: Error: can't resolve .data.rtems_rtl_tls_offsets - rtems__
↪rtl_base_globals
```

Steps to reproduce

Try to compile ARM ZynqMP RPU BSP.

Author: Kinsey Moore 2024-08-28T19:42:30.054Z

mentioned in merge request !111

Author: Sebastian Huber 2024-08-29T02:19:55.017Z

I think this was fixed by https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/19.

Author: Kinsey Moore 2024-08-29T02:19:55.017Z

I thought I had built the ARM toolchain more recently than that, but apparently not. A fresh toolchain fixed the problem.

3.9.1.250 5102 - aio_fsync.c: Use of uninitialised memory

Id	5102
State	closed
Type	ISSUE
Author	Joel Sherrill
Closed by	Sebastian Huber
Created	2024-08-07T15:15:24.811Z
Closed	2024-08-27T23:55:58.919Z
Updated	2024-08-28T13:23:16.705Z
Milestone	6.1
Labels	api::posix, scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5102
Merges	1

Summary

Coverity CID 1512532

Coverity notes that the rtems_aio_enqueue() call is using a field in the allocated _req_. Tracing the rtems_aio_enqueue() down through the layers, it eventually needs _req->next_prio.next_ to be NULL. The safest thing to do is likely to change malloc() to calloc().

```
87
6. alloc_fn: Calling malloc which returns uninitialized memory. [Note: The source code implementation of the function has been overridden by a builtin model.]
7. assign: Assigning: req = malloc(28U), which points to uninitialized data.
88  req = malloc( sizeof( rtems_aio_request ) );
8. Condition req == NULL, taking false branch.
89  if ( req == NULL )
90    rtems_set_errno_and_return_minus_one( EAGAIN );
91
92  /*
93   * If O_SYNC != O_DSYNC, then this code needs to check for each individually.
94   */
95  req->aiocbp = aiocbp;
96  req->op_type = AIO_OP_SYNC;
97

CID 1512532: (#1 of 1): Uninitialized pointer read (UNINIT)
9. uninit_use_in_call: Using uninitialized value req->next_prio.next when calling rtems_aio_enqueue.[show details]
98  return rtems_aio_enqueue( req );
```

Author: Joel Sherrill 2024-08-07T18:14:22.048Z

mentioned in merge request !172

Author: Joel Sherrill 2024-08-28T13:23:16.688Z

Confirming that Coverity reported that this is resolved.

3.9.1.251 5114 - Is xilinx-zynqmp console.c specific to the aarch64/xilinx_zynqmp_lp64_cfc400x BSP?

Id	5114
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Kinsey Moore
Closed by	Chris Johns
Created	2024-08-09T01:05:05.310Z
Closed	2024-08-09T22:52:56.365Z
Updated	2024-08-12T02:00:43.986Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5114
Merges	0

The file `bsps/aarch64/xilinx-zynqmp/console/console.c` name would indicate it is the console driver for the ZynqMP BSP. Examination of the code shows it supports a the NS16550 UART which is not present in the hard IP of any Xilinx Ultrascale devices.

1. Why this name? Should the console driver file be named in a BSP specific way?
2. Why are we supporting PL (FPGA logic) drivers and configurations in our BSP drivers?

It can be convenient to have this support in RTEMS and if a board is publicly available there is a case however Xilinx ecosystem integration is complex and we need to be careful around PL resident functionality.

Author: Chris Johns 2024-08-09T01:05:05.405Z

assigned to @opticron

Author: Chris Johns 2024-08-09T01:07:31.951Z

changed the description

Author: Kinsey Moore 2024-08-12T01:57:05.895Z

To be clear, console.c supports both the hard UARTs as well as the soft 16550 management UART for the CFC-400X. The 16550 code is only used if it is present in the DTB.

Author: Chris Johns 2024-08-12T01:57:05.895Z

Which BSPs use it it?

If it is bespoke to the space board BSP and IP that has to be loaded into its PL why not reflect this in the name?

I initially assumed the ZynqMP `a53` had the wrong driver.

If the driver is for your specific BSP do we need the complexity of a DTB switch?

Is this board COTS?

Author: Joel Sherrill 2024-08-12T01:57:05.895Z

Kinsey can answer more to this but the board is COTS.

https://www.satcatalog.com/component/cfc-400/

The watchdog has to be touched or you can not run the tests.

Author: Kinsey Moore 2024-08-12T01:57:05.895Z

It's just the CFC-400X that uses it. When I was building this up it didn't initially have DTB hooks, but that was suggested (by @chris, I think) to prevent a hard dependency on that interface being in place. That conversation would have been in November 2022 with the title "zynqmp: Add support for the CFC-400X".

Author: Chris Johns 2024-08-12T01:57:05.895Z

Thanks for the link to the board and for the clarification. What has confused me are:

1. https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/spec/build/bsps/aarch64/xilinx-zynqmp/obj.yml?ref_type=heads#L22
2. https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/spec/build/bsps/aarch64/a53/obj.yml?ref_type=heads#L19

and this:

https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/spec/build/bsps/aarch64/xilinx-zynqmp/bspa53lp64.yml?ref_type=heads

We now have:

1. `aarch64/xilinx_zynqmp_lp64_a53`
2. `aarch64/xilinx_zynqmp_lp64_zu3eg`

that appear similar but use different console drivers?

Author: Chris Johns 2024-08-12T01:57:05.895Z

My close review shows the approach for the `xilinx_zynqmp_lp64_cfc400x` is inline with `xilinx_zynqmp_lp64_zu3eg` that existed. It is `xilinx_zynqmp_lp64_a53` that appears to be different.

Author: Kinsey Moore 2024-08-12T02:00:43.966Z

Ah, there's still some confusion here. There is a generic A53 BSP for AArch64 (the second thing you linked) that is intended to be used with QEMU, then there is the new ZynqMP A53 BSP (the last thing you linked) which is a clone of the ZU3EG BSP but is intended to be ZynqMP variant agnostic.

The generic A53 QEMU BSP uses GICv3 and the pl011 driver which is standard for generic QEMU targets.

Author: Chris Johns 2024-08-09T22:52:55.965Z

Looking close the driver name is fine and it used by almost all ZynqMP BSPs.

3.9.1.252 5111 - kern_ntptime.c: Assigning time_t to 32-bit variable truncates time

Id	5111
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Chris Johns
Created	2024-08-08T16:08:41.692Z
Closed	2024-08-11T02:31:52.398Z
Updated	2024-08-11T02:31:52.513Z
Milestone	6.1
Labels	scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5111
Merges	1

Summary

Coverity CID 1512505

Line 983 assigns the tv_sec (time_t) value to pps_lastsec (long). long is 32-bits on RTEMS 32-bit targets and time_t is always 64-bits. The solution should be to use time_t for pps_lastsec.

```
981         pps_calcnt++;
982         v_nsec = -pps_fcount;

CID 1512505: (#2 of 2): Use of 32-bit time_t (Y2K38_SAFETY)
1. store_truncates_time_t: A time_t value is stored in an integer with too few␣
↪bits to accommodate it. The expression pps_tf[0].tv_sec is cast to long.
983         pps_lastsec = pps_tf[0].tv_sec;
```

Author: Joel Sherrill 2024-08-08T16:08:41.874Z

assigned to @joel

Author: Joel Sherrill 2024-08-08T16:34:39.039Z

mentioned in merge request !179

3.9.1.253 5113 - bdpart-register.c: Calling close() with negative value

Id	5113
State	closed
Type	ISSUE
Author	Joel Sherrill
Closed by	Chris Johns
Created	2024-08-08T21:41:09.076Z
Closed	2024-08-11T02:30:50.806Z
Updated	2024-08-11T02:30:50.909Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5113
Merges	1

Summary

Coverity CID 1467408

At line 212, close() is called and fd can potentially be negative. The simplest way to address this is to add a check for "fd >= 0" before calling close().

```
209cleanup:
210
211  free( logical_disk_name);

CID 1467408: (#1 of 1): Argument cannot be negative (NEGATIVE_RETURNS)
5. negative_returns: fd is passed to a parameter that cannot be negative. [Note: The source code implementation of the function has been overridden by a builtin model.]
212  close( fd);
```

Author: Joel Sherrill 2024-08-09T13:58:02.089Z

mentioned in merge request !181

3.9.1.254 5112 - flashdisk.c: Invalid printf format string

Id	5112
State	closed
Type	ISSUE
Author	Joel Sherrill
Closed by	Amar Takhar
Created	2024-08-08T21:07:31.179Z
Closed	2024-08-10T21:53:58.542Z
Updated	2024-08-10T21:53:58.637Z
Milestone	6.1
Labels	scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5112
Merges	1

Summary

Coverity CID 1467406

Coverity spotted that line 1013 has an invalid printf format string.

```
1011    if ((flash_flags & page_desc->flags) != page_desc->flags)
1012    {

CID 1467406: (#1 of 1): Invalid printf format string (PRINTF_ARGS)
format_error: Invalid conversion specifier in %04 .[show details]
1013      rtems_fdisk_error ("  seg-write-page-flags: %02d-%03d-%03d: "
1014                         "flags not erased: 0x%04 -> 0x%04x",
1015                         sc->device, sc->segment, page,
1016                         flash_flags, page_desc->flags);
1017      return ret;
1018    }
```

Steps to reproduce

Author: zack liang 2024-08-10T21:21:10.560Z

mentioned in merge request !183

3.9.1.255 5098 - Add libdebugger support for PowerPC

Id	5098
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Amar Takhar
Created	2024-08-05T05:45:48.248Z
Closed	2024-08-07T18:31:28.026Z
Updated	2024-08-07T18:31:28.194Z
Milestone	6.1
Labels	arch:powerpc, cpukit::debugger
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5098
Merges	1

Add support to libdebugger for the PowerPC.

The `e500` variants are currently not supported.

Author:	Chris Johns	2024-08-05T05:45:48.344Z

assigned to @chris

Author:	Chris Johns	2024-08-05T05:49:23.604Z

mentioned in merge request !163

3.9.1.256 5100 - aio_fsync.c: Coverity reports dead code

Id	5100
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Amar Takhar
Created	2024-08-05T13:56:26.080Z
Closed	2024-08-07T03:07:24.522Z
Updated	2024-08-07T03:07:24.610Z
Milestone	6.1
Labels	api::posix, scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5100
Merges	1

Summary

Coverity CID 1616018

This one is not immediately obvious. The problem stems from O_SYNC and O_DSYNC having the same value. The solution is to:

1. add preprocessor checks that they are the same,
2. add comments that if the cpp test ever fails, the code needs updating
3. consolidate references to the first test so there is only once place to update in the future.

```
59
cond_const: Condition op != 8192, taking false branch. Now the value of op is␣
↪equal to 8192.
60  if ( op != O_SYNC && op != O_DSYNC )
61    rtems_set_errno_and_return_minus_one( EINVAL );
62
63  if ( rtems_aio_check_sigevent( &aiocbp->aio_sigevent ) == 0 )
64    rtems_set_errno_and_return_minus_one( EINVAL );
65
66  mode = fcntl( aiocbp->aio_fildes, F_GETFL );
67  if (
68    !(
69      ((mode & O_ACCMODE) == O_WRONLY) ||
70      ((mode & O_ACCMODE) == O_RDWR)
71    )
72  )
73    rtems_set_errno_and_return_minus_one( EBADF );
74
75  req = malloc( sizeof( rtems_aio_request ) );
76  if ( req == NULL )
77    rtems_set_errno_and_return_minus_one( EAGAIN );
78
79  req->aiocbp = aiocbp;
const: At condition op == 8192, the value of op must be equal to 8192.
dead_error_condition: The condition op == 8192 must be true.
80  if ( op == O_SYNC ) {
81    req->op_type = AIO_OP_SYNC;
82  } else {

CID 1616018: (#1 of 1): Logically dead code (DEADCODE)
dead_error_line: Execution cannot reach this statement: req->op_type = 3;.
83    req->op_type = AIO_OP_DSYNC;
84  }
```

Author: Joel Sherrill 2024-08-05T13:56:26.274Z

assigned to @joel

Author: Joel Sherrill 2024-08-05T14:02:53.115Z

changed the description

Author: Joel Sherrill 2024-08-05T14:40:08.107Z

mentioned in merge request !165

3.9.1.257 4069 - dl06 does not link on RISCV

Id	4069
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2020-09-06T08:13:07.000Z
Updated	2024-08-02T02:22:13.321Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4069
Merges	0

```
rtems-ld -r /home/jiri/src/rtems/riscvmp/riscv-rtems6/c/griscv \\
-C riscv-rtems6-gcc -c "-march=rv32imafd -mabi=ilp32d" \\
-O rap -b dl06.pre -e rtems_main -s \\
-o dl06.rap dl06-o1.o dl06-o2.o -lm
error: rap::object: Section index '0' not found: dl06-o1.o
Makefile:8528: recipe for target 'dl06.rap' failed
make[5]: *** [dl06.rap] Error 10
```

- 0001-libdl-riscv-Support-misaligned-read-and-write-access.patch
- disable-dl-for-riscv.patch
- riscv-rtl-empty-symbols.diff
- rld-rap.patch
- v2-0001-libdl-riscv-Fix-RISCV-issues-with-libdl-tests.patch

Author: Trac Migrate 2020-09-06T18:44:04.000Z

- **Attachment** rld-rap.patch added

Author: Trac Migrate 2024-08-02T02:22:13.233Z

By re-applying Hesham's earlier patch (above), dl06 builds again. The program fails however on griscv bsp:

```
*** BEGIN OF TEST libdl (RTL) 6 ***
*** TEST VERSION: 6.0.0.aedd92d1477df0025821b77c06b2f2b2dc7aaf67
```

(continues on next page)

(continued from previous page)

```
*** TEST STATE: EXPECTED_PASS
*** TEST BUILD: RTEMS_NETWORKING RTEMS_POSIX_API RTEMS_SMP
*** TEST TOOLS: 10.2.1 20200904 (RTEMS 6, RSB␣
↪47f32b8b1a597b5ed3475722bdc155249ef51115, Newlib a0d7982)

load: /dl06.rap
dlopen failed: offset past end of file: offset=11716 size=11716

*** FATAL ***
fatal source: 5 (RTEMS_FATAL_SOURCE_EXIT)
fatal code: 0 (0x00000000)
RTEMS version: 6.0.0.aedd92d1477df0025821b77c06b2f2b2dc7aaf67
RTEMS tools: 10.2.1 20200904 (RTEMS 6, RSB␣
↪47f32b8b1a597b5ed3475722bdc155249ef51115, Newlib a0d7982)
executing thread ID: 0x08a010001
executing thread name: UI1
```

I guess this is not the intended behavior . . . ?

Author: Trac Migrate 2020-09-06T21:12:01.000Z

- **Owner** set to Hesham Almatary <Hesham.Almatary@cl.cam.ac.uk>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"764ea5787926ee50d2c1df8db2eede5d31e427eb/rtems" 764ea578/rtems]:

```
htif_console_handler is defined in htif.c

closes #4069.
```

Author: Trac Migrate 2020-09-07T14:00:52.000Z

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

The HTIF fix doesn't fix this error. The new run-time error (after Jiri applied my patch) is probably because of:

1) Some relocations not being supported in libdl/RISC-V implementation (e.g., RELAX)
2) I haven't tested/supported RAP format when I ported libdl for RISC-V.

Author: Chris Johns 2020-09-08T07:26:07.000Z

If Jiri's patch builds `dl06` then it can be pushed. The patch looks reasonable.

Author: Trac Migrate 2020-09-08T07:32:41.000Z

The patch fixes the build of dl06, but several of the dlxx test then will fail during execution. If we push this patch, the the dl test must be marked as expected-fail for RISC-V. I would think that disabling building of dl tests is cleaner, see new suggested patch.

Author: Trac Migrate 2020-09-08T07:33:22.000Z

- **Attachment** disable-dl-for-riscv.patch added

Disable building dl tests for RISC-V

Author: Chris Johns 2020-09-09T02:11:01.000Z

Replying to Jiri Gaisler:

> The patch fixes the build of dl06, but several of the dlxx test then will fail during execution. If we push this patch, the the dl test must be marked as expected-fail for RISC-V.
>
> Tagging the tests with `expected-fail` is my preferred approach.
>
> > I would think that disabling building of dl tests is cleaner, see new suggested patch.
> >
> > I do not support doing this. Disabling or excluding tests because they fail hides the failures and does not encourage fixes. Why should RISCV be treated as special? I feel disabling tests sends the wrong message.
> >
> > I assume they passed once so regressions like this happen. I suspect if you wind back the tool sets to a previous version the tests might past. Should tools upgrades be linked to regressions? I do not think that would be helpful.

Author: Chris Johns 2020-09-09T04:06:29.000Z

I built the tests and `dl01` to `dl04` pass and `dl05` to `dl09` fail. I tried to have a look at `dl05` however gdb reported:

```
(gdb) target remote :1234
Remote debugging using :1234
Truncated register 52 in remote 'g' packet
```

then disconnected me from `sis`.

Author: Trac Migrate 2024-08-02T01:37:07.226Z

Replying to Chris Johns:

I built the tests and `dl01` to `dl04` pass and `dl05` to `dl09` fail. I tried to have a look at `dl05` however gdb reported:

```
(gdb) target remote :1234
Remote debugging using :1234
Truncated register 52 in remote 'g' packet
```

then disconnected me from `sis`.

Make sure you use the extended-remote target, and riscv-rtems5-sis:

```
$ riscv-rtems5-sis -gdb . .

$ riscv-rtems6-gdb ./riscv-rtems6/c/griscv/testsuites/
↪psxtests/psxfenv01.exe

$ (gdb) tar extended-remote localhost:1234
Remote debugging using localhost:1234 0x00000000 in ?? ()
(gdb) load
Loading section .start, size 0xa8 lma 0x40000000
Loading section .text, size 0x15138 lma 0x400000a8
Loading section .rodata, size 0x1c1d lma 0x400151e0
Loading section .eh_frame, size 0x68 lma 0x40016e00
Loading section .init_array, size 0x4 lma 0x40016e68
Loading section .fini_array, size 0x4 lma 0x40016e6c
Loading section .rtemsroset, size 0x74 lma 0x40016e70
Loading section .data, size 0x490 lma 0x40016ee8
Loading section .sdata, size 0xac lma 0x40017380
Start address 0x40000000, load size 95261
Transfer rate: 4429 KB/sec, 237 bytes/write.
(gdb) run
```

Author: Chris Johns 2024-08-02T01:38:48.516Z

Replying to Jiri Gaisler:

Replying to Chris Johns:

I built the tests and `dl01` to `dl04` pass and `dl05` to `dl09` fail. I tried to have a look at `dl05` however gdb reported:

```
(gdb) target remote :1234
Remote debugging using :1234
Truncated register 52 in remote 'g' packet
```

then disconnected me from `sis`.

Make sure you use the extended-remote target, and riscv-rtems5-sis:

```
$ riscv-rtems5-sis -gdb .
```

I built it using the `devel/sis` RSB package and I only got an `sis` executable installed.

```
$ ../source-builder/sb-set-builder --list-bsets | grep sis␣
↪devel/sis.bset $ ls /opt/work/rtems/6/bin/ | grep sis sis␣
↪sparc-rtems6-sis
```

I checked the build log and there is no `riscv-rtems[56]-sis` installed. I see a `sparc-rtems-sis` installed. Where do the those come from?

I will push a change to the RSB to build 2.22.

```
$ riscv-rtems6-gdb ./riscv-rtems6/c/griscv/
↪testsuites/psxtests/psxfenv01.exe
$ (gdb) tar extended-remote localhost:1234
```

I added `-riscv` to the `sis` command line and it works. It must have been defaulting to the `sparc` simulation.

Note, the `-riscv` option is spelt wrong in the usage help.

Author: Chris Johns 2020-09-10T04:17:07.000Z

I have looked into the crash in `dl05` and it is a misaligned access because the rela record has an offset of `7`. You can see this here:

```
$ riscv-rtems6-readelf -r riscv-rtems6/c/griscv/testsuites/libtests/
↪dl05-o5.o
[snip]

Relocation section '.rela.gcc_except_table.exception_dl' at offset␣
↪0x8b98 contains 58 entries:
Offset     Info    Type            Sym.Value  Sym. Name + Addend
00000007  00006423 R_RISCV_ADD32     0000002c   .LEHB0 + 0

[snip]
```

This is a relocation record for exception table.

I have added reloc tracing to the RISCV backend the reloc that crashes is:

```
rtl: reloc base_rel(/dl05-o5.o): ADD32: where=0x4006cc67,␣
↪*where=0xdedeeded, addend=0x0, base 0x4006cc60
```

The `*where=0xdedeeded` can be ignored, the value is invalid because the address was detected as odd.

I do not know the RISCV so does the write needs to be smarter or is the problem else where.

I am wondering if a number of other crashes are the same or a similar issue.

Author: Chris Johns 2020-09-10T05:07:34.000Z

- **Attachment** 0001-libdl-riscv-Support-misaligned-read-and-write-access.patch added

libdl/risc: Support misaligned acesses for updates to the loaded code

Author: Chris Johns 2020-09-10T05:08:43.000Z

The patch lets things get further along however there are other issues with the libdl tests 5 thru 9. I have no more time available to look into this.

Author: Trac Migrate 2024-08-02T01:41:52.819Z

Replying to Chris Johns:

> Replying to Jiri Gaisler:
>
> > Replying to Chris Johns:
> >
> > > I built the tests and `dl01` to `dl04` pass and `dl05` to `dl09` fail. I tried to have a look at `dl05` however gdb reported:
> > >
> > > ```
> > > (gdb) target remote :1234
> > > Remote debugging using :1234
> > > Truncated register 52 in remote 'g' packet
> > > ```
> > >
> > > then disconnected me from `sis`.
> >
> > Make sure you use the extended-remote target, and riscv-rtems5-sis:
> >
> > ```
> > $ riscv-rtems5-sis -gdb
> > ```
>
> I built it using the `devel/sis` RSB package and I only got an `sis` executable installed.
>
> ```
> $ ../source-builder/sb-set-builder --list-bsets | grep sis␣
> ↪devel/sis.bset $ ls /opt/work/rtems/6/bin/ | grep sis sis␣
> ↪sparc-rtems6-sis
> ```
>
> I checked the build log and there is no `riscv-rtems[56]-sis` installed. I see a `sparc-rtems-sis` installed. Where do the those come from? I will push a change to the RSB to build 2.22.
>
> ```
> $ riscv-rtems6-gdb ./riscv-rtems6/c/griscv/
> ↪testsuites/psxtests/psxfenv01.exe
> $ (gdb) tar extended-remote localhost:1234
> ```
>
> I added `-riscv` to the `sis` command line and it works. It must have been defaulting to the `sparc` simulation. Note, the `-riscv` option is spelt wrong in the usage help.
>
> I have updated RSB to also build sis for RISC-V. This was previously done only for rtems5, not rtems6.

Author: Chris Johns 2020-09-10T23:25:33.000Z

Replying to Jiri Gaisler:

> I have updated RSB to also build sis for RISC-V. This was previously done only for rtems5, not rtems6.
>
> Thanks. Does this install as `riscv-rtems6-sis`?

Author: Chris Johns 2020-09-10T23:28:09.000Z

- **Attachment** riscv-rtl-empty-symbols.diff added

Apply on top of the misalignment patch. Teach the RTL to handle empty symbol names.

Author: Trac Migrate 2020-09-11T06:49:07.000Z

Replying to Chris Johns:

> Replying to Jiri Gaisler:
>
> > I have updated RSB to also build sis for RISC-V. This was previously done only for rtems5, not rtems6.
> >
> > Thanks. Does this install as `riscv-rtems6-sis`?
> >
> > Yes, that is the whole idea with this patch... :-)

Author: Chris Johns 2020-09-11T07:06:23.000Z

Replying to Jiri Gaisler:

> Yes, that is the whole idea with this patch... :-)
>
> Being able to have the SIS available like this when a RISCV tool chain is built is fantastic. Thank you for your support and the tool.

Author: Trac Migrate 2020-09-11T07:08:33.000Z

The riscv-rtl-empty-symbols.diff patch gives me the following failures:

Failures: dl01.exe dl02.exe dl05.exe dl08.exe User Input: dl10.exe monitor.exe termios.exe top.exe

dl01, dl02 and dl08 now times-out rather than fails....

Author: Chris Johns 2020-09-11T07:36:26.000Z

Yeah, something is wrong with the patch. I was seeing an unresolved symbol with a symbol name of `""` being added and as you can imagine it is never resolved.

Author: Chris Johns 2020-09-11T08:07:21.000Z

I am starting to suspect the issue is the `R_RISCV_RELAX` reloc records and the call sites. The simplest approach is to ignore those relocs and just use 32bit destinations or implement the 21bit relative offset if the target is in range.

The RISCV relax approach is nicer to libdl than the ARM or PowerPC trampoline support.

Author: Chris Johns 2020-09-11T08:24:12.000Z

- **Attachment** v2-0001-libdl-riscv-Fix-RISCV-issues-with-libdl-tests.patch added

Tests dl01-dl04,dl06-dl09 pass with this patch on the SIS. Hesham, please test, review and push if you think it is OK.

Author: Chris Johns 2020-09-11T08:26:15.000Z

`dl05` has an issue in the unwind tables somewhere. An object's tables are added to the base tables so you can throw in a module and catch it elsewhere. `dl06` is a RAP thing which requires some work to sort out.

Author: Trac Migrate 2020-09-15T07:17:20.000Z

Thanks, Chris for your fixes! I applied the last patch and tried to test rv64imafdc_medany on QEMU, but dl01 fails in run-time triggering an exception while loading the object. I'll debug that issue.

Author: Chris Johns 2022-11-29T23:03:11.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

please reopen if it is still failing.

3.9.1.258 5080 - Lowercase all directories and files in source.

Id	5080
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Amar Takhar
Closed by	Amar Takhar
Created	2024-07-29T20:54:08.309Z
Closed	2024-07-30T04:32:21.715Z
Updated	2024-07-30T04:32:21.729Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5080
Merges	0

Summary

We have always had inconsistent directory and file naming. There is no consistency it would be nice if files sorted correctly and we had a policy going forward that all files must be lower case. With the exception of the file extension `.S` which does have some meaning and text files which again denotes that it's text, typically.

I'm proposing this in the spirit of wanting the source code reformatted for %6.1 we should take this opportunity to change the file names as well as cleaning up our in-source documentation with the MarkDown conversion. I consider this a purely documentation change.

We have no especial files in the source that are absolutely required to be upper case or Camel-Case that I can see. Below are a list of directories and files:

Directories

```
./bsps/arm/imxrt/mcux-sdk/devices/MIMXRT1052
./bsps/arm/imxrt/mcux-sdk/devices/MIMXRT1052/drivers
./bsps/arm/imxrt/mcux-sdk/devices/MIMXRT1052/gcc
./bsps/arm/imxrt/mcux-sdk/devices/MIMXRT1052/xip
./bsps/arm/imxrt/mcux-sdk/devices/MIMXRT1166
./bsps/arm/imxrt/mcux-sdk/devices/MIMXRT1166/drivers
./bsps/arm/imxrt/mcux-sdk/devices/MIMXRT1166/drivers/cm4
./bsps/arm/imxrt/mcux-sdk/devices/MIMXRT1166/drivers/cm7
./bsps/arm/imxrt/mcux-sdk/devices/MIMXRT1166/gcc
./bsps/arm/imxrt/mcux-sdk/devices/MIMXRT1166/xip
./bsps/arm/stm32h7/boards/stm/Components
./bsps/arm/stm32h7/boards/stm/Components/mt25tl01g
./bsps/arm/stm32h7/hal/Legacy
./bsps/arm/stm32h7/include/Legacy
./bsps/bfin/bf537Stamp
./bsps/bfin/bf537Stamp/config
./bsps/bfin/bf537Stamp/console
./bsps/bfin/bf537Stamp/include
```

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```
./bsps/bfin/bf537Stamp/include/bsp
./bsps/bfin/bf537Stamp/start
./bsps/bfin/eZKit533
./bsps/bfin/eZKit533/config
./bsps/bfin/eZKit533/console
./bsps/bfin/eZKit533/include
./bsps/bfin/eZKit533/include/bsp
./bsps/bfin/eZKit533/start
./bsps/bfin/TLL6527M
./bsps/bfin/TLL6527M/config
./bsps/bfin/TLL6527M/console
./bsps/bfin/TLL6527M/include
./bsps/bfin/TLL6527M/include/bsp
./bsps/bfin/TLL6527M/start
./bsps/include/xil/arm/ARMv8
./bsps/include/xil/arm/ARMv8/32bit
./bsps/include/xil/arm/ARMv8/64bit
./bsps/lm32/milkymist/Documentation
./bsps/m68k/uC5282
./bsps/m68k/uC5282/btimer
./bsps/m68k/uC5282/clock
./bsps/m68k/uC5282/config
./bsps/m68k/uC5282/console
./bsps/m68k/uC5282/include
./bsps/m68k/uC5282/include/bsp
./bsps/m68k/uC5282/start
./bsps/powerpc/mvme5500/GT64260
./bsps/shared/xil/arm/ARMv8
./make/Templates
./spec/build/bsps/bfin/bf537Stamp
./spec/build/bsps/bfin/eZKit533
./spec/build/bsps/bfin/TLL6527M
./spec/build/bsps/m68k/uC5282
./testsuites/libtests/POSIX
```

Files

```
_Exit
bf537Stamp
BSP_irq
bspException
bspIo
bspMvme5500
bspVmeDmaList
bspVmeDmaListP
cecRegs
ChangeLog
COBRA5475
consoleIo
```

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```
COPYING
coreTimerRegs
cpuIdent
cpuModel
displayCpu
dmaRegs
ebiuRegs
errata_SSWF021_45
ethernetRegs
eZKit533
FD_CLR
FD_ISSET
FD_SET
FD_ZERO
flashPgm
flashPgmPvt
fsl-mpc564xL
gpioRegs
GT64260eth
GT64260ethreg
GT64260TWSI
intelFlash
interruptmask_TX49
m5484FireEngine
Makefile
MCD_dma
MCD_dmaApi
MCD_progCheck
MCD_tasks
MCD_tasksInit
mediaLB
memoryRegs
memProbe
MIMXRT1052
MIMXRT1052_features
MIMXRT1166_cm4
MIMXRT1166_cm4_features
MIMXRT1166_cm7
MIMXRT1166_cm7_features
mmuAsm
mmuRegs
MVME5500I2C
ppiRegs
probeMemEnd
ReleaseNotes
rtcRegs
sicRegs
spansionFlash
spiRegs
```

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```
sportRegs
stackTrace
startAP
startup_MIMXRT1052
startup_MIMXRT1166_cm4
startup_MIMXRT1166_cm7
system_MIMXRT1052
system_MIMXRT1166_cm4
system_MIMXRT1166_cm7
tfsDriver
tftpDriver
timerRegs
twiRegs
uartRegs
uC5282
Unlimited
uuidP
videoAsm
VME
VMEConfig
VMEDMA
vmeTsi148
vmeTsi148DMA
vmeUniverse
vmeUniverseDMA
VPD
wdogRegs
```

Author: Amar Takhar 2024-07-29T20:54:08.454Z

assigned to @amar

Author: Amar Takhar 2024-07-30T04:32:21.436Z

This change isn't going to happen anytime soon if at all because the includes also rely on the file case. It's not worth making a sweeping change like this with too much uncertainty.

At the very least I hope we can get a policy that does not introduce files that does not introduce more files or at least has a justification such as they come from upstream.

3.9.1.259 5076 - objectgetinfo.c: Potential access past end of array

Id	5076
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Amar Takhar
Created	2024-07-27T15:15:54.273Z
Closed	2024-07-27T20:34:23.909Z
Updated	2024-07-27T20:34:24.009Z
Milestone	6.1
Labels	scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5076
Merges	1

Summary

If presented with a specific badly formed that includes an API class field of 4-7, this method will currently access beyond the end of the _Objects_Information_table array. This was spotted by Coverity – CID 1592935

```
44Objects_Information *_Objects_Get_information_id(
45  Objects_Id  id
46)
47{

CID 1592935: (#1 of 1): Out-of-bounds access (OVERRUN)
1. overrun-call: Overrunning callee's array of size 4 by passing argument _
↪Objects_Get_API(id) (which evaluates to 7) in call to _Objects_Get_information.
↪[show details]
48  return _Objects_Get_information(
49    _Objects_Get_API( id ),
50    _Objects_Get_class( id )
51  );
```

The fix is to ensure that the api field is validated in _Objects_Get_information().

> **Author:** Joel Sherrill 2024-07-27T15:15:54.458Z
>
> assigned to @joel
>
> **Author:** Joel Sherrill 2024-07-27T15:31:58.330Z
>
> mentioned in merge request !136

3.9.1.260 4677 - incorrect handling of “inactive_per_block” from “Objects_Information” structure (cloned)

Id	4677
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-07-13T06:10:51.000Z
Updated	2024-07-27T07:24:35.773Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4677
Merges	0

Original author: avarlan

Cloned from #4676:

The inactive_per_block for block 1 is not handled correctly. For the first object in the second block, the inactive_per_block value is not decremented. As a consequence, the block might be deleted when the second to last object from block 1 is deleted. This is only valid when the application is configured with `CONFIGURE_UNLIMITED_OBJECTS`.

The reason is the following:

in function `_Objects_Activate_unlimited` from “objectimpl.h”

```
block = _Objects_Get_index( the_object->id ) - OBJECTS_INDEX_MINIMUM;
if ( block > objects_per_block ) {
block /= objects_per_block;
information->inactive_per_block[ block ]--;
information->inactive--;
}
```

in a block with 8 objects per block, when creating the 9th object, _Objects_Get_index(the_object->id) returns 9. Therefore, “block” will be 8 (9 - 1). The next “if” will not be taken (8 > 8 ? No) and the inactive_per_block will not be decremented to 7 and remains at 8. This means that block 1 is a candidate for “_Objects_Shrink_information” function although object id 9 is still valid.

Steps to reproduce: -assuming 8 objects per allocation block -using semaphores as objects

1. create 17 `RTEMS_SIMPLE_BINARY_SEMAPHORE` semaphore objects id’s 1 -> 17.
2. delete semaphores 11, 12, 13, 14, 15, 16, 17 (order is important)
3. lock semaphore 9
4. delete semaphore 10 -> at this point, block 1 is freed although semaphore 9 is still active
5. unlock semaphore 9 -> this can lead to errors. In my case due to the free the semaphore object was altered and changed from a `SEMAPHORE_VARIANT_SIMPLE_BINARY`

to `SEMAPHORE_VARIANT_MUTEX_INHERIT_PRIORITY` resulting in a return value of `RTEMS_NOT_OWNER_OF_RESOURCE`.

Simple fix: the condition for the `if` should be >= instead of >.

Author: Trac Migrate 2022-07-18T07:27:45.000Z

Original author: avarlan

In [changeset:"e0942613f134ac28c5c6cdae99060989b6db1d08/rtems" e094261/rtems]:

```
score: Fix _Objects_Active_count()

With unlimited objects the object maximum may be larger than the sum of active
and inactive objects.

Update #4677.
```

Author: Trac Migrate 2022-07-18T07:27:47.000Z

Original author: avarlan

In [changeset:"3bb79aabca99bb9b97b788b3b873c82908a0d78d/rtems" 3bb79aab/rtems]:

```
spunlimited01: New test

Update #4677.
```

Author: Trac Migrate 2022-07-18T07:27:50.000Z

Original author: avarlan

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"12a03bea4f936f6305869b43f9c0a5f1473213e9/rtems" 12a03bea/rtems]:

```
score: Fix unlimited objects support

Commit 21275b58a5a69c3c838082ffc8a7a3641f32ea9a ("score: Static
Objects_Information initialization") introduced an off-by-one error in the
maintenance of inactive objects.

Close #4677.
```

Author: Amar Takhar 2024-04-25T20:49:57.213Z

changed the description

Author: Chris Johns 2024-07-27T07:24:35.875Z

changed the description

3.9.1.261 5063 - Add a call to return open file descriptors

Id	5063
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Amar Takhar
Created	2024-07-08T05:42:51.325Z
Closed	2024-07-24T03:23:33.140Z
Updated	2024-07-24T03:23:33.305Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5063
Merges	1

EPICS `iocStats` module reports the number of open file descriptors by directly access the IOPs table. Provide a call to return the number of open.

Add the call `rtems_libio_iop_descriptors_open()`.

Author: Chris Johns 2024-07-08T05:42:51.408Z

assigned to @chris

Author: Chris Johns 2024-07-16T06:15:27.664Z

mentioned in merge request !117

3.9.1.262 5062 - Return task and idle time with getrusage

Id	5062
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Amar Takhar
Created	2024-07-08T05:25:51.011Z
Closed	2024-07-18T00:11:22.688Z
Updated	2024-07-18T04:57:24.697Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5062
Merges	1

Return the task and idle execution time via `getrusage()` call. User can use these times to determine the percentage load of the system and if they record the delta they current load.

Return the total amount of time executed by tasks (not `IDLE`) in the `utime` field and IDLE time in `stime` of `struct ruse`.

Author: Chris Johns 2024-07-08T05:25:51.125Z

assigned to @chris

Author: Chris Johns 2024-07-08T05:25:51.229Z

marked this issue as related to #5060

Author: Chris Johns 2024-07-16T05:42:17.692Z

mentioned in merge request !116

Author: Chris Johns 2024-07-18T04:57:24.415Z

mentioned in merge request rtems/docs/rtems-docs!31

3.9.1.263 5049 - Add sys/tree.h from newlib to the score with a different name

Id	5049
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Joel Sherrill
Created	2024-06-18T02:22:07.967Z
Closed	2024-07-09T22:55:17.102Z
Updated	2024-07-18T00:09:28.503Z
Milestone	6.1
Labels	libbsd, rtems::score, tool::newlib
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5049
Merges	1

Summary

Newlib has an old and out dated copy of `sys/tree.h` which RTEMS uses in the `score` via `rbtree.h`. Move the file from newlib to RTEMS and change the name to `bsd-tree.h`. Update the include guards.

Newlib does not use or depend on `sys/tree.h` and having it in newlib offers no advantage however it being there complicates it's use because newlib, RTEMS and LibBSD all depend on it and different versions:

1. RTEMS's internal data structures depends on a critical file external to RTEMS. RTEMS should contain important kernel structures and not be effect by outside files.
2. LibBSD is confused by this file and assuming LibBSD and newlib share a common version creates compatibility issues. The `6-freebsd-12` and `main` branches support the version in newlib however any current version of LibBSD does not and updating newlib's copy would break `6-freebsd-12`.

> **Author:** Chris Johns 2024-06-18T02:22:08.059Z
>
> assigned to @chris
>
> **Author:** Aaron Nyholm 2024-06-18T02:24:51.376Z
>
> mentioned in merge request !77
>
> **Author:** Sebastian Huber 2024-06-21T05:43:19.485Z
>
> The <sys/tree.h> in Newlib is not out-dated. I continuously synchronized it with FreeBSD. The last update was in 2021. FreeBSD decided to change the implementation from red-black trees to rank-based trees based on a XFS use case. I made a performance evaluation and kept the red-black tree implementation (see Newlib mailing list archive).

I would remove the <sys/tree.h> from libbsd and update the Newlib version if necessary. The red-black tree support provides a critical data structure and there should be only one version of it.

Author: Chris Johns 2024-06-21T05:43:19.485Z

Where is this data structure critical?

Author: Sebastian Huber 2024-06-21T05:43:19.485Z

It is used for the RTEMS thread queues and the watchdogs for example. A red-black tree implementation is not completely trivial and there is always an opportunity for performance tweaks. This is why it is good to use an implementation which is exposed to a large user group.

Author: Chris Johns 2024-06-21T05:43:19.485Z

Thanks, this confirms to me the change is a good idea. We should have data structures we deem critical held in the `score` sources and not dependent on an outside project where anyone could submit a change that effects us.

Author: Sebastian Huber 2024-06-21T05:43:19.485Z

I have the contrary point of view that things important for us should be shared with as many projects as possible.

Author: Chris Johns 2024-06-21T05:43:19.485Z

The change brings the code into RTEMS and insulates from any external changes. I asked on dsscord what the use case for it in newlib and you said none so this seems to be a style or preference thing. I see the newlib path as a liability on the project.

Being useful, and it is, is not a strong case for being in newlib. Newlib is about standards and `libc` and not a hold pen for useful code. Why do you need it there as RTEMS will install it?

Author: Sebastian Huber 2024-06-21T05:43:19.485Z

This is not the strategy I used in the past. I am in favour of sharing code with other projects as much as possible.

Author: Chris Johns 2024-06-21T05:43:19.485Z

We should avoid being a clearing house for fragments of code from other projects not directly used. User should be encouraged to use the upstream project and manage

fixes, updates and versioning. We should also not clutter other projects such newlib with things not related to that project's core purpose. Code brought into newlib to fulfill it purpose is acceptable however `tree.h` is not referenced.

Author: Sebastian Huber 2024-06-21T05:43:19.485Z

You neglect a bit how all this evolved. Newlib already had a <sys/queue.h> so adding a <sys/tree.h> was straight forward. During this period I worked a lot on making Newlib and FreeBSD compatible enough so that we are able to use the network stack from FreeBSD. I maintain the <sys/tree.h> file in Newlib since 2015 and will continue to do so. This resulted also in contributions to FreeBSD.

Author: Chris Johns 2024-06-21T05:43:19.485Z

I have not neglected how it evolved. Newlib has FreeBSD code in it and rightly so but that does then imply any FreeBSD can be added. There is no compelling reason for this file to be in newlib and I feel it is problematic being there. @joel has posted the remove patch as he said he would on discord so I think his view is clear. I support that patch.

I have found only a few references to `sys/tree.h` in the entire issue database and only one issue from you related to an optimization (#4522). I have only just learnt from you in this issue about a choice you made related to benchmark testing of the XFS version. There is no mention of XFS in the issue database. In reading #4522 the location of the code for coverage analysis is not clear so I can only assume our testsuite. This means we are coverage testing a key data structure and algorithm located in a different project or a key part of our kernel's performance can change with no record in our project. We should have this header in our code base where we can control and this is what !77 does.

I appreciate your offer of continued maintenance and that can continue with the file in our repo. Anyone can post a change to `tree.h` in newlib that breaks our build or more problematically changes its performance. Having to have someone from this project always monitoring and checking newlib and being a gatekeeper of that file is something I find not feasible long term.

Author: Sebastian Huber 2024-06-21T05:43:19.485Z

A performance change can go in two directions. You may also see a performance increase. If you remove this file, you may miss this chance. The rate of change in Newlib is pretty low. If the RTEMS Project is not able to monitor the Newlib changes, then it has a bigger issue. Right now you address an artificial problem.

The more serious issue is, that the RTEMS Project would probably not notice performance changes, because we do not systematically monitor the RTEMS performance at a project level.

Author: Chris Johns 2024-06-21T05:43:19.485Z

@joel has reminded us in his newlib post the score should never depends on libc and this change respects that principle. The principle has exist long before I joined the project. His statement in the post is:

> This actually violated a core development principle for RTEMS and we should have spotted this long ago. Everything in the score and "bottom" of RTEMS should not depend on libc.

Author: Sebastian Huber 2024-06-21T05:43:19.485Z

I am sorry for violating the core development principles of RTEMS, then please go ahead and fix this issue after nine years in service.

Author: Chris Johns 2024-06-21T05:43:19.485Z

Thanks. The header has not been an issue and it is now an issue so we are sorting out.

Author: Sebastian Huber 2024-07-12T05:50:39.414Z

mentioned in merge request !115

Author: Sebastian Huber 2024-07-18T00:09:28.283Z

mentioned in commit 1dd384bb1b317ff409eb11643cfbc3c48d461c12

3.9.1.264 5060 - Add CPU Usage calls to return the time or ticks accounted for in tasks

Id	5060
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-07-04T05:40:04.842Z
Closed	2024-07-08T05:26:32.234Z
Updated	2024-07-08T05:26:32.304Z
Milestone	6.1
Labels	cpukit, cpukit::cpuuse
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5060
Merges	0

Summary

Add two calls to CPU usage in `cpukit/libmisc` to return the time in nano-seconds or the time as ticks to the caller.

The EPICS iocStats module has code that directly iterates over the object information. This change provides a simple interface to remove the dependence of the IOC module on the internals of RTEMS. The CPU usage code i `libmisc` has all the pieces in place to make this a simple addition.

Author: Chris Johns 2024-07-04T05:40:04.950Z

assigned to @chris

Author: Sebastian Huber 2024-07-04T06:59:15.940Z

The <rtems/cpuuse.h> header file is generated from specification items. If you want to add new API elements to this header, then please do this in rtems-central, so that the Classic API Guide gets updated as well.

Author: Joel Sherrill 2024-07-04T16:10:27.742Z

Be sure to consider the behavior if the statistics are reset.

But grabbing a single thread's CPU usage should be ok.

If clock_gettime doesn't already support CLOCK_THREAD_CPUTIME_ID, please add it. That use case should match youra.

Author: Sebastian Huber 2024-07-04T18:08:00.590Z

Is this about getting timings for a single thread or all threads of the system?

Author: Sebastian Huber 2024-07-05T00:56:39.741Z

There is also a `times()` system call.

Author: Chris Johns 2024-07-05T00:56:39.692Z

Thanks, I did not know about the `times()` call. It may work nicely and solve the problem for EPICS iocStats.

Author: Chris Johns 2024-07-05T05:47:16.367Z

The man page on FreeBSD says:

> This interface is obsoleted by getrusage(2) and gettimeofday(2).
>
> The issue with `getrusage()` is:

```
/*
*  RTEMS only has a single process so there are no children.
*  The single process has been running since the system
*  was booted and since there is no distinction between system
*  and user time, we will just report the uptime.
*/
```

And EPICS wants the amount of time tasks have used which is this time less `IDLE`. I am now wondering is `IDLE` time should be account for as system time and that would leave user time as the time spent running tasks?

Author: Chris Johns	2024-07-05T06:10:51.083Z

In an SMP system would the `IDLE` time reported as system time be the total of active periods for all the `iDLE` threads? I think it is.

For example if you have 4 CPUs and 2 are running at 100% and 2 are idle the over all load is 50%, ie `user / (user + system)` if user is the total time tasks have run for and system is the total idle time.

Author: Chris Johns	2024-07-08T05:25:51.262Z

marked this issue as related to #5062

Author: Chris Johns	2024-07-08T05:26:31.574Z

Update the `getrusage` call to handle this.

3.9.1.265 5013 - Generate release notes.

Id	5013
State	closed
Type	ISSUE
Author	Amar Takhar
Assignee(s)	Chris Johns, Amar Takhar
Closed by	Amar Takhar
Created	2024-05-17T03:54:50.137Z
Closed	2024-07-08T04:20:14.906Z
Updated	2024-07-08T04:20:14.916Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5013
Merges	0

Summary

We need to generate release notes from GitLab. The old script relied on trac.

GitLab has internal support for ChangeLog generation:

- https://docs.gitlab.com/ee/user/project/changelogs.html

The `glab` command supports generating ChangeLogs so we may not even need a script:

- https://gitlab.com/gitlab-org/cli/-/issues/1337

It also supports templates here is someone bringing up a caveat:

- https://stackoverflow.com/questions/77355492/glab-changelog-generate-does-not-use-my-template

Author: Amar Takhar 2024-05-17T03:54:50.295Z

assigned to @chris and @amar

Author: Amar Takhar 2024-05-17T04:05:33.579Z

After further investigation the ChangeLog api uses git trailers. So while in the future we should start doing this to automatically generate changelogs it does not help us right now.

- https://docs.gitlab.com/ee/api/repositories.html#migrating-from-a-manually-managed-changelog-file-to-git-trailers
- https://docs.gitlab.com/ee/user/project/changelogs.html

Author: Chris Johns 2024-06-13T01:33:50.583Z

mentioned in merge request rtems-release!1

Author: Amar Takhar 2024-07-08T04:20:14.634Z

We've decided that we won't be supporting the internal `ChangeLog:` trailer tracking method that GitLab uses to generate changelogs internally.

@chris has written a script to do this and for releases we'll be generating and including it as a tarball we can do this as part of CI in the future.

3.9.1.266 5058 - dhrystone: Prevent procedure merging

Id	5058
State	closed
Type	ISSUE
Author	Sebastian Huber
Assignee(s)	Sebastian Huber
Closed by	Amar Takhar
Created	2024-07-02T09:48:41.704Z
Closed	2024-07-08T03:41:59.853Z
Updated	2024-07-08T03:41:59.955Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5058
Merges	1

Summary

From the Dhrystone RATIONAL file:

```
o No procedure merging

Although Dhrystone contains some very short procedures where execution would
benefit from procedure merging (inlining, macro expansion of procedures),
procedure merging is not to be used. The reason is that the percentage of
procedure and function calls is part of the "Dhrystone distribution" of
statements contained in [1]. This restriction does not hold for the string
functions of the C version since ANSI C allows an implementation to use
inline code for these functions.
```

We have to add `-fno-inline` to the CFLAGS.

Author: Sebastian Huber 2024-07-02T09:48:41.829Z

assigned to @sebhub

Author: Sebastian Huber 2024-07-02T09:52:48.256Z

mentioned in merge request !106

Author: Joel Sherrill 2024-07-02T18:46:48.557Z

changed the description

3.9.1.267 5050 - Add fatal error for rtems_cache_disable_data()

Id	5050
State	closed
Type	ISSUE
Author	Sebastian Huber
Assignee(s)	Sebastian Huber
Closed by	Amar Takhar
Created	2024-06-20T13:51:38.807Z
Closed	2024-06-25T03:59:05.528Z
Updated	2024-06-27T23:31:57.877Z
Milestone	6.1
Labels	api
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5050
Merges	1

Summary

An user noticed that for example on the Xilinx Zynq 7000 BSP, the rtems_cache_disable_data() doesn't work.

I had a look at this and managed to disable the L1 and L2 caches, however, afterwards I got not that far. On the Cortex-A cores it seems at least the L1 data cache is required to provide support for atomic operations:

https://stackoverflow.com/questions/76207164/disabled-dcache-will-prevent-atomic-flag-from-being-set

I guess we have this situation on most modern chips with caches since the reservation granule is usually a cache line. How do we want to deal with rtems_cache_disable_data() in this case? From my point of view, this function as no real use case and adding it in the first place was a mistake.

We have a couple of options:

- Make the rtems_cache_disable_data() directive a no-operation. Afterwards the cache is still enabled, and an user may get confused.
- Issue a fatal error if someone calls rtems_cache_disable_data().
- Really disable the cache and let the user figure out that the atomic operations no longer work. Disabling the data cache can be a quite complex thing to do.
- Add a return status code to rtems_cache_disable_data() and let it return RTEMS_UNSATISFIED for example.

After discussions, the solution to optionally issue a fatal error was selected. If rtems_cache_disable_data() issues a fatal error is BSP-specific.

Author: Sebastian Huber 2024-06-20T13:51:38.977Z

assigned to @sebhub

Author: Sebastian Huber 2024-06-26T10:02:21.541Z

mentioned in merge request !97

Author: Sebastian Huber 2024-06-27T23:31:57.668Z

mentioned in commit c847f4c10161bebddec346ac38cd10c689dcc97b

3.9.1.268 4522 - Optimize red-black tree insert/extract

Id	4522
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-10-05T14:16:32.000Z
Updated	2024-06-20T07:02:39.266Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, tool::newlib, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4522
Merges	0

Original author: sebastian.huber

Code coverage analysis of the red-black tree insert/extract operations defined in <sys/tree.h> showed that the macros contain dead code. To fix this simplify some expressions and add specialized rotations:

https://sourceware.org/pipermail/newlib/2021/018599.html

Author: Trac Migrate 2021-10-07T19:39:19.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"889cf95db0122bd1a6b21598569620c40ff2069d/rtems-source-builder" 889cf95/rtems-source-builder]:

```
Update newlib to fetch <sys/tree.h> optimizations

Close #4522.
```

Author: Amar Takhar 2024-04-25T20:49:13.299Z

changed the description

Author: Chris Johns 2024-06-20T07:02:39.171Z

mentioned in issue #5049

3.9.1.269 5043 - Remove e500 instructions from PowerPC BSPs that are not E500

Id	5043
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Amar Takhar
Created	2024-06-15T06:48:20.446Z
Closed	2024-06-18T06:27:01.121Z
Updated	2024-06-18T06:27:01.169Z
Milestone	6.1
Labels	arch:powerpc, tool::gdb
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5043
Merges	1

Summary

The PowerPC BSP `libcpu` header `powerpc-utilities.h` has functions that force the machine type to be `e500`. GDB sees this machine state and selects the architecture to be `powerpc:e500` and that causes problems when debugging BSPs that are not `e500` based. For example the Beatnik BSP has `-mcpu=7400` and GDB should report `powerpc:7400` however it reports `powerpc:e500`.

The functions are https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/bsps/powerpc/include/libcpu/powerpc-utility.h?ref_type=heads#L887

Steps to reproduce

- Build `powerpc/mvme2700`
- Start GDB with `powerpc-rtems6-gdb build/powerpc/mvme2700/testsuites/samples/hello.exe`
- Enter `show architecture`

GDB reports the incorrect architecture:

```
(gdb) show architecture
The target architecture is set to "auto" (currently "powerpc:e500").
```

Solution

Find a solution. I cannot easily see how to conditionally build for E500 type processors. It would be good if someone with more PowerPC experience could help provide a solution.

Would removing the `.machine e500` statements be OK for all PowerPC BSPs?

Author: Chris Johns 2024-06-15T07:31:42.433Z

Checking the architecture and compiler options using the scripts and GDB init commands:

```
$ ../get-archs
↪
↪
↪              [59/1887]
EXE: build/powerpc/mpc5643l_evb/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/hsc_cm01/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/qoriq_core_1/testsuites/samples/hello.exe
Architecture of file not recognized.
The target architecture is set to "auto" (currently "rs6000:6000").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/mpc8313erdb/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/mvme3100/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -msoft-float
EXE: build/powerpc/beatnik/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=7400
EXE: build/powerpc/mvme2100/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/qoriq_e6500_32/testsuites/samples/hello.exe
Architecture of file not recognized.
The target architecture is set to "auto" (currently "rs6000:6000").
| -ftls-model=local-exec -mcpu=e6500 -m32 -mvrsave
EXE: build/powerpc/mpc8349eamds/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/pm520_ze30/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/mpc5668g/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/qoriq_e6500_64/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common64").
| -ftls-model=local-exec -mcpu=e6500 -m64 -mvrsave
EXE: build/powerpc/pghplus/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=860
EXE: build/powerpc/virtex5/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -msoft-float
EXE: build/powerpc/t32mppc/testsuites/samples/hello.exe
Architecture of file not recognized.
```

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```
The target architecture is set to "auto" (currently "rs6000:6000").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/mtx603e/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/mpc8309som/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/mvme2307/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=604
EXE: build/powerpc/phycore_mpc5554/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/pm520_cr825/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/mvme5500/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec
EXE: build/powerpc/icecube/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/mpc5566evb/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/gwlcfm/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/br_uid/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/tqm8xx_stk8xx/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=860
EXE: build/powerpc/qoriq_core_0/testsuites/samples/hello.exe
Architecture of file not recognized.
The target architecture is set to "auto" (currently "rs6000:6000").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/mpc5674fevb/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/mvme2700/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=604
EXE: build/powerpc/qemuppc/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/qoriq_e500/testsuites/samples/hello.exe
```

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```
Architecture of file not recognized.
The target architecture is set to "auto" (currently "rs6000:6000").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/qemuprep-altivec/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=7400
EXE: build/powerpc/virtex4/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec
EXE: build/powerpc/qemuprep/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec
EXE: build/powerpc/mpc8260ads/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/mcp750/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec
EXE: build/powerpc/psim/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/ss555/testsuites/samples/hello.exe

warning: Section .debug_aranges in /opt/work/chris/rtems/kernel/rtems.
↪git/build/powerpc/ss555/testsuites/samples/hello.exe entry at offset␣
↪0 has unsupported version 0, ignoring .debug_aranges.
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=505
EXE: build/powerpc/virtex/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=403
```

Scripts:

get-archs

show-arch.txt

Author: Chris Johns 2024-06-15T08:03:19.532Z

With the following patch:

```
diff --git a/bsps/powerpc/include/libcpu/powerpc-utility.h b/bsps/
↪powerpc/include/libcpu/powerpc-utility.h
index bfe0a68154..cf2d4c3f8c 100644
--- a/bsps/powerpc/include/libcpu/powerpc-utility.h
+++ b/bsps/powerpc/include/libcpu/powerpc-utility.h
@@ -888,7 +888,6 @@ static inline void ppc_msync(void)
{
__asm__ volatile (
```

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```
".machine push\\n"
-    ".machine e500\\n"
"msync\\n"
".machine pop"
:
@@ -901,7 +900,6 @@ static inline void ppc_tlbre(void)
{
__asm__ volatile (
".machine push\\n"
-    ".machine e500\\n"
"tlbre\\n"
".machine pop"
:
@@ -914,7 +912,6 @@ static inline void ppc_tlbwe(void)
{
__asm__ volatile (
".machine push\\n"
-    ".machine e500\\n"
"tlbwe\\n"
".machine pop"
:
@@ -927,7 +924,6 @@ static inline void ppc_tlbsx(void *addr)
{
__asm__ volatile (
".machine push\\n"
-    ".machine e500\\n"
"tlbsx 0, %0\\n"
".machine pop"
:
@@ -940,7 +936,6 @@ static inline void ppc_mtivpr(void *prefix)
{
__asm__ volatile (
".machine push\\n"
-    ".machine e500\\n"
"mtivpr %0\\n"
".machine pop"
:
@@ -950,7 +945,6 @@ static inline void ppc_mtivpr(void *prefix)

#define ppc_mtivor(x, vec) __asm__ volatile ( \\
".machine push\\n" \\
-    ".machine e500\\n" \\
"mtivor" RTEMS_XSTRING(x) " %0\\n" \\
".machine pop" \\
: \\
```

The GDB and command line arguments are:

```
$ ../get-archs
```

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```
EXE: build/powerpc/mpc5643l_evb/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/hsc_cm01/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/qoriq_core_1/testsuites/samples/hello.exe
Architecture of file not recognized.
The target architecture is set to "auto" (currently "rs6000:6000").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/mpc8313erdb/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/mvme3100/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -msoft-float
EXE: build/powerpc/beatnik/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=7400
EXE: build/powerpc/mvme2100/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/qoriq_e6500_32/testsuites/samples/hello.exe
Architecture of file not recognized.
The target architecture is set to "auto" (currently "rs6000:6000").
| -ftls-model=local-exec -mcpu=e6500 -m32 -mvrsave
EXE: build/powerpc/mpc8349eamds/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/pm520_ze30/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/mpc5668g/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/qoriq_e6500_64/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common64").
| -ftls-model=local-exec -mcpu=e6500 -m64 -mvrsave
EXE: build/powerpc/pghplus/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=860
EXE: build/powerpc/virtex5/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -msoft-float
EXE: build/powerpc/t32mppc/testsuites/samples/hello.exe
Architecture of file not recognized.
The target architecture is set to "auto" (currently "rs6000:6000").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/mtx603e/testsuites/samples/hello.exe
```

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```
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/mpc8309som/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/mvme2307/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=604
EXE: build/powerpc/phycore_mpc5554/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/pm520_cr825/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/mvme5500/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec
EXE: build/powerpc/icecube/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/mpc5566evb/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/gwlcfm/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/br_uid/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/tqm8xx_stk8xx/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=860
EXE: build/powerpc/qoriq_core_0/testsuites/samples/hello.exe
Architecture of file not recognized.
The target architecture is set to "auto" (currently "rs6000:6000").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/mpc5674fevb/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:e500").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
EXE: build/powerpc/mvme2700/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=604
EXE: build/powerpc/qemuppc/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/qoriq_e500/testsuites/samples/hello.exe
Architecture of file not recognized.
The target architecture is set to "auto" (currently "rs6000:6000").
| -ftls-model=local-exec -mcpu=8540 -msoft-float
```

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```
EXE: build/powerpc/qemuprep-altivec/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=7400
EXE: build/powerpc/virtex4/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec
EXE: build/powerpc/qemuprep/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec
EXE: build/powerpc/mpc8260ads/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/mcp750/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec
EXE: build/powerpc/psim/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=603e
EXE: build/powerpc/ss555/testsuites/samples/hello.exe

warning: Section .debug_aranges in /opt/work/chris/rtems/kernel/rtems.
↪git/build/powerpc/ss555/testsuites/samples/hello.exe entry at offset␣
↪0 has unsupported version 0, ignoring .debug_aranges.
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=505
EXE: build/powerpc/virtex/testsuites/samples/hello.exe
The target architecture is set to "auto" (currently "powerpc:common").
| -ftls-model=local-exec -mcpu=403
```

Author: Amar Takhar 2024-06-17T03:37:13.547Z

Just as a note this was added by @sebhub not too long ago:

- https://gitlab.rtems.org/rtems/rtos/rtems/-/commit/9b3b33d91a4615175852aee5d2f44df0a9fd1e87

Author: Chris Johns 2024-06-17T03:37:13.506Z

It looks like GDB is detecting E500 through sections like `.gnu.attribute` and other sections. An example is https://github.com/RTEMS/sourceware-mirror-binutils-gdb/blob/master/gdb/rs6000-tdep.c#L7655.

Author: Sebastian Huber 2024-06-17T05:55:49.764Z

There should be no code for the inline assembly functions if they are not used. I guess that the e500 stuff slips in through the shared exception support.

Author: Chris Johns 2024-06-17T05:55:49.734Z

Yeah I suspect it does and I agree there is a lot of sharing in a common exe of code that should never run. My guess is `ld` collects up the `.gnu.atrribute` sections and so this machine type bubbles to the surface?

Is the `.machine e500` needed for some BSPs? Do you if those calls can be made conditional somehow?

Author: Sebastian Huber 2024-06-17T06:00:13.404Z

The idea of the shared exception support was to have the support for all targets in one binary and use a run-time detection to select the right one. This code existed before I started working with RTEMS.

Author: Chris Johns 2024-06-17T06:02:17.303Z

Yes and I have only recently started to use the older PowerPCs boards. I see no value in touching the code to change this so your help in finding a solution would be welcome. If the `.machine e500` lines can be removed that would work for me but I have no idea why they are there?

Author: Sebastian Huber 2024-06-17T06:10:21.145Z

This was a change for GCC 10, which no longer passes -many to the assembler. You can try to remove it and see if all powerpc BSPs still build.

Author: Chris Johns 2024-06-17T06:12:27.466Z

I have and they do. I used `rtems-bsps` to list the BSPs and created the attached INI file. Is this all that is needed?

powerpc-all.ini

Author: Sebastian Huber 2024-06-17T06:30:12.807Z

As far as I remember at that time this resulted in assembly-time errors. So, if everything builds now without the `.machine` push and pop, it should be all right.

Author: Chris Johns 2024-06-18T04:10:50.952Z

mentioned in merge request !78

3.9.1.270 4861 - “Single HTML” links on docs.rtems.org lead to empty pages

Id	4861
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2023-02-17T15:59:48.000Z
Closed	2024-06-14T15:46:06.076Z
Updated	2024-06-14T17:12:10.732Z
Milestone	6.1
Labels	priority::normal, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4861
Merges	0

Original author: JSchweikhardt

Point your browser to docs.rtems.org.

All the orange icon “HTML” links in the “Single HTML” columns lead to an empty page. The PDF links are ok.

Author: Joel Sherrill 2023-02-17T16:11:18.000Z

Original author: JSchweikhardt

- **Milestone** set to %”6.1”
- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Kinsey Moore 2024-06-14T15:46:05.784Z

This appears to be resolved. Both the user manual and classic API guide loaded as expected given the instructions in the issue. It did take a little bit to load as it’s a single HTML document that contains the entirety of the document.

Author: Kinsey Moore 2024-06-14T15:46:06.203Z

changed the description

Author: Amar Takhar 2024-06-14T17:12:10.717Z

The other reason it takes a while to load is all the assets/images are inlined so it really is just a single page.

3.9.1.271 4997 - GMP not building when not installed

Id	4997
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Closed by	Joel Sherrill
Created	2024-02-28T05:22:44.000Z
Closed	2024-06-13T15:36:06.692Z
Updated	2024-06-13T15:36:06.777Z
Milestone	6.1
Labels	priority::normal, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4997
Merges	0

Email from Joel to `devel`:

rtems 6.1rc2 has a lot of tool build failures because I didn't have gmp-devel installed.

```
Checking for gmp.h... no
configure: error: gmp.h header not found
```

This is reported as part of building `gcc-newlib`. Should the RSB account for this by building gmp at the same time?

For now, I installed a host `gmp-devel` and restarted the build sweep.

Author: Chris Johns 2024-02-28T05:24:16.000Z

Joel,

Can you please detail the operating system?

Can you please remove the installed `gmp-devel` package and then check if the GMP is built? Please add `--trace` to the RSB command line.

Thanks Chris

Author: Joel Sherrill 2024-02-28T23:47:38.000Z

The build of gdb now depends on gmp-devel. I don't know if we want to include gmp in the rsb bset or not. But once I loaded that package, it built.

This is on CentOS 7 with the software collection to have gcc 8 and Python 3. CentOS 7 default is a gcc 4.8 and Python 2 which is insufficient. Should we update the CentOS 7 recommendations in the Users Guide?

Author: Chris Johns 2024-03-01T05:14:38.000Z

Replying to Joel Sherrill:

> The build of gdb now depends on gmp-devel.
>
> Yes, it has for a while and we have building gmp for a while as a result.
>
> > I don't know if we want to include gmp in the rsb bset or not. But once I loaded that package, it built.
> >
> > Please remove the package and retest. It is included in the build setsfor the RTEMS tools. Please have a look in the defaults build sets for the 6 release.
> >
> > > This is on CentOS 7 with the software collection to have gcc 8 and Python 3.
> > >
> > > Python 3 is now required because GDB requires it. The RTEMS tools commands are still python 2 compatible however pushing to a more recent GDB means we all need python 3.
> > >
> > > > CentOS 7 default is a gcc 4.8 and Python 2 which is insufficient.
> > > >
> > > > I do not use Linux and I do not know what this means?
> > > >
> > > > > Should we update the CentOS 7 recommendations in the Users Guide?
> > > > >
> > > > > To say what? The issue is not needing the package but why it was not built when it should be. Can you please debug this?

Author: Chris Johns 2024-06-13T15:36:01.749Z

@joel is this fixed?

Author: Joel Sherrill 2024-06-13T15:36:01.718Z

This is fixed but the hash changed for rtems-tools without the sha512 checksum getting updated. I will have a MR for that shortly.

Author: Joel Sherrill 2024-06-13T15:36:06.825Z

changed the description

3.9.1.272 4870 - Add features for QSPI Flash on Xilinx Versal

Id	4870
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Aaron Nyholm
Closed by	Gedare Bloom
Created	2023-03-06T02:35:37.000Z
Closed	2024-06-10T17:58:28.781Z
Updated	2024-06-13T04:26:44.735Z
Milestone	6.1
Labels	arch:aarch64, priority::normal, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4870
Merges	1

Original author: Eagleirony

Adds bug fixes for code ported from Xilinx, adds ReadId function for QSPI flash, adds wrapper to Xilinx driver to allow use of QSPI flash device API and ports JFFS2 driver from ZynqMP.

- 0001-bsps-Fix-xqspipsu-build-issues-on-versal.patch
- 0002-bsps-Add-ReadId-command-Xilinx-GQSPI-flash-helper.patch
- 0004-aarch64-versal-Add-wrapper-for-Xilinx-GQSPI-for-QSPI.2.patch
- 0004-aarch64-versal-Add-wrapper-for-Xilinx-GQSPI-for-QSPI.3.patch
- 0004-aarch64-versal-Add-wrapper-for-Xilinx-GQSPI-for-QSPI.patch
- 0005-aarch64-versal-Port-JFFS2-GQSPI-NOR-Driver-from-Zynq.patch

Author: Trac Migrate 2023-03-06T02:36:01.000Z

Original author: Eagleirony

- **Attachment** 0001-bsps-Fix-xqspipsu-build-issues-on-versal.patch added

Author: Trac Migrate 2023-03-06T02:36:35.000Z

Original author: Eagleirony

- **Attachment** 0002-bsps-Add-ReadId-command-Xilinx-GQSPI-flash-helper.patch added

Author: Trac Migrate 2023-03-06T02:38:28.000Z

Original author: Eagleirony

- **Attachment** 0004-aarch64-versal-Add-wrapper-for-Xilinx-GQSPI-for-QSPI.patch added

Author: Trac Migrate 2023-03-06T02:38:42.000Z

Original author: Eagleirony

- **Attachment** 0005-aarch64-versal-Port-JFFS2-GQSPI-NOR-Driver-from-Zynq.patch added

Author: Trac Migrate 2023-03-09T00:31:59.000Z

Original author: Eagleirony

- **Attachment** 0004-aarch64-versal-Add-wrapper-for-Xilinx-GQSPI-for-QSPI.2.patch added

Author: Trac Migrate 2023-03-09T00:32:51.000Z

Original author: Eagleirony

Updated patch 4 to reflect changes to spiflash API begin renamed

Author: Trac Migrate 2023-03-15T23:27:33.000Z

Original author: Eagleirony

- **Attachment** 0004-aarch64-versal-Add-wrapper-for-Xilinx-GQSPI-for-QSPI.3.patch added

Author: Chris Johns 2024-05-02T23:03:47.819Z

@eagleirony can you please make a merge request for these changes? Thanks

Author: Chris Johns 2024-05-02T23:04:06.007Z

changed the description

Author: Chris Johns 2024-05-02T23:04:06.044Z

assigned to @eagleirony

Author: Chris Johns 2024-05-02T23:04:16.233Z

unassigned @tracmigrate

Author: Aaron Nyholm 2024-05-07T05:55:32.508Z

mentioned in merge request !21

Author: Sebastian Huber 2024-06-11T11:37:16.310Z

mentioned in merge request !67

Author: Sebastian Huber 2024-06-13T04:26:44.547Z

mentioned in commit 1d997f33386485971e3ea30b7645a3e579155b74

3.9.1.273 550 - fcntl() fails to put a non-blocking socket into blocking mode

Id	550
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2004-01-16T11:47:00.000Z
Updated	2024-06-13T01:26:19.534Z
Milestone	6.1
Labels	network::legacy, priority::normal, resolution::wontfix, tickettype::defect, version::4.5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/550
Merges	0

Original author: trauscher

A socket cannot be put into blocking mode using `fcntl()` once it has been put into non-blocking mode.

`ioctl()` is working fine, so the problem is not in the IP stack.

The problem occurs in real life with the GoAhead webserver on high-latency connections as its non-blocking write socket remains non-blocking and a web page can be truncated when `websDone()` is called.

In newlib (1.10, 1.11) there are several non-blocking flags. The following is defined in `sys/fcntl.h`

```
#define _FNBIO          0x1000  /* non blocking I/O (sys5 style) */
#define _FNONBLOCK      0x4000  /* non blocking I/O (POSIX style) */
...
#define _FNDELAY        _FNONBLOCK      /* non blocking I/O (4.2 style) */
/*      O_NDELAY        _FNDELAY        set in include/fcntl.h */
/*      O_NDELAY        _FNBIO          set in 5include/fcntl.h */
#define O_NONBLOCK      _FNONBLOCK
```

So `O_NDELAY` is never defined. `sys/fcntl.h` is not patched by the `rtems-newlib` patch.

In RTEMS, `libio.c` and `libio_.h` both contain the following code

```
#if ! defined(O_NDELAY)
# if defined(solaris2)
#  define O_NDELAY O_NONBLOCK
# elif defined(RTEMS_NEWLIB)
#  define O_NDELAY _FNBIO
# endif
#endif
```

As `O_NDELAY` is undefined and `RTEMS_NEWLIB` is defined, `O_NDELAY` is defined to `0x1000`.

Thus, using `O_NONBLOCK` in `fcntl()` (this was suggested in the mailing list some time ago) doesn't seem to work.

Release: RTEMS-4.5

Environment: rtems-4.5.0, newlib-1.10 or newlib-1.11

- socketblock.c

Author: Joel Sherrill 2004-01-16T18:01:54.000Z

Original author: trauscher

- **Status** changed from *assigned* to *waiting*

State-Changed-From-To: open->feedback State-Changed-Why: Thomas .. does this happen in 4.6 or the currect source? I don't see this problem in the current code. At this point, no further releases from the 4.5 branch are planned so I am prone to close any bug report against it.

Author: Trac Migrate 2006-12-03T13:31:12.000Z

Original author: trauscher

- **Attachment** socketblock.c added

socketblock.c

Author: Gedare Bloom 2014-11-22T14:23:02.000Z

Original author: trauscher

- **Description** changed

```
A socket cannot be put into blocking mode using fcntl()
once it has been put into non-blocking mode.

ioctl() is working fine, so the problem is not in the IP stack.

The problem occurs in real life with the GoAhead webserver on high-
↪latency connections as its non-blocking write socket remains non-
↪blocking and a web page can be truncated when websDone() is called.
```

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```
7
8  In newlib (1.10, 1.11) there are several non-blocking flags.
9  The following is defined in sys/fcntl.h
10
11 #define _FNBIO          0x1000  /* non blocking I/O (sys5 style) */
12 #define _FNONBLOCK      0x4000  /* non blocking I/O (POSIX style) */
13 ...
14 #define _FNDELAY        _FNONBLOCK      /* non blocking I/O (4.2 style)␣
   ↪*/
15 /*      O_NDELAY        _FNDELAY        set in include/fcntl.h */
16 /*      O_NDELAY        _FNBIO          set in 5include/fcntl.h */
17 #define O_NONBLOCK      _FNONBLOCK
18
19 So O_NDELAY is never defined. sys/fcntl.h is not patched by
20 the rtems-newlib patch.
21
22 In RTEMS, libio.c and libio_.h both contain the following
23 code
24
25 #if ! defined(O_NDELAY)
26 # if defined(solaris2)
27 #  define O_NDELAY O_NONBLOCK
28 # elif defined(RTEMS_NEWLIB)
29 #  define O_NDELAY _FNBIO
30 # endif
31 #endif
32
33 As O_NDELAY is undefined and RTEMS_NEWLIB is defined,
34 O_NDELAY is defined to 0x1000.
35
36 Thus, using O_NONBLOCK in fcntl() (this was suggested
37 in the mailing list some time ago) doesn't seem to work.
38
39 Release:
40 RTEMS-4.5
41
42 Environment:
43 rtems-4.5.0, newlib-1.10 or newlib-1.11
```

- **Milestone** changed from %”2” to %”4.9.5”

Author: Gedare Bloom 2014-11-22T14:24:39.000Z

Original author: trauscher

- **Owner** set to @joel

Author: Joel Sherrill 2014-11-23T18:52:45.000Z

Original author: trauscher

I am hacking together a test but I believe this does happen in the current source. It looks like so_ioctl(fd, FIONBIO, [O_NONBLOCK|~O_NONBLOCK]) needs to be called. We have the ioctl_h handler but should we make the call if networking is enabled?

Author: Joel Sherrill 2014-11-23T18:56:06.000Z

Original author: trauscher

NOTE that FIONBIO is not defined in newlib – only in the network stack so that makes for some trouble. I suppose we could modify rtems_syscalls.c to handle F_SETFD.

Author: Joel Sherrill 2015-02-12T17:46:49.000Z

Original author: trauscher

- **Description** changed

```
A socket cannot be put into blocking mode using fcntl()
once it has been put into non-blocking mode.

ioctl() is working fine, so the problem is not in the IP stack.

The problem occurs in real life with the GoAhead webserver on high-
↪latency connections as its non-blocking write socket remains non-
↪blocking and a web page can be truncated when websDone() is called.

In newlib (1.10, 1.11) there are several non-blocking flags.
The following is defined in sys/fcntl.h

#define _FNBIO          0x1000  /* non blocking I/O (sys5 style) */
#define _FNONBLOCK      0x4000  /* non blocking I/O (POSIX style) */
...
#define _FNDELAY        _FNONBLOCK      /* non blocking I/O (4.2 style)␣
↪*/
/*      O_NDELAY        _FNDELAY        set in include/fcntl.h */
/*      O_NDELAY        _FNBIO          set in 5include/fcntl.h */
#define O_NONBLOCK      _FNONBLOCK

So O_NDELAY is never defined. sys/fcntl.h is not patched by
the rtems-newlib patch.

In RTEMS, libio.c and libio_.h both contain the following
code

#if ! defined(O_NDELAY)
# if defined(solaris2)
```

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```
#  define O_NDELAY O_NONBLOCK
# elif defined(RTEMS_NEWLIB)
#  define O_NDELAY _FNBIO
# endif
#endif

As O_NDELAY is undefined and RTEMS_NEWLIB is defined,
O_NDELAY is defined to 0x1000.

Thus, using O_NONBLOCK in fcntl() (this was suggested
in the mailing list some time ago) doesn't seem to work.

Release:
RTEMS-4.5

Environment:
rtems-4.5.0, newlib-1.10 or newlib-1.11
```

- **Milestone** changed from %”4.9.5” to %”5.0”

This is a known issue with many RTOS’. The FACE (http://www.opengroup.org/face) standard has specifically had to add requirements so this behavior is required of RTOSes conforming to the FACE POSIX Profiles. The ioctl() interface is not in POSIX and fcntl() is the only way to set non-blocking in a pure POSIX environment.

I pushed this milestone to 5.0 because:

- this is a long-standing issue.
- it is technically beyond the POSIX standard itself.
- it will need to be addressed with the current IPV4 stack, the new IPV4/IPV6 stack and LWIP if we are to support that.
- this needs test code.
- this needs a design that can work with multiple network stacks.

Author: Trac Migrate 2017-11-09T06:26:42.000Z

Original author: trauscher

- **Milestone** changed from %”5.0” to %”6.1”

Milestone renamed

Author: Chris Johns 2022-11-29T21:47:15.000Z

Original author: trauscher

- **Resolution** set to ~”wontfix”
- **Status** changed from *assigned* to *closed*

The fd handling has evolved and now we have libbsd. If this is still a problem please reopen.

Author: Chris Johns 2024-06-13T01:26:19.602Z

changed the description

3.9.1.274 4960 - User manual test documentation update

Id	4960
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2023-10-07T04:04:07.000Z
Closed	2024-06-11T21:07:51.015Z
Updated	2024-06-11T21:07:51.026Z
Milestone	6.1
Labels	priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4960
Merges	1

The Testing chapter of the User Manual needs to be update for RTEMS 6.

Author: Chris Johns 2024-05-02T23:16:50.567Z

changed the description

Author: Kinsey Moore 2024-06-07T01:39:49.020Z

created branch 4960-user-manual-test-documentation-update to address this issue

Author: Kinsey Moore 2024-06-07T01:40:19.900Z

mentioned in merge request !61

Author: Kinsey Moore 2024-06-07T02:57:06.215Z

mentioned in merge request rtems/docs/rtems-docs!16

3.9.1.275 4962 - MicroBlaze BSPs modify carry flag before MSR is saved

Id	4962
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Alex White
Closed by	Amar Takhar
Created	2023-10-23T14:09:39.000Z
Closed	2024-06-11T21:04:13.433Z
Updated	2024-06-11T21:04:13.494Z
Milestone	6.1
Labels	bsp, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4962
Merges	2

Original author: Alex

The interrupt handler for the MicroBlaze BSPs defined in `bsps/microblaze/microblaze_fpga/start/_interrupt_handler.S` saves one register to the stack, R5, before jumping to the architecture `_ISR_Handler`. This is because R5 is used to pass the interrupt source if it is known. To indicate an unknown interrupt source, it uses the following instruction:

```
addi r5, r0, 0xFF
```

The `addi` instruction modifies the carry flag in MSR. This is a problem because MSR has not been saved to the stack yet. It is saved in `_ISR_Handler`.

This went unnoticed because it manifests itself in subtle ways. It requires that an interrupt happen somewhere between an instruction that modifies the carry flag and an instruction that uses the modified carry flag.

To resolve this issue, the entire interrupt frame should be saved as the first step of `_interrupt_handler` rather than in `_ISR_Handler`. It should also be made very clear that saving the stack frame is handled by the BSP rather than the architecture-specific `_ISR_Handler`.

Author: Trac Migrate 2023-10-23T18:49:22.000Z

Original author: Alex

- **Owner** set to Alex
- **Status** changed from *new* to *assigned*

Author: Chris Johns 2024-05-02T23:14:34.815Z

@alex what is the status of this issue?

Author: Chris Johns 2024-05-02T23:14:57.815Z

changed the description

Author: Chris Johns 2024-05-02T23:14:57.850Z

assigned to @alex and unassigned @tracmigrate

Author: Kinsey Moore 2024-05-23T20:07:20.759Z

There was a patch posted on October 24, 2023, but it was never committed: https://lists.rtems.org/pipermail/devel/2023-October/076601.html

Author: Kinsey Moore 2024-05-23T20:08:01.995Z

@alex Would you mind opening a MR for this issue and adding that patch?

Author: Kinsey Moore 2024-06-06T23:33:32.352Z

created branch 4962-microblaze-bsps-modify-carry-flag-before-msr-is-saved to address this issue

Author: Kinsey Moore 2024-06-06T23:34:27.007Z

mentioned in merge request !60

Author: Kinsey Moore 2024-06-06T23:38:07.457Z

mentioned in commit 87ee0df97e3aed5220d8dfde404b2bcb134b5544

Author: Kinsey Moore 2024-06-10T19:18:58.920Z

mentioned in commit 4492fc1d66863846867e010619dda167e04bd6d2

Author: Kinsey Moore 2024-06-11T14:48:38.744Z

mentioned in merge request !69

3.9.1.276 5017 - Creation of an helper method for rtems_aio_handle()

Id	5017
State	closed
Type	ISSUE
Author	Alessandro Nardin
Closed by	Chris Johns
Created	2024-05-21T17:03:08.191Z
Closed	2024-05-29T22:12:57.103Z
Updated	2024-05-29T22:12:57.211Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5017
Merges	1

Summary

The rtems_aio_handle() method in aio_misc.c is currently long and difficult to read. To improve readability and facilitate future support for listio, a helper method should be created to handle the different types of requests.

Author: Alessandro Nardin	2024-05-21T17:06:49.269Z

mentioned in merge request !42

3.9.1.277 4923 - FPU context init/switch not working well on more than 2 tasks on Cortex-Mx/ARMv7-M platform

Id	4923
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Cedric Berger
Closed by	Kinsey Moore
Created	2023-07-07T09:47:34.000Z
Closed	2024-05-22T01:52:07.903Z
Updated	2024-05-22T01:52:07.980Z
Milestone	6.1
Labels	arch:arm, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4923
Merges	1

Original author: kgardas

While working on stm32h7 I've noted strange results from fpu calculations when several tasks are involved. I've minimized that to attach testcase. The testcase runs well on Xilinx/A9/Qemu and BeagleBone White platforms (ARMv7-A), but fails by providing wrong output on ARMv7-M (STM32H757i-eval).

The core of the testcase is a comparison of power of two done on integer by shifting and by calling C pow function with using double. When there is discrepancy in comparison of those,

error is signaled and counted. The output then prints number of test run/number of failures and this all for Init and 4 other tasks created. The first error in comparison is also signaled for every task where it happen by clear 'ERROR' message. The output from H7 looks like:

```
initializing...
main task infinite loop.
ERROR, computation failed in fpu_task_pow2
ERROR, computation failed in fpu_task_pow3
ERROR, computation failed in fpu_task_pow4
ERROR, computation failed in Init
INIT: 1000/1000, T1: 38985/0, T2: 39802/39802, T3: 39735/39735, T4: 39804/39804
INIT: 2000/1000, T1: 78030/0, T2: 79663/79663, T3: 79508/79508, T4: 79650/79650
INIT: 3000/1000, T1: 117100/0, T2: 119517/119517, T3: 119281/119281, T4: 119513/
↪119513
INIT: 4000/2000, T1: 156138/0, T2: 159385/159385, T3: 159054/159054, T4: 159355/
↪159355
INIT: 5000/2000, T1: 195198/0, T2: 199242/199242, T3: 198827/198827, T4: 199195/
↪199195
INIT: 6000/2000, T1: 234238/0, T2: 239111/239111, T3: 238599/238599, T4: 239054/
↪239054
INIT: 7000/2000, T1: 273278/0, T2: 278961/278961, T3: 278372/278372, T4: 278903/
↪278903
INIT: 8000/2000, T1: 312315/0, T2: 318807/318807, T3: 318145/318145, T4: 318740/
↪318740
INIT: 9000/2000, T1: 351353/0, T2: 358628/358628, T3: 357918/357918, T4: 358600/
↪358600
INIT: 10000/2000, T1: 390393/0, T2: 398463/398463, T3: 397691/397691, T4: 398444/
↪398444
INIT: 11000/2000, T1: 429431/0, T2: 438302/438302, T3: 437464/437464, T4: 438279/
↪438279
INIT: 12000/2000, T1: 468470/0, T2: 478152/478152, T3: 477236/477236, T4: 478123/
↪478123
INIT: 13000/2000, T1: 507506/0, T2: 518006/518006, T3: 517009/517009, T4: 517961/
↪517961
...
```

as you can see computation is always good (0 error) on T1 task while it is always bad on T2, T3, T4 tasks. Sometimes it is even bad on Init task.

Expected output from BeagleBone looks:

```
initializing...
main task infinite loop.
INIT: 1000/0, T1: 8028/0, T2: 8042/0, T3: 8043/0, T4: 8043/0
INIT: 2000/0, T1: 16053/0, T2: 16084/0, T3: 16084/0, T4: 16085/0
INIT: 3000/0, T1: 24076/0, T2: 24125/0, T3: 24125/0, T4: 24126/0
INIT: 4000/0, T1: 32097/0, T2: 32163/0, T3: 32165/0, T4: 32167/0
INIT: 5000/0, T1: 40120/0, T2: 40204/0, T3: 40207/0, T4: 40208/0
...
```

The idea here is that task context initialization or switch is not working well on v7-M platform.

- bug-1-make-paranoia-test-fail.patch

- fix-1-save-and-restore-fpscr.patch
- fix-2-clean-initial-thread-frame.patch
- init.2.c
- init-5.c

Author: Trac Migrate	2023-07-07T09:48:03.000Z

Original author: kgardas

- **Attachment** init-5.c added

testcase code

Author: Trac Migrate	2023-07-07T10:19:26.000Z

Original author: kgardas

- **Attachment** init.2.c added

test case code with referenced output

Author: Trac Migrate	2023-07-07T10:23:37.000Z

Original author: kgardas

Testing on nucleo-h743zi (most close to original platform of stm32h743-eval I have here) reveals same results as from stm32h757i-eval: (although to get failure on Init takes more time)

```
initializing...
main task infinite loop.
ERROR, computation failed in fpu_task_pow2
ERROR, computation failed in fpu_task_pow3
ERROR, computation failed in fpu_task_pow4
INIT: 1000/0, T1: 15085/0, T2: 15336/15336, T3: 15351/15351, T4: 15356/
↪15356
INIT: 2000/0, T1: 30162/0, T2: 30685/30685, T3: 30716/30716, T4: 30727/
↪30727
INIT: 3000/0, T1: 45239/0, T2: 46035/46035, T3: 46080/46080, T4: 46098/
↪46098
INIT: 4000/0, T1: 60318/0, T2: 61384/61384, T3: 61429/61429, T4: 61468/
↪61468
INIT: 5000/0, T1: 75419/0, T2: 76733/76733, T3: 76794/76794, T4: 76839/
↪76839
INIT: 6000/0, T1: 90496/0, T2: 92082/92082, T3: 92159/92159, T4: 92210/
↪92210
INIT: 7000/0, T1: 105575/0, T2: 107432/107432, T3: 107524/107524, T4:␣
↪107581/107581
INIT: 8000/0, T1: 120650/0, T2: 122799/122799, T3: 122888/122888, T4:␣
```

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```
↪122952/122952
INIT: 9000/0, T1: 135725/0, T2: 138167/138167, T3: 138252/138252, T4:␣
↪138322/138322
INIT: 10000/0, T1: 150799/0, T2: 153535/153535, T3: 153617/153617, T4:␣
↪153693/153693
INIT: 11000/0, T1: 165874/0, T2: 168903/168903, T3: 168981/168981, T4:␣
↪169064/169064
INIT: 12000/0, T1: 180947/0, T2: 184253/184253, T3: 184346/184346, T4:␣
↪184435/184435
INIT: 13000/0, T1: 196021/0, T2: 199621/199621, T3: 199711/199711, T4:␣
↪199805/199805
INIT: 14000/0, T1: 211114/0, T2: 214989/214989, T3: 215075/215075, T4:␣
↪215176/215176
INIT: 15000/0, T1: 226187/0, T2: 230357/230357, T3: 230440/230440, T4:␣
↪230547/230547
INIT: 16000/0, T1: 241261/0, T2: 245726/245726, T3: 245805/245805, T4:␣
↪245918/245918
INIT: 17000/0, T1: 256335/0, T2: 261094/261094, T3: 261169/261169, T4:␣
↪261289/261289
INIT: 18000/0, T1: 271409/0, T2: 276463/276463, T3: 276534/276534, T4:␣
↪276659/276659
ERROR, computation failed in Init
INIT: 19000/1000, T1: 286484/0, T2: 291832/291832, T3: 291899/291899,␣
↪T4: 292030/292030
INIT: 20000/1000, T1: 301565/0, T2: 307199/307199, T3: 307264/307264,␣
↪T4: 307398/307398
INIT: 21000/1000, T1: 316637/0, T2: 322550/322550, T3: 322628/322628,␣
↪T4: 322765/322765
```

Author: Trac Migrate 2023-07-07T13:15:38.000Z

Original author: kgardas

Does the spcontext01 check the floating-point registers on this BSP and what is the outcome of this test?

Author: Trac Migrate 2023-07-07T13:25:38.000Z

Original author: kgardas

Here is the output of spcontext01 on nucleo-h743zi:

```
*** BEGIN OF TEST SPCONTEXT 1 ***
*** TEST VERSION: 6.0.0.6264b14804bbe21f13d4691160b45e208286abaa
*** TEST STATE: EXPECTED_PASS
*** TEST BUILD:
*** TEST TOOLS: 12.2.1 20230224 (RTEMS 6, RSB␣
↪7153c2f1dcfb83b154b976298699c26e793a33dd, Newlib 17ac400)
```

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```
Test configuration N N N... done
Test configuration N N F... done
Test configuration N F N... done
Test configuration N F F... done
Test configuration F N N... done
Test configuration F N F... done
Test configuration F F N... done
Test configuration F F F... done

*** END OF TEST SPCONTEXT 1 ***


[ RTEMS shutdown ]
RTEMS version: 6.0.0.6264b14804bbe21f13d4691160b45e208286abaa
RTEMS tools: 12.2.1 20230224 (RTEMS 6, RSB␣
↪7153c2f1dcfb83b154b976298699c26e793a33dd, Newlib 17ac400)
executing thread ID: 0x0a010001
executing thread name: UI1
```

Let me know if there is anything I should test here. I have some spare time at my disposal, but I'd need to be kicked into the right direction. Currently studding Cortex-M lazy stacking and context switching and RTEMS book is ordered as a backup and will be here probably next week. I'll also provide few registers dumps for your information...

Author: Trac Migrate 2023-07-07T14:05:26.000Z

Original author: kgardas

Maybe we don't save a status register related to the FPU.

Author: Joel Sherrill 2023-07-07T14:19:47.000Z

Original author: kgardas

Maybe the FPU context isn't properly initialized for this CPU variant. The first context switch restore is handled special in _Thread_Handler. Easy enough to break there and see what is actually being restored. If it's wrong, then that's the culprit.

Author: Trac Migrate 2023-07-07T14:48:04.000Z

Original author: kgardas

Ad _Thread_Handler breakpoint:

```
(gdb) b _Thread_Handler
Breakpoint 1 at 0x8003748: file ../../../cpukit/include/rtems/score/
↪percpu.h, line 719.
```

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```
Note: automatically using hardware breakpoints for read-only addresses.
(gdb) c
Continuing.

Breakpoint 1, _Thread_Handler ()
at ../../../cpukit/include/rtems/score/percpu.h:719
719       return cpu->executing;
(gdb) where
#0  _Thread_Handler () at ../../../cpukit/include/rtems/score/percpu.
↪h:719
#1  0x08003748 in _Thread_Get (id=<optimized out>, lock_context=0x0)
at ../../../cpukit/score/src/threadget.c:63
Backtrace stopped: previous frame identical to this frame (corrupt␣
↪stack?)
(gdb) c
Continuing.

Breakpoint 1, _Thread_Handler ()
at ../../../cpukit/include/rtems/score/percpu.h:719
719       return cpu->executing;
(gdb) c
Continuing.

Breakpoint 1, _Thread_Handler ()
at ../../../cpukit/include/rtems/score/percpu.h:719
719       return cpu->executing;
(gdb) c
Continuing.

Breakpoint 1, _Thread_Handler ()
at ../../../cpukit/include/rtems/score/percpu.h:719
719       return cpu->executing;
```

this looks like some macro executing:

```
static inline struct _Thread_Control *_Per_CPU_Get_executing(
const Per_CPU_Control *cpu
)
{
return cpu->executing;
}
```

Author: Trac Migrate 2023-07-13T12:32:33.000Z

Original author: kgardas

We were able to reproduce the issue. It is a problem in the FPU context save/restore during interrupt processing. Under certain conditions, the FPU context is restored from an uninitialized frame which could enable the flush-to-zero configuration. I

am currently quite busy. I will add it to my TODO list, but it could be September/October.

Author: Trac Migrate 2023-07-13T12:43:11.000Z

Original author: kgardas

Sebastian, thanks a lot for the information. Could you give me as much information as possible with regarding to the issue as there is a high chance I find some time to deal it again before your available timeframe. For example I'm curious is it related to FPU lazy stack saving which is used and enforced by the RTEMS code? Knowing all information about it from you, will certainly help with possible fixing of the issue on our side. Thanks a lot!

Author: Trac Migrate 2023-07-13T13:23:33.000Z

Original author: kgardas

The FPU context corruption happens in _ARMV7M_Pendable_service_call(). Somehow the FPU context is not restored from the right frame position in certain cases. It is not clear, why this error doesn't show up in the spcontext01 test.

Author: Trac Migrate 2023-07-27T18:45:22.000Z

Original author: kgardas

I consider this issue to be release critical as it affects one of major platforms (ARMv7-M) and makes FPU computation unreliable/unpredictable there. Hence switching milestone to 6.1. Please discuss if you do not think so.

Author: Trac Migrate 2023-07-27T18:45:55.000Z

Original author: kgardas

- **Milestone** set to %"6.1"

Author: Trac Migrate 2024-01-31T18:28:00.000Z

Original author: kgardas

- **Cc** added @cedric@precidata.com

Author: Trac Migrate 2024-01-31T18:30:49.000Z

Original author: kgardas

- **Owner** set to cedric
- **Status** changed from *new* to *accepted*

- **Version** set to ~"6"

I will try to work on that in February.

Author: Trac Migrate 2024-02-06T15:04:10.000Z

Original author: kgardas

- **Attachment** bug-1-make-paranoia-test-fail.patch added

VFP: make paranoia test fail

Author: Trac Migrate 2024-02-06T15:04:50.000Z

Original author: kgardas

- **Attachment** fix-1-save-and-restore-fpscr.patch added

VFP: save and restore FPSCR register during context switch

Author: Trac Migrate 2024-02-06T15:05:30.000Z

Original author: kgardas

- **Attachment** fix-2-clean-initial-thread-frame.patch added

VFP: starts thread frames in a clean state

Author: Cedric Berger 2024-05-01T20:34:48.027Z

mentioned in merge request !10

Author: Amar Takhar 2024-05-01T20:45:34.520Z

changed the description

Author: Amar Takhar 2024-05-01T20:45:34.559Z

assigned to @cedric

Author: Amar Takhar 2024-05-01T20:45:40.907Z

unassigned @tracmigrate

Author: Sebastian Huber 2024-05-02T11:59:28.406Z

mentioned in merge request !12

3.9.1.278 4783 - Fix issues when compiling dtc with Cygwin

Id	4783
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Closed by	Joel Sherrill
Created	2023-01-16T21:23:55.000Z
Closed	2024-05-17T13:44:13.755Z
Updated	2024-05-17T13:44:13.768Z
Milestone	6.1
Labels	priority::normal, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4783
Merges	0

Original author: rlong

Currently, DTC is failing to build due to this check in checks.c. For some reason the argument into isxdigit is coming in as a char. I've brought it up to the maintainer, but he sees no reason to change it. Therefore, a patch is needed to get it to build.

1183 if (unitname[0] == '0' && isxdigit(unitname[1])) 1184 FAIL(c, dti, node, "unit name should not have leading 0s"); 1185 }

- 0001-checks.c-Ensure-argument-is-an-integer-v2.patch
- 0001-checks.c-Ensure-argument-is-an-integer.patch

Author: Trac Migrate	2023-01-16T21:28:54.000Z

Original author: rlong

- **Attachment** 0001-checks.c-Ensure-argument-is-an-integer.patch added

Author: Trac Migrate	2023-01-17T07:30:41.000Z

Original author: rlong

I can't find the associated thread on the DTC mailing list. Could you please provide a link?

Author: Joel Sherrill	2023-01-20T15:02:48.000Z

Original author: rlong

See https://github.com/dgibson/dtc/issues/71 and I just posted. If you want to pile on, it would be appreciated. I don't think he sees the underlying issue.

Per https://en.cppreference.com/w/c/string/byte/isxdigit, the argument is an integer. GCC and LLVM warn for using a character as an array index and this is from the GCC manual.

```
-Wchar-subscripts
Warn if an array subscript has type char. This is a common cause of error, as programmers often forget that this type is signed on some machines. This warning is enabled by -Wall.
```

Author: Kinsey Moore 2023-01-30T17:11:39.000Z

Original author: rlong

- **Attachment** 0001-checks.c-Ensure-argument-is-an-integer-v2.patch added

Make sure patch compiles within the build system.

Author: Trac Migrate 2023-01-30T17:21:10.000Z

Original author: rlong

In [changeset:"afaeda7681e5e7ef54a2dd040a60a89210a44e51/rtems-source-builder" afaeda7/rtems-source-builder]:

```
dtc: Add patch to build for ticket 4783

This patch resolves a build error with dtc on cygwin until upstream adopts a fix.
```

Author: Trac Migrate 2023-07-25T05:27:50.000Z

Original author: rlong

The patch makes no sense. You need an (unsigned char) cast. I added a comment to the dtc issue.

Author: Trac Migrate 2023-07-27T11:09:59.000Z

Original author: rlong

See:

https://github.com/dgibson/dtc/pull/105

Author: Trac Migrate 2023-07-28T13:51:08.000Z

Original author: rlong

Pull request was merged. The next release will fix the issue.

Author: Trac Migrate 2023-07-28T13:51:26.000Z

Original author: rlong

- **Milestone** changed from %"Indefinite" to %"6.1"

Author: Chris Johns 2024-05-02T23:11:08.349Z

changed the description

Author: Chris Johns 2024-05-02T23:11:08.386Z

assigned to @joel and unassigned @tracmigrate

Author: Amar Takhar 2024-05-17T02:07:25.904Z

@joel is this issue resolved? Seems like it is. rlong is not on GitLab

Author: Joel Sherrill 2024-05-17T13:44:13.507Z

This issue appears to be resolved based on build mailing list results. Failures appear to be in gdb now.

3.9.1.279 5007 - typo in CODEOWNERS

Id	5007
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Amar Takhar
Closed by	Amar Takhar
Created	2024-05-02T04:17:47.284Z
Closed	2024-05-17T00:38:49.038Z
Updated	2024-05-17T00:38:49.049Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5007
Merges	0

Summary

The group name for @approvers/arch/aarch64 is missing the 64 at the `[Arch AArch64]` section definition.

Steps to reproduce

Author: Gedare Bloom 2024-05-02T05:22:58.150Z

assigned to @amar

Author: Gedare Bloom 2024-05-02T05:22:01.118Z

assigned to @amar

Author: Gedare Bloom 2024-05-02T04:17:47.369Z

assigned to @amar

Author: Amar Takhar 2024-05-02T04:19:40.513Z

Please open this issue in @administration/gitlab All these tickets must go there if you want to create one here and link it to one there that's fine but open the @administration/gitlab issue first thanks.

Author: Amar Takhar 2024-05-02T05:21:25.771Z

That's cool when you mentioned the group it made all of the people in that group participants. . . .that's scary if you choose the approvers/general group

Author: Gedare Bloom 2024-05-02T05:21:25.705Z

oof, good to remember that.

Author: Gedare Bloom 2024-05-02T05:22:01.467Z

moved from rtems/rtos/rtems#5006

Author: Gedare Bloom 2024-05-02T05:22:44.648Z

ok that was not the right thing. I guess an Issue can't be moved across the top-level groups. Moving it back. . .

Author: Gedare Bloom 2024-05-02T05:22:58.593Z

moved from rtems/gitlab-config#1

Author: Gedare Bloom 2024-05-02T05:25:50.320Z

mentioned in issue administration/gitlab#50

Author: Amar Takhar 2024-05-17T00:38:48.773Z

This issue was moved closing.

3.9.1.280 4844 - Score Unchecked boundaries

Id	4844
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Chris Johns
Created	2023-02-09T14:52:06.000Z
Closed	2024-05-16T23:15:21.647Z
Updated	2024-05-16T23:15:37.575Z
Milestone	6.1
Labels	priority::normal, qualification, rtems::score, tickettype::defect, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4844
Merges	0

Original author: dppinto

Consider checking for overflow situations and taking necessary actions in the three files designated below.

Memory copy function accesses out-of-bound array element in file cpukitincludertemssco-recoremsgimpl.h (line 469)

Additional Information: The pointer to the structure that contains the buffer and the size is tested against NULL, but this finding refers to the fact that the argument size of is not validated against the maximum size of the destination and/or source buffer.

This function can be traced up to `rtems_message_queue_send` and `rtems_message_queue_receive` functions where the buffer, its size and maximum size for queue messages are provided by the user. In the RTEMS library at the moment of sending a message in the _CORE_message_queue_Submit function it is validated if the given size of the buffer is not above the user previously provided/configured maximum size, and returns an error if so. But it is up to the user to supply correct values. If the user tries to pass a buffer with 16 bytes, but indicates 32 bytes in the size there is no possible library validation that will detect an overflow situation. These cases must be detected by user code inspection/review.

```
Out of bound memory access (access exceeds upper limit of memory block) in file␣
↪cpukit\\include\\rtems\\score\\mrspimpl.h (lines 120, 312, 315)
```

Additional Information: There is a Global variable `const size_t _Scheduler_Count = _CONFIGURE_SCHEDULER_COUNT;` corresponding to the value configured statically depending of `RTEMS_ARRAY_SIZE( _Scheduler_Table )`, which is the number of scheduler. Relevant source code for lines 312 and 315, which are OK:

```
scheduler_count = _Scheduler_Count;
for ( i = 0 ; i < scheduler_count ; ++i ) {
(...)
scheduler_of_index = &_Scheduler_Table[ i ];
```

(continues on next page)

(continued from previous page)

```
(...)
mrsp->ceiling_priorities[ i ] =
```

Relevant source code for lines 120 and others, do not seem OK, because is not clear that the scheduler is always valid:

```
scheduler_index = _Scheduler_Get_index( scheduler ); // Note: translates to
↪"return (uint32_t) (scheduler - &_Scheduler_Table[ 0 ]);"
return mrsp->ceiling_priorities[ scheduler_index ];
```

Returned pointer value points outside the original object (potential buffer overflow) for file cpukitscoresrcthreadqops.c (line 294)

Consider checking for overflow situations and acting accordingly.

Additional Information: The line 294 (the referred line is for version 3 of the QDP), from function `_Thread_queue_Priority_queue_by_index`:

```
return &heads->Priority[ scheduler_index ];
```

The priority field is declared as `Thread_queue_Priority_queue Priority[ RTEMS_ZERO_LENGTH_ARRAY ];` which is a zero-length array...

Then in threads.h file a Struct is defined as

```
struct Thread_queue_Configured_heads {
Thread_queue_Heads Heads;
Thread_queue_Priority_queue Priority[ _CONFIGURE_SCHEDULER_COUNT ];
};
```

Which permits to access the zero-length array beyond the initial configuration of zero length (C99 permits it): C99 6.7.2.1, §16: As a special case, the last element of a structure with more than one named member may have an incomplete array type; this is called a flexible array member.

But still, scheduler_index value is obtained by calling several other functions which extract information from a thread object in order to obtain and use the scheduler_index value in the _Thread_queue_Priority_queue_by_index function. It is not clear that that value is below _CONFIGURE_SCHEDULER_COUNT value.

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). The original ISVV reference for this issue is RTEMS-SMP-CODE-VER-036.

Author: Trac Migrate 2023-02-10T07:16:22.000Z

Original author: dppinto

These should have been three tickets and not just one.

1. The message send directives use the size as an output only parameter. If you change this to an input and output parameter, then you may break existing applications which do not set the size parameter to a proper value.

2. The Semaphore Control Block size is defined by the application configuration:

```
#if CONFIGURE_MAXIMUM_SEMAPHORES > 0
SEMAPHORE_INFORMATION_DEFINE(
CONFIGURE_MAXIMUM_SEMAPHORES,
_CONFIGURE_SCHEDULER_COUNT
);
#endif
```

3. There are lots of other values in the Thread Control Block which have to be correct. Why should we add a check here specifically? We could add an _Assert().

Author: Trac Migrate 2023-03-23T16:25:34.000Z

Original author: dppinto

- **Milestone** set to %”6.1”
- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-06-16T14:28:50.000Z

Original author: dppinto

1 >>> We agree that changing the function prototype for rtems_message_queue_send, rtems_message_queue_receive, _CORE_message_queue_Insert_message and other functions in-between could break existing applications and may not be acceptable to do so. So, one suggests dismissing this point of the ticket.

2 >>> This point can be dismissed as it is now confirmed that necessary protections are already in place on the API entry point for _MRSP_Get_priority and _MRSP_Get_priority, which is the rtems_semaphore_set_priority (one can refer to the protections implemented by this function within code and/or ICD).

3 >>> Yes, appending the _Assert(scheduler_index < _Scheduler_Count); just before the concerned line will solve it. Thanks

Author: Joel Sherrill 2023-06-22T21:11:21.000Z

Original author: dppinto

If there is an _Assert() implemented somewhere, please merge it and close if the rest of these are non-issues.

Author: Joel Sherrill 2023-06-22T22:31:03.000Z

Original author: dppinto

This will be closed before 6. Please clone for 7 if continued.

Author: Trac Migrate 2023-07-28T14:50:34.000Z

Original author: dppinto

In [changeset:"6293fc4fd52553bfccf91c64583ee811170187f7/rtems" 6293fc4f/rtems]:

```
score: Assert scheduler index validity

Update #4844.
```

Author: Trac Migrate 2023-07-28T14:51:27.000Z

Original author: dppinto

Daniel, please review the changes and close the ticket if everything is all right.

Author: Amar Takhar 2024-04-25T20:50:32.801Z

changed the description

Author: Chris Johns 2024-05-16T23:10:39.794Z

changed the description

Author: Chris Johns 2024-05-16T23:11:09.526Z

changed the description

Author: Chris Johns 2024-05-16T23:12:01.473Z

changed the description

Author: Chris Johns 2024-05-16T23:15:37.649Z

changed title from **Unchecked boundaries** to **{+Score +}Unchecked boundaries**

3.9.1.281 4952 - rtems-ld created wrong RAP file on arm

Id	4952
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	xiaojun zheng
Closed by	Chris Johns
Created	2023-09-11T02:47:17.000Z
Closed	2024-05-09T01:21:16.286Z
Updated	2024-05-09T01:22:50.159Z
Milestone	6.1
Labels	priority::normal, tickettype::defect, tool
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4952
Merges	1

Original author: jameszxj

I use the latest rtems-tools to generate RAP file, I found the object file become too small(elf,2184bytes==>rap,736bytes) and the file loaded failed, error message like this:

```
load app.out error:offset past end of file: offset=736 size=736 error.
```

I reverted the rtl-rap.cpp commit (rtems/tools/rtems-tools@0ad4aaafc20afcb5aacb7a82b0b3a8150b638975).

At Chris's suggestion, I founded `get_relocations(s)` return all the count of relocation and write to rap file, but actual count is less, because ignore the reloc with `section=0`.

I tried to make the length fit the relocs write to rap file, the file can not be loaded, it crashed. So the `relocs(reloc.symsect == 0)` can not be ignored, at least on arm.

The command line I used to create RAP file is like this:

```
rtems-ld -n -e appmain -s -O rap --base rtems.elf app.elf -o app.out
```

Author: xiaojun zheng 2024-05-03T12:06:06.253Z

mentioned in merge request rtems/tools/rtems-tools!1

Author: Chris Johns 2024-05-06T05:16:24.159Z

changed the description

Author: Chris Johns 2024-05-06T05:17:15.675Z

Could you please attach the app source that causes the issue?

Author: xiaojun zheng 2024-05-09T01:13:09.973Z

Just a printf in app.

```
#include <stdio.h>
#include <stdlib.h>

int appmain()
{
printf("app start\\n");

return 0;
}
```

Author: Chris Johns 2024-05-09T01:13:09.945Z

Thanks. Do you have a script to build this code and then run the RTEMS linker?

Author: Amar Takhar 2024-05-09T01:11:23.405Z

assigned to @zhengxiaojun and unassigned @tracmigrate

Author: Chris Johns 2024-05-09T01:21:16.422Z

moved to rtems/tools/rtems-tools#1

Author: Chris Johns 2024-05-09T01:22:50.128Z

marked this issue as related to rtems/tools/rtems-tools#1

3.9.1.282 5003 - Make GCC ARM Cortex-A53 errata workarounds available

Id	5003
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Closed by	Kinsey Moore
Created	2024-03-25T06:17:43.000Z
Closed	2024-05-08T22:09:44.882Z
Updated	2024-05-08T22:09:44.963Z
Milestone	6.1
Labels	arch:aarch64, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5003
Merges	1

Original author: sebastian.huber

The ARM Cortex-A53 processor has several chip errata. For two of them compiler workarounds are available. Make these errata workarounds available for RTEMS through a specialized A53 multilib:

-mcpu=cortex-a53 -mfix-cortex-a53-835769 -mfix-cortex-a53-843419

Author: Sebastian Huber 2024-05-08T09:24:42.150Z

mentioned in merge request !27

3.9.1.283 4961 - Document and test CONFIGURE_JFFS2_DELAYED_WRITE_TASK_PRIORITY

Id	4961
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Kinsey Moore
Closed by	Chris Johns
Created	2023-10-11T05:18:58.000Z
Closed	2024-05-02T23:16:27.041Z
Updated	2024-05-02T23:16:27.052Z
Milestone	6.1
Labels	filesystem::jffs2, priority::normal, qualification, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4961
Merges	0

Original author: sebastian.huber

The CONFIGURE_JFFS2_DELAYED_WRITE_TASK_PRIORITY application configuration option should be documented according to:

https://docs.rtems.org/branches/master/eng/req/howto.html#application-configuration-options

There should be a test program for this option.

Author: Trac Migrate 2023-12-19T07:01:26.000Z

Original author: sebastian.huber

In [changeset:"a901ca3989db8ba4f4f6d3ef224dccf12e22280f/rtems" a901ca3/rtems]:

```
doxygen: CONFIGURE_JFFS2_DELAYED_WRITE_TASK_PRIORITY

Document CONFIGURE_JFFS2_DELAYED_WRITE_TASK_PRIORITY.

Update #4961.
```

Author: Trac Migrate 2023-12-19T07:27:49.000Z

Original author: sebastian.huber

In [changeset:"ddf2b038382df028973a40c18cc030021a03b578/rtems-docs" ddf2b03/rtems-docs]:

```
c-user: CONFIGURE_JFFS2_DELAYED_WRITE_TASK_PRIORITY

Document CONFIGURE_JFFS2_DELAYED_WRITE_TASK_PRIORITY.

Update #4961.
```

Author: Trac Migrate 2023-12-19T07:28:57.000Z

Original author: sebastian.huber

In [changeset:"8bfd9ce8c87f16a97b50820690ec98bd88828aec/rtems-central" 8bfd9ce/rtems-central]:

```
spec: Add JFFS2 delayed write task priority

This adds the configuration option used to select the JFFS2 delayed
write task priority to be used when operating on NAND flash.

Updates #4961
```

Author: Kinsey Moore 2024-02-16T00:35:28.000Z

Original author: sebastian.huber

- **Owner** set to @kinsey
- **Status** changed from *new* to *assigned*

Author: Amar Takhar 2024-04-25T20:50:55.917Z

changed the description

Author: Kinsey Moore 2024-05-02T23:15:02.100Z

Documentation for this has been added to rtems-docs and rtems-central.

Author: Chris Johns 2024-05-02T23:16:26.682Z

This looks like it is done. Please reopen if there is more to do.

3.9.1.284 4910 - RSB options for python selection

Id	4910
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2023-05-23T02:49:31.000Z
Closed	2024-05-02T22:59:33.936Z
Updated	2024-05-02T22:59:34.022Z
Milestone	6.1
Labels	priority::normal, tickettype::enhancement, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4910
Merges	0

A recent change to the version of GDB means we need `python3` development libraries installed as GDB will only build with Python3.

To aid compatibility for older operating systems provide options to aid the selection of a suitable python. Add support for:

`--with-python2` : command for Python2

`--with-python3` : command for Python3

`--with-python-version` : command for a version of Python

For example:

```
--with-python-version=python3.6
```

Author: Chris Johns 2023-06-30T00:14:15.000Z

Joel, what do you think?

Author: Chris Johns 2024-05-02T22:59:33.572Z

We have to python3 because GDB needs it to build. There is no point in supporting python2.

Author: Chris Johns 2024-05-02T22:59:34.069Z

changed the description

3.9.1.285 4968 - Python 3.12 fix escape sequences and remove SafeConfigParser

Id	4968
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2023-11-20T22:12:42.000Z
Closed	2024-05-02T22:57:59.891Z
Updated	2024-05-02T22:57:59.975Z
Milestone	6.1
Labels	priority::normal, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4968
Merges	0

This breaks `version.py` in: * rtems-tools * rtems-docs * rtems_waf

Also update any escape sequences that are not correctly escaped or are a regx expressions (prefix with `r`).

Author: Trac Migrate 2023-11-21T20:47:51.000Z

In [changeset:"63396e2ed62be9b58c460ca6b10e434717c580b6/rtems-source-builder" 63396e2/rtems-source-builder]:

```
sb: Fix Python 3.12 safeConfigParser and invalid escape sequences

Updates #4968
```

Author: Trac Migrate 2023-11-21T21:29:36.000Z

In [changeset:"75ffa6781a88d0837b07979b5358ea7882aca488/rtems-tools" 75ffa67/rtems-tools]:

```
python: Updates for Python 3.12

- Change SafeConfigParser to ConfigParser

- Fix escape sequences in strings

Updates #4968
```

Author: Chris Johns 2023-11-22T02:52:25.000Z

- **Summary** changed from *Python 3.12 does not have SafeConfigParser* to *Python 3.12 fix escape sequences and remove SafeConfigParser*

Author: Trac Migrate 2023-11-22T20:59:58.000Z

In [changeset:"72c11fa91ab99e23252000797fcfd0d4aa0de1cf/rtems" 72c11fa/rtems]:

```
waf: Fix Python 3.12 escape sequences

Updates #4968
```

Author: Chris Johns 2024-05-02T22:57:59.532Z

Fixed and merged

Author: Chris Johns 2024-05-02T22:58:00.021Z

changed the description

3.9.1.286 4993 - Increase FD_SETSIZE to 256

Id	4993
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Joel Sherrill
Closed by	Chris Johns
Created	2024-02-19T22:38:06.000Z
Closed	2024-05-02T22:57:19.470Z
Updated	2024-05-02T22:57:19.551Z
Milestone	6.1
Labels	priority::highest, tickettype::defect, tool::newlib, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4993
Merges	0

The default for `FD_SETSIZE` in newlib is 64. This is proving to be too small for EPICS applications. EPICS limits the number of descriptors here for RTEMS 6 builds. The comment in EPICS base is:

```
/* Note: The select() system call can only be used with the first FD_SETSIZE
*       File Descriptors (newlib default is 64).  Beginning RTEMS 5.1, FDs are
*       allocated sequentially.  So changing this CONFIGURE parameter such
*       that CONFIGURE_MAXIMUM_FILE_DESCRIPTORS >= FD_SETSIZE will likely
*       cause applications making select() calls to fault at some point.
*
*       IOC core components (libca and RSRV) do not make select() calls.
*
*       Applications and driver code using poll() or other socket
```

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```
10 *       multiplexers do not share this limitation.
11 *
12 *       cf. https://github.com/epics-base/epics-base/issues/300
13 */
```

Increasing FD_SETSIZE to 256 will increase the set but 64 is too small for RTEMS and we do not need 1024 that systems like FreeBSD have.

- 0001-RTEMS-Increase-FS_SETSIZE-to-256-bits.patch
- 0001-rtems-newlib-Increase-FD_SETSIZE-to-256.patch

Author: Chris Johns 2024-02-19T22:38:17.000Z

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Chris Johns 2024-02-20T23:23:53.000Z

- **Attachment** 0001-RTEMS-Increase-FS_SETSIZE-to-256-bits.patch added

Newlib patch to increase the FD_SETSIZE from 64 to 256 bits per set

Author: Chris Johns 2024-02-20T23:24:12.000Z

- **Summary** changed from *Increase FD_SIZE to 256* to *Increase FD_SETSIZE to 256*

Author: Chris Johns 2024-02-20T23:24:35.000Z

- **Description** changed

```
1 - The default for `FD_SIZE` in newlib is 64. This is proving to be too␣
  ↪small for EPICS applications. EPICS limits the number of descriptors␣
  ↪[here](https://github.com/epics-base/epics-base/blob/7.0/modules/
  ↪libcom/RTEMS/posix/rtems_config.c#L63) for RTEMS 6 builds. The␣
  ↪comment in EPICS base is:
2 + The default for `FD_SETSIZE` in newlib is 64. This is proving to be␣
  ↪too small for EPICS applications. EPICS limits the number of␣
  ↪descriptors [here](https://github.com/epics-base/epics-base/blob/7.0/
  ↪modules/libcom/RTEMS/posix/rtems_config.c#L63) for RTEMS 6 builds.␣
  ↪The comment in EPICS base is:
3 ?                      +++
4
5 {{{
6 /* Note: The select() system call can only be used with the first FD_
  ↪SETSIZE
7 *       File Descriptors (newlib default is 64).  Beginning RTEMS 5.1,␣
```

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```
↪FDs are
*       allocated sequentially.  So changing this CONFIGURE parameter␣
↪such
*       that CONFIGURE_MAXIMUM_FILE_DESCRIPTORS >= FD_SETSIZE will␣
↪likely
*       cause applications making select() calls to fault at some point.
*
*       IOC core components (libca and RSRV) do not make select() calls.
*
*       Applications and driver code using poll() or other socket
*       multiplexers do not share this limitation.
*
*       cf. https://github.com/epics-base/epics-base/issues/300
*/
}}}
- Increasing `FD_SIZE` to 256 will increase the set but 64 is too small␣
↪for RTEMS and we do not need 1024 that systems like FreeBSD have.
+ Increasing `FD_SETSIZE` to 256 will increase the set but 64 is too␣
↪small for RTEMS and we do not need 1024 that systems like FreeBSD␣
↪have.
?                 +++
```

Author: Chris Johns 2024-02-20T23:36:43.000Z

- **Attachment** 0001-rtems-newlib-Increase-FD_SETSIZE-to-256.patch added

RSB patch to apply the newlib patch. Please use for testing.

Author: Chris Johns 2024-02-20T23:43:41.000Z

LibBSD `select()` call is https://git.rtems.org/rtems-libbsd/tree/freebsd/sys/kern/sys_generic.c?h=6-freebsd-12#n998 and it says:

```
/*
* The magic 2048 here is chosen to be just enough for FD_SETSIZE
* infds with the new FD_SETSIZE of 1024, and more than enough for
* FD_SETSIZE infds, outfds and exceptfds with the old FD_SETSIZE
* of 256.
*/
```

Author: Chris Johns 2024-02-28T22:56:01.000Z

- **Owner** set to @joel

Author: Joel Sherrill 2024-02-28T23:03:31.000Z

Patch submitted to newlib. When I get acked to push it, I will let you know so you

can bump the newlib hash to pick the change to 256 up.

Author: Chris Johns 2024-05-02T22:57:19.115Z

Merged and in the RSB

Author: Chris Johns 2024-05-02T22:57:19.605Z

changed the description

3.9.1.287 4991 - RSB source and patch checksum updates

Id	4991
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-02-16T06:51:10.000Z
Closed	2024-05-02T22:54:06.069Z
Updated	2024-05-02T22:54:06.160Z
Milestone	6.1
Labels	priority::normal, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4991
Merges	0

Downloaded files in the RSB are reporting checksum errors. This ticket is to cover the updates to correct this for the RTEMS 6 release.

Author: Trac Migrate 2024-02-18T23:44:09.000Z

In [changeset:"ee02d32288a2e871a271d8e6da9adb6e686a8c25/rtems-source-builder" ee02d32/rtems-source-builder]:

```
gcc: gcc-4.9-1.cfg Make-lang patch checksum error

Updates #4991
```

Author: Trac Migrate 2024-02-20T00:58:30.000Z

In [changeset:"07ba8d5f8f514b70ed6908c73d2dc5562f4723e1/rtems-source-builder" 07ba8d5/rtems-source-builder]:

```
rtems: Checksum fixes

Updates #4991
```

Author: Chris Johns	2024-05-02T22:54:05.719Z

Fixed and merged.

Author: Chris Johns	2024-05-02T22:54:06.200Z

changed the description

3.9.1.288 4718 - Coverity issues in cpukit/libfs/src/ftpfs/tftpDriver.c

Id	4718
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-09-16T16:47:28.000Z
Updated	2024-05-02T21:24:35.809Z
Milestone	6.1
Labels	filesystem, priority::lowest, resolution::fixed, scan::coverity, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4718
Merges	0

Original author: frank_k

Coverity indicates the following issues in `cpukit/libfs/src/ftpfs/tftpDriver.c`:

CID 1506523 (1 of 1):

Unchecked return value from library (CHECKED_RETURN) 11. check_return: Calling sendto(tp->socket, send_buf, plen, 0, (struct sockaddr *)&tp->farAddress, 16U) without checking return value. This library function may fail and return an error code.

```
727         sendto (
728             tp->socket,
729             send_buf,
730             plen,
731             0,
732             (struct sockaddr *) &tp->farAddress,
733             sizeof (tp->farAddress)
734         );
```

CID 1506522 (1 of 1): Unchecked return value from library (CHECKED_RETURN) 2. check_return: Calling sendto(tp->socket, (char *)&msg, len, 0, (struct sockaddr *)to, 16U) without checking return value. This library function may fail and return an error code.

```
529     sendto (tp->socket, (char *)&msg, len, 0, (struct sockaddr *)to, sizeof␣
↪*to);
```

CID 1437618 (1 of 3): Unchecked return value from library (CHECKED_RETURN) 11. check_return: Calling setsockopt(tp->socket, 65535, 4102, &tv, 16U) without checking return value. This library function may fail and return an error code.

```
1 594         setsockopt (tp->socket, SOL_SOCKET, SO_RCVTIMEO, &tv, sizeof tv);
```

CID 1437618 (2 of 3): Unchecked return value from library (CHECKED_RETURN) 3. check_return: Calling setsockopt(tp->socket, 65535, 4102, &tv, 16U) without checking return value. This library function may fail and return an error code.

```
1 555         setsockopt (tp->socket, SOL_SOCKET, SO_RCVTIMEO, &tv, sizeof tv);
```

CID 1437618 (3 of 3): Unchecked return value from library (CHECKED_RETURN) 3. check_return: Calling setsockopt(tp->socket, 65535, 4102, &tv, 16U) without checking return value. This library function may fail and return an error code.

```
1 559         setsockopt (tp->socket, SOL_SOCKET, SO_RCVTIMEO, &tv, sizeof tv);
```

Author: Trac Migrate 2022-12-02T15:18:54.000Z

Original author: frank_k

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"997ba1d905d91d62f23fee1fe43c7faa2c44a44b/rtems" 997ba1d9/rtems]:

```
1 tftpDriver.c: Fix Coverity issues
2
3 CID 1506523: Unchecked return value from library (CHECKED_RETURN)
4 CID 1506522: Unchecked return value from library (CHECKED_RETURN)
5 CID 1437618: Unchecked return value from library (CHECKED_RETURN)
6
7 Close #4718
```

Author: Amar Takhar 2024-04-25T20:50:01.455Z

changed the description

Author: Joel Sherrill 2024-05-02T21:24:35.939Z

changed the description

3.9.1.289 5006 - typo in CODEOWNERS

Id	5006
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Amar Takhar
Closed by	Gedare Bloom
Created	2024-05-02T04:17:47.284Z
Closed	2024-05-02T05:22:01.387Z
Updated	2024-05-02T05:22:01.452Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5006
Merges	0

Summary

The group name for @approvers/arch/aarch64 is missing the 64 at the `[Arch AArch64]` section definition.

Steps to reproduce

Author: Gedare Bloom 2024-05-02T04:17:47.369Z

assigned to @amar

Author: Amar Takhar 2024-05-02T04:19:40.513Z

Please open this issue in @administration/gitlab All these tickets must go there if you want to create one here and link it to one there that's fine but open the @administration/gitlab issue first thanks.

Author: Amar Takhar 2024-05-02T05:21:25.771Z

That's cool when you mentioned the group it made all of the people in that group participants. . . .that's scary if you choose the approvers/general group

Author: Gedare Bloom 2024-05-02T05:21:25.705Z

oof, good to remember that.

Author: Amar Takhar 2024-05-02T05:22:42.993Z

I feel like half the things I learn while using it are this way.. and yes, on the GitLab project you can see 150+ participants on some issues or epics so it doesn't care.

Author: Gedare Bloom 2024-05-02T05:22:01.505Z

moved to rtems/gitlab-config#1

3.9.1.290 5005 - Migrate commits from master to main after gitlab transition

Id	5005
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Gedare Bloom
Created	2024-04-29T15:47:34.269Z
Closed	2024-05-02T04:20:18.630Z
Updated	2024-05-02T04:20:18.642Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/5005
Merges	1

Summary

The transition to gitlab did not catch all commits to master before adding new commits to main. Pick those up here.

Steps to reproduce

Author: Gedare Bloom 2024-04-29T15:47:34.344Z

assigned to @gedare

Author: Gedare Bloom 2024-04-29T15:47:42.176Z

created branch 5005-migrate-commits-from-master-to-main-after-gitlab-transition to address this issue

Author: Gedare Bloom 2024-04-29T15:48:24.754Z

mentioned in merge request !6

3.9.1.291 4955 - sparc: Potential stack corruption in uniprocessor configurations during start multitasking

Id	4955
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-09-20T06:54:57.000Z
Updated	2024-04-29T15:49:30.640Z
Milestone	6.1
Labels	arch:sparc, priority::normal, qualification, resolution::fixed, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4955
Merges	0

Original author: sebastian.huber

The system initialization uses the interrupt stack. A first level interrupt shall never interrupt a context which uses the interrupt stack. Such a use would lead to stack corruption and undefined system behaviour. Unfortunately, in uniprocessor configurations this is the case right now. Multiprocessing is started using _CPU_Context_restore(). The caller of this function (_Thread_Start_multitasking()) uses the interrupt stack. Later we have in cpukit/score/cpu/sparc/cpu_asm.S:

```
mov     %g1, %psr                   ! restore status register and
! **** ENABLE TRAPS ****

ld      [%o1 + G5_OFFSET], %g5      ! restore the global registers
ld      [%o1 + G7_OFFSET], %g7

! Load thread specific ISR dispatch prevention flag
ld      [%o1 + ISR_DISPATCH_DISABLE_STACK_OFFSET], %o2
! Store it to memory later to use the cycles

ldd     [%o1 + L0_OFFSET], %l0      ! restore the local registers
ldd     [%o1 + L2_OFFSET], %l2
ldd     [%o1 + L4_OFFSET], %l4
ldd     [%o1 + L6_OFFSET], %l6

! Now restore thread specific ISR dispatch prevention flag
st      %o2, [%g6 + PER_CPU_ISR_DISPATCH_DISABLE]

ldd     [%o1 + I0_OFFSET], %i0      ! restore the input registers
ldd     [%o1 + I2_OFFSET], %i2
ldd     [%o1 + I4_OFFSET], %i4
ldd     [%o1 + I6_FP_OFFSET], %i6

ldd     [%o1 + O6_SP_OFFSET], %o6   ! restore the output registers
```

Between the ENABLE TRAPS and the restore of the output registers, we still use the stack of the

caller and interrupts may be enabled. If an interrupt happens in this code block, the interrupt stack is concurrently used which may lead to a crash.

Author: Trac Migrate 2023-09-26T05:50:21.000Z

Original author: sebastian.huber

In [changeset:"a986262380b0b651b232140470f40cf5c2c4d147/rtems" a9862623/rtems]:

```
validation: Check stack of interrupted context

Check the stack of the interrupted context during the multitasking
start.

Update #4955.
```

Author: Trac Migrate 2023-10-12T11:53:39.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"1c36971d9245fe0c212890d61cb43a8d7fa14e1c/rtems" 1c36971d/rtems]:

```
sparc: Fix stack corruption

Fix a potential stack corruption in uniprocessor configurations during
start multitasking.

The system initialization uses the interrupt stack.  A first level
interrupt shall never interrupt a context which uses the interrupt
stack.  Such a use would lead to stack corruption and undefined system
behaviour.  Unfortunately, in uniprocessor configurations this was the
case.  Multiprocessing is started using _CPU_Context_restore().  The
caller of this function (_Thread_Start_multitasking()) uses the
interrupt stack.  Later we have in cpukit/score/cpu/sparc/cpu_asm.S:

mov     %g1, %psr                   ! restore status register and
! **** ENABLE TRAPS ****

ld      [%o1 + G5_OFFSET], %g5      ! restore the global registers
ld      [%o1 + G7_OFFSET], %g7

! Load thread specific ISR dispatch prevention flag
ld      [%o1 + ISR_DISPATCH_DISABLE_STACK_OFFSET], %o2
! Store it to memory later to use the cycles

```

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```
ldd     [%o1 + L0_OFFSET], %l0        ! restore the local registers
ldd     [%o1 + L2_OFFSET], %l2
ldd     [%o1 + L4_OFFSET], %l4
ldd     [%o1 + L6_OFFSET], %l6

! Now restore thread specific ISR dispatch prevention flag
st      %o2, [%g6 + PER_CPU_ISR_DISPATCH_DISABLE]

ldd     [%o1 + I0_OFFSET], %i0        ! restore the input registers
ldd     [%o1 + I2_OFFSET], %i2
ldd     [%o1 + I4_OFFSET], %i4
ldd     [%o1 + I6_FP_OFFSET], %i6

ldd     [%o1 + O6_SP_OFFSET], %o6     ! restore the output registers

Between the ENABLE TRAPS and the restore of the output registers, we
still use the stack of the caller and interrupts may be enabled.  If an
interrupt happens in this code block, the interrupt stack is
concurrently used which may lead to a crash.

Fix this by adding a new function _SPARC_Start_multiprocessing() for
uniprocessor configurations.  This function first sets the stack pointer
to use the stack of the heir thread.

Close #4955.
```

Author: Trac Migrate 2023-10-12T14:07:59.000Z

Original author: sebastian.huber

In [changeset:"43b74b142e928b7be8118a10e963c465ce1ff625/rtems" 43b74b14/rtems]:

```
validation: Support powerpc in test case

Update #4955.
```

Author: Amar Takhar 2024-04-25T20:50:55.476Z

changed the description

Author: Gedare Bloom 2024-04-29T15:49:30.455Z

mentioned in commit faed58f9065da271217e54c218d6be08ad9b71d7

3.9.1.292 4971 - Report that nested validation test cases did run

Id	4971
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-11-22T13:50:41.000Z
Updated	2024-04-25T20:50:56.803Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4971
Merges	0

Original author: sebastian.huber

Some validation test cases use parameterized nested test cases. For example, the rtems_semaphore_obtain() test uses a parameterized test case to seize a mutex. The nested mutex seize test case uses a parameterized thread queue enqueue test case. Currently, there is no indication that these nested test cases did actually run. Some of these nested test cases run in a tight loop, so printing a hint on every run could lead to a massive amount of test output.

Add test case remarks to the RTEMS Test Framework which may be used to give such an indication.

Author: Trac Migrate 2023-11-28T13:03:37.000Z

Original author: sebastian.huber

In [changeset:"d586b3c01484640b7b0243b172672f47fd8c0c74/rtems" d586b3c/rtems]:

```
libtest: Add T_add_remark()

This can be used to report that nested test cases did run in a test
case.

Update #4971.
```

Author: Trac Migrate 2023-11-28T13:03:40.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"528f0e1947876ef584681860c4c8b0615c548baf/rtems" 528f0e1/rtems]:

```
validation: Add nested test case remarks

Close #4971.
```

Author: Amar Takhar	2024-04-25T20:50:56.843Z

changed the description

3.9.1.293 4954 - sparc: Simplify the clock driver and CPU counter support

Id	4954
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-09-15T08:39:53.000Z
Updated	2024-04-25T20:50:54.966Z
Milestone	6.1
Labels	arch:sparc, priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4954
Merges	0

Original author: sebastian.huber

Unfortunately, most SPARC SoCs supported by RTEMS lack a proper free-running counter. The only exception are the GR712RC and the GR740. For the pre-qualified GR712RC BSP, the current implementation is too complicated. Make the fall back to a free-running GPTIMER mandatory for the leon3 BSP family to simplify things. For the GR712RC use the DSU time tag counter.

Author: Trac Migrate	2023-09-15T16:02:59.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
- Unfortunately, most SPARC SoCs supported by RTEMS lack a proper free-
↪running counter. The only exception is the GR740. For the pre-
↪qualified GR712RC BSP, the current implementation is too complicated.␣
↪Make the fall back to a free-running GPTIMER mandatory for the leon3␣
↪BSP family to simplify things.
?                                                                    ␣
↪                                     ^^^^^^

+ Unfortunately, most SPARC SoCs supported by RTEMS lack a proper free-
```

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```
↪running counter. The only exception are the GR712RC and the GR740.␣
↪For the pre-qualified GR712RC BSP, the current implementation is too␣
↪complicated. Make the fall back to a free-running GPTIMER mandatory␣
↪for the leon3 BSP family to simplify things. For the GR712RC use the␣
↪DSU time tag counter.
?
↪                                    ^^^^^^^^^^^^^^^^^^^^^^^^                ␣
↪                                                                            ␣
↪                                                                            ␣
↪                                                                            ␣
↪                                     ␣
↪++++++++++++++++++++++++++++++++++++++++++++++++
```

Author: Trac Migrate 2023-10-20T08:56:45.000Z

Original author: sebastian.huber

In [changeset:"8fe0fc47213a7f217294c94634ca90a37f0a4535/rtems" 8fe0fc4/rtems]:

```
bsps/leon3: Optional IRQ(A)MP timestamp support

This is necessary to run the tests on SIS with profiling enabled.

Update #4954.
```

Author: Trac Migrate 2023-10-20T08:56:47.000Z

Original author: sebastian.huber

In [changeset:"b6dc4b47077803cde93648016d15ce3992573d03/rtems" b6dc4b4/rtems]:

```
sparc: Move CPU counter implementation

Enable a BSP-specific CPU counter implementation.

Update #4954.
```

Author: Trac Migrate 2023-10-20T08:56:49.000Z

Original author: sebastian.huber

In [changeset:"3f03a6d2ef787d8b0a6ebf4549eb992c0aced513/rtems" 3f03a6d/rtems]:

```
bsps/leon3: Make GPTIMER fall back mandatory

```

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```
Using the auto reload counter which generates the clock ticks for the
timecounter or CPU counter is quite difficult and only works in
uniprocessor configurations.

Update #4954.
```

Author: Trac Migrate 2023-10-20T08:56:51.000Z

Original author: sebastian.huber

In [changeset:"ff533cec9dc4f5c10972f0f6d8a2f90064765462/rtems" ff533cec/rtems]:

```
bsps/leon3: Simplify clock and CPU counter

Share the timecounter instance between the clock and the CPU counter.
This greatly simplifies the clock driver since we have to do the device
selection only in one place, the CPU counter support.

Update #4954.
```

Author: Trac Migrate 2023-10-20T08:56:53.000Z

Original author: sebastian.huber

In [changeset:"abb2f8bd6635457fcac4ddbd0cb284b623b5c602/rtems" abb2f8b/rtems]:

```
bsps/leon3: Use custom CPU counter implementation

Merge the timecounter and CPU counter support for the leon3 BSP family.
Remove now unused functions from the CPU counter support of the erc32
and leon3 BSPs.

Update #4954.
```

Author: Trac Migrate 2023-10-20T08:56:55.000Z

Original author: sebastian.huber

In [changeset:"8266a8a33539dec10ec258a5196fd4d331f8bb16/rtems" 8266a8a3/rtems]:

```
bsps/leon3: Move code blocks

Move code blocks to simplify C preprocessor usage.

Update #4954.
```

Author: Trac Migrate 2023-10-20T08:56:57.000Z

Original author: sebastian.huber

In [changeset:"ffa29bac30cd5009cd94f39de6a52619b412a48f/rtems" ffa29bac/rtems]:

```
bsps/leon3: Statically initialize get timecount

Update #4954.
```

Author: Trac Migrate 2023-10-20T08:56:59.000Z

Original author: sebastian.huber

In [changeset:"601b84c7583e3e80e1deeeee1ec27fb1c7319712/rtems" 601b84c7/rtems]:

```
bsps/leon3: leon3_counter_use_irqamp_timestamp()

Simplify leon3_counter_use_irqamp_timestamp().

Update #4954.
```

Author: Trac Migrate 2023-10-20T08:57:01.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"958d517215025851fd728abdc1f246c9ad808dab/rtems" 958d517/rtems]:

```
bsps/leon3: Use DSU time tag for GR712RC

Close #4954.
```

Author: Trac Migrate 2023-10-20T12:50:44.000Z

Original author: sebastian.huber

In [changeset:"36b935f1c383bee71bbb620260e834d3004d4719/rtems" 36b935f1/rtems]:

```
sparc: Fix move of CPU counter implementation

This fixes a build error with RTEMS_PROFILING enabled.
```

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```
4
5 Update #4954.
```

Author: Amar Takhar 2024-04-25T20:50:55.006Z

changed the description

3.9.1.294 4953 - Use of symbol addresses for arbitrary values may not work for some code models

Id	4953
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-09-12T13:48:38.000Z
Updated	2024-04-25T20:50:54.507Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4953
Merges	0

Original author: sebastian.huber

The _ISR_Stack_size is defined by the application configuration like this:

```
1 /**
2 * @ingroup RTEMSAPIBaseDefs
3 *
4 * @brief Defines a global symbol with the name and value.
5 *
6 * @param _name is the user defined name of the symbol.  The name shall be a
7 *   valid designator.  On the name a macro expansion is performed and
8 *   afterwards it is stringified.
9 *
10 * @param _value is the value of the symbol.  On the value a macro expansion is
11 *   performed and afterwards it is stringified.  It shall expand to an integer
12 *   expression understood by the assembler.
13 *
14 * This macro shall be placed at file scope.
15 */
16 #if defined(__USER_LABEL_PREFIX__)
17 #define RTEMS_DEFINE_GLOBAL_SYMBOL( _name, _value ) \\
18 __asm__( \\
19 "\\t.globl " RTEMS_XSTRING( RTEMS_SYMBOL_NAME( _name ) ) \\
20 "\\n\\t.set " RTEMS_XSTRING( RTEMS_SYMBOL_NAME( _name ) ) \\
21 ", " RTEMS_STRING( _value ) "\\n" \\
```

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```
)
#else
#define RTEMS_DEFINE_GLOBAL_SYMBOL( _name, _value )
#endif

RTEMS_DEFINE_GLOBAL_SYMBOL(
_ISR_Stack_size,
CONFIGURE_INTERRUPT_STACK_SIZE
);
```

Firstly, the RTEMS_DEFINE_GLOBAL_SYMBOL() is broken. It should depend on __GNUC__ and not __USER_LABEL_PREFIX__.

Secondly, setting a symbol to an arbitrary absolute address may not work with all code models, see:

https://sourceware.org/pipermail/binutils/2023-September/129448.html

The _ISR_Stack_size should be changed to point to the end of the ISR stack of processor 0:

```
RTEMS_DEFINE_GLOBAL_SYMBOL(
_ISR_Stack_0_end,
RTEMS_SYMBOL_NAME( _ISR_Stack_area_begin )
+ CONFIGURE_INTERRUPT_STACK_SIZE
);
```

The tests for RTEMS_DEFINE_GLOBAL_SYMBOL() should be changed to use values relative to another symbol.

Author: Trac Migrate 2023-09-13T05:28:52.000Z

Original author: sebastian.huber

In [changeset:"0add2d2edcbcc9cd3d5aa24fb900fbe295fc1ef5/rtems" 0add2d2/rtems]:

```
score: Fix RTEMS_DEFINE_GLOBAL_SYMBOL()

The availability of a proper RTEMS_DEFINE_GLOBAL_SYMBOL() implementation
depends on __asm__() and thus __GNUC__.

Clarify documentation.

Update #4953.
```

Author: Trac Migrate 2023-09-13T05:28:54.000Z

Original author: sebastian.huber

In [changeset:"d7a6e803984e5508c30aa9e3625c76460beb807b/rtems" d7a6e80/rtems]:

```
tests: Improve RTEMS_DEFINE_GLOBAL_SYMBOL() tests

Use a symbol value relative to an existing symbol address to make the
test work on more code models.

Update #4953.
```

Author: Trac Migrate 2023-09-13T05:44:16.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Since the start files are written in assembly, they can use the right instructions to load an arbitrary absolute address. A review of the uses of _ISR_Stack_size showed that there is actually no issue right now. Adjusting the tests for RTEMS_DEFINE_GLOBAL_SYMBOL() should be enough.

Author: Trac Migrate 2023-09-13T08:52:29.000Z

Original author: sebastian.huber

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

The spconfig01 test fails on aarch64 with:

```
testsuites/sptests/spconfig01/init.c: 89 rtems_configuration_get_
↪interrupt_stack_size() == CPU_STACK_MINIMUM_SIZE
```

The rtems_configuration_get_interrupt_stack_size() needs to be fixed.

Author: Trac Migrate 2023-09-13T08:57:43.000Z

Original author: sebastian.huber

- **Summary** changed from *Definition of _ISR_Stack_size may not work for some code models* to *Use of symbol addresses for arbitrary values may not work for some code models*

The use of _TLS_BSS_size and _TLS_Data_begin may also not work on some code models. I really wonder why the TLS related tests pass on aarch64.

Author: Trac Migrate 2023-09-13T09:02:33.000Z

Original author: sebastian.huber

There are also issues with _TLS_Size and _TLS_Alignment.

Author: Trac Migrate 2023-09-14T12:01:15.000Z

Original author: sebastian.huber

In [changeset:"5f8415b92e2787e5f11fd0808af341b40ae2d17c/rtems" 5f8415b/rtems]:

```
validation: Add RTEMS_DEFINE_GLOBAL_SYMBOL() test

Update #4953.
```

Author: Trac Migrate 2023-09-18T05:24:10.000Z

Original author: sebastian.huber

In [changeset:"206bbeb31b72f4c9ce066e878f94a6914de5dd9e/rtems" 206bbeb/rtems]:

```
score: Fix TLS support for some code models

Store symbols with an arbitrary absolute address such as _TLS_Size,
_TLS_Alignment, _TLS_Data_size, and _TLS_BSS_size in an object to avoid␣
↪issues
with some code models.

Update #4953.
```

Author: Trac Migrate 2023-09-18T05:24:12.000Z

Original author: sebastian.huber

In [changeset:"2111497c0f9ad5dda154ef533ab2c842435a8e09/rtems" 2111497/rtems]:

```
rtems: rtems_configuration_get_interrupt_stack_size()

Fix rtems_configuration_get_interrupt_stack_size() for some code models.

The _ISR_Stack_size symbol has an arbitrary absolute address and may not
be representable in the code model used by the compiler.

Update #4953.
```

Author: Trac Migrate 2023-11-24T07:15:12.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"

- **Status** changed from *reopened* to *closed*

Author: Amar Takhar 2024-04-25T20:50:54.558Z

changed the description

3.9.1.295 4915 - Building sphinx 7.0.1 fails

Id	4915
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-06-07T10:27:01.000Z
Updated	2024-04-25T20:50:46.164Z
Milestone	6.1
Labels	doc::sphinx, priority::high, priority::normal, qualification, resolution::fixed, resolution::wontfix, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4915
Merges	0

Original author: abutterfield

I am trying to install sphinx on an Apple Silicon OSX machine. I've already done this successfully in the past on a similar machine.

This time, after following steps in the rtems-docs README.txt, I do ./waf , it does some stuff and then:

```
[ 7/10] Compiling common/_static/favicon.ico
[ 8/10] Compiling common/_static/my-styles.css
[ 9/10] Compiling common/_static/logo.png
[10/10] Compiling common/_static/style.css

Theme error:
An error happened in rendering the page bld/index.
Reason: UndefinedError("'style' is undefined")
```

I'm using pip 22.2.1, Python 3.10.6 and pip3 installs sphinx 7.0.1

```
(sphinx) ab-rtems-docs% pip3 install sphinx
Requirement already satisfied: sphinx in ./sphinx/lib/python3.10/site-packages (7.
↪0.1)
```

Author: Trac Migrate 2023-06-14T05:25:08.000Z

Original author: abutterfield

- **Owner** set to Utkarsh Verma <utkarsh@bitbanged.com>
- **Resolution** set to ~"fixed"

- **Status** changed from *new* to *closed*

In [changeset:"4c87f9b594217786cabc84ba4d734383234e6d14/rtems-docs" 4c87f9b/rtems-docs]:

```
eng: Fix builds for newer Sphinx versions (>=7)

The current Sphinx theme depends on the `style` parameter which got
deprecated in v5.1 and finally got removed in v7. Now, the `styles` key
should be preferred which is a list of stylesheets. This commit
implements this change.

Closes #4915
```

Author: Trac Migrate 2023-07-26T18:38:09.000Z

Original author: abutterfield

In [changeset:"13237ab34b8430760a930d456cc18ddf8e7ed55c/rtems-docs" 13237ab/rtems-docs]:

```
layout.html: Revert patch forcing Spinx to >= 6.0

Unfortunately, updating past Sphinx 5.x results in unordered bullet
lists not formatting correctly as show in a screen capture attached
to #4928. Revert this patch until the issue is resolved and output
is reviewed for other potential issues.

From: Utkarsh Verma <utkarsh@bitbanged.com>
Date: Wed, 14 Jun 2023 05:36:26 +0000
Subject: [PATCH] eng: Fix builds for newer Sphinx versions (>=7)

The current Sphinx theme depends on the `style` parameter which got
deprecated in v5.1 and finally got removed in v7. Now, the `styles` key
should be preferred which is a list of stylesheets. This commit
implements this change.

Updates #4915.
Updates #4928.
```

Author: Joel Sherrill 2023-07-26T18:59:53.000Z

Original author: abutterfield

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

My patch set was a work-around to not use >= 6. This needs a permanent fix.

Author: Trac Migrate 2023-08-01T07:20:53.000Z

Original author: abutterfield

- **Milestone** changed from %"Indefinite" to %"6.1"
- **Priority** changed from ~"high" to ~"normal"
- **Resolution** set to ~"wontfix"
- **Status** changed from *reopened* to *closed*

Author: Trac Migrate 2023-11-21T13:35:58.000Z

Original author: abutterfield

In [changeset:"027ed522a4088020a998d309a70a631253808e88/rtems-central" 027ed52/rtems-central]:

```
requirements.txt: Set maximum Sphinx version

Update #4915.
Update #4928.
```

Author: Amar Takhar 2024-04-25T20:50:46.208Z

changed the description

Author: Amar Takhar 2024-04-25T20:50:50.665Z

mentioned in issue #4936

3.9.1.296 4909 - Multiple Protected Heap Functions are Ununused

Id	4909
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Created	2023-05-21T11:54:39.000Z
Updated	2024-04-25T20:50:45.699Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4909
Merges	0

The following functions are unused and should be removed:

- _Protected_heap_Get_block_size
- _Protected_heap_Iterate

- _Protected_heap_Resize_block

Author: Joel Sherrill 2023-05-21T11:54:45.000Z

- **Owner** set to @joel
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-05-26T14:52:35.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"63415655e342dbcb9da76aae312ab135901bd2e1/rtems" 63415655/rtems]:

```
score/src/pheap*: Remove unreferenced methods

* _Protected_heap_Get_block_size
* _Protected_heap_Iterate
* _Protected_heap_Resize_block

Closes #4909.
```

Author: Amar Takhar 2024-04-25T20:50:45.742Z

changed the description

3.9.1.297 4900 - PowerPC score warnings in score headers

Id	4900
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2023-04-23T22:48:53.000Z
Updated	2024-04-25T20:50:45.245Z
Milestone	6.1
Labels	priority::highest, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4900
Merges	0

Building a few of the PowerPC BSPs with `RTEMS_DEBUG = True` generates these warnings:

```
[ 319/1483] Compiling cpukit/score/cpu/powerpc/cpu.c
In file included from ../../../cpukit/score/cpu/powerpc/include/rtems/score/cpu.
↪h:59,
```

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```
from ../../../cpukit/score/cpu/powerpc/include/rtems/score/cpuimpl.h:42,
from ../../../cpukit/score/cpu/powerpc/cpu.c:43:
../../../cpukit/score/cpu/powerpc/cpu.c: In function '_CPU_Fatal_halt':
../../../cpukit/include/rtems/score/basedefs.h:436:33: warning: implicit␣
↪declaration of function '_Assert' [-Wimplicit-function-declaration]
436 |   #define _Assert_Unreachable() _Assert( 0 )
|                                 ^~~~~~~
../../../cpukit/include/rtems/score/basedefs.h:865:7: note: in expansion of macro
↪'_Assert_Unreachable'
865 |       _Assert_Unreachable(); \\
|       ^~~~~~~~~~~~~~~~~~~
../../../cpukit/score/cpu/powerpc/cpu.c:361:3: note: in expansion of macro 'RTEMS_
↪UNREACHABLE'
361 |   RTEMS_UNREACHABLE();
|   ^~~~~~~~~~~~~~~~
../../../cpukit/include/rtems/score/basedefs.h:436:33: warning: nested extern␣
↪declaration of '_Assert' [-Wnested-externs]
436 |   #define _Assert_Unreachable() _Assert( 0 )
|                                 ^~~~~~~
../../../cpukit/include/rtems/score/basedefs.h:865:7: note: in expansion of macro
↪'_Assert_Unreachable'
865 |       _Assert_Unreachable(); \\
|       ^~~~~~~~~~~~~~~~~~~
../../../cpukit/score/cpu/powerpc/cpu.c:361:3: note: in expansion of macro 'RTEMS_
↪UNREACHABLE'
361 |   RTEMS_UNREACHABLE();
|   ^~~~~~~~~~~~~~~~
```

The score headers basedefs.h header depends on assert.h and assert.h includes basedefs.h at it's top.

I think this ticket should be set to blocker for the 6.1 release. We should resolve this and the warnings before we make a release.

Author: Trac Migrate 2023-04-24T08:15:52.000Z

Yes, there is a cyclic dependency. For RTEMS_STATIC_ANALYSIS we need basedefs.h. For RTEMS_UNREACHABLE() we need _Assert().

I am not sure if the RTEMS_STATIC_ANALYSIS was really a good idea. It is currently just used in assert.h. Maybe we should remove it.

Author: Chris Johns 2023-04-24T08:27:17.000Z

You are the best judge of this. Breaking the dependency would be good to see done.

Author: Trac Migrate 2023-04-25T06:02:19.000Z

In [changeset:"9eb5dd34018a42767942d8d525540b5c08d27e3a/rtems-central" 9eb5dd3/rtems-central]:

```
spec: Avoid cyclic header file dependencies

There was a cyclic dependency: For RTEMS_STATIC_ANALYSIS we needed
basedefs.h in assert.h. For RTEMS_UNREACHABLE() we needed _Assert() from
assert.h in basedefs.h.

Fix this by introducing _Debug_Unreachable() in basedefs.h.

Add RTEMS_FUNCTION_NAME to basedefs.h and use it in basedefs.h and
assert.h.

Update #4900.
```

Author: Trac Migrate 2023-04-25T06:06:50.000Z

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"863b26ee3a5ab938c2003bcdbc5b82957f917997/rtems" 863b26ee/rtems]:

```
score: Avoid cyclic header file dependencies

There was a cyclic dependency: For RTEMS_STATIC_ANALYSIS we needed
basedefs.h in assert.h. For RTEMS_UNREACHABLE() we needed _Assert() from
assert.h in basedefs.h.

Fix this by introducing _Debug_Unreachable() in basedefs.h.

Add RTEMS_FUNCTION_NAME to basedefs.h and use it in basedefs.h and
assert.h.

Close #4900.
```

Author: Amar Takhar 2024-04-25T20:50:45.294Z

changed the description

3.9.1.298 4874 - Undefined behaviour

Id	4874
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-03-09T12:37:19.000Z
Updated	2024-04-25T20:50:39.682Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::wontfix, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4874
Merges	0

Original author: dppinto

If one searches within SRSs or ICDs for 'undefined behaviour' one will find specifications/functions on which descriptions mention conditions that will lead to 'undefined behaviour', e.g.:

. . .

spec:/rtems/clock/if/get-boot-time

. . .

boot_time is the pointer to a struct timespec object. The time elapsed since the Unix epoch at some time point during system initialization call will be stored in this object. Calling the directive with a pointer equal to NULL is undefined behaviour.".

One created specific tests to further access the eventual impacts, for instance in the clock-related functions below:

spec:/rtems/clock/if/get-boot-time

spec:/rtems/clock/if/get-boot-time-bintime

spec:/rtems/clock/if/get-boot-time-timeval

spec:/rtems/clock/if/get-monotonic

spec:/rtems/clock/if/get-monotonic-bintime

spec:/rtems/clock/if/get-monotonic-coarse

spec:/rtems/clock/if/get-monotonic-coarse-bintime

spec:/rtems/clock/if/get-monotonic-coarse-timeval

spec:/rtems/clock/if/get-monotonic-timeval

spec:/rtems/clock/if/get-realtime

spec:/rtems/clock/if/get-realtime-bintime

spec:/rtems/clock/if/get-realtime-coarse

spec:/rtems/clock/if/get-realtime-coarse-bintime

spec:/rtems/clock/if/get-realtime-coarse-timeval

spec:/rtems/clock/if/get-realtime-timeval

The outcome was:

There is no internal check for a NULL pointer in these functions, so when called with a null pointer argument there is unwanted behaviour for both the GR712rc and GR740; an attempt to access memory location 0.

For the GR712rc board this memory position is not mapped and causes a trap to be raised (this trap handler leads to unpredictable results, the workflow of the program is not recoverable). For the GR740 board the actual memory position is either read or written (the previous value being overridden with unpredictable results).

So, even if somehow this shall also be a user responsibility, shouldn't one adopt a safe approach to this and add input checking for these functions?

Additional Notes:

This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). The original ISVV reference for this issue is RTEMS-SMP-REQ-VER-008 and RTEMS-SMP-VAL-005.

Author: Trac Migrate 2023-03-09T12:54:46.000Z

Original author: dppinto

- **Resolution** set to ~"wontfix"
- **Status** changed from *new* to *closed*

This was discussed on the RTEMS mailing list some time ago:

https://lists.rtems.org/pipermail/devel/2021-November/069991.html

Quite frankly, someone passing a NULL pointer to functions like `void rtems_clock_get_monotonic_bintime(struct bintime *time_point)` will also use the NULL pointer later. The next release of the pre-qualified RTEMS will probably contain the `clock_get()` function which performs these NULL pointer checks.

Author: Trac Migrate 2023-03-09T12:55:23.000Z

Original author: dppinto

- **Milestone** set to %"6.1"
- **Version** set to ~"6"

Author: Amar Takhar 2024-04-25T20:50:39.748Z

changed the description

3.9.1.299 4863 - Operations evaluation order.

Id	4863
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-02-23T12:37:47.000Z
Updated	2024-04-25T20:50:38.313Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4863
Merges	0

Original author: dppinto

Within cpukitincludertemsscoreobjectimpl.h line 545 one has: if (!the_api || the_api > OBJECTS_APIS_LAST)

This shall be equivalent to “if ((!the_api) || (the_api > OBJECTS_APIS_LAST))”, but at first glance, this is not always obvious to everyone and one might need to read further documentation to be fully sure of it.

We would suggest the parenthesis be added so that the code logic is straightforward. In this case, one would not call it an ‘excess’ as stated within the RTEMS SW Eng. Manual (“Avoid excess parentheses. Learn the operator precedence. rules.”).

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). The original ISVV reference for this issue is RTEMS-SMP-CODE-VER-076.

Author: Trac Migrate 2023-02-23T14:30:55.000Z

Original author: dppinto

The operators were interpreted as new lines. This is the correct description (with a white space between the operators):

Within cpukitincludertemsscoreobjectimpl.h line 545 one has:

if (!the_api | | the_api > OBJECTS_APIS_LAST) This shall be equivalent to “if ((!the_api) | | (the_api > OBJECTS_APIS_LAST))”, but at first glance, this is not always obvious to everyone and one might need to read further documentation to be fully sure of it.

Author: Joel Sherrill 2023-02-23T15:17:54.000Z

Original author: dppinto

The code would be better written avoiding the use of compound expressions which will ease the testing when moving to higher design assurance levels which require MCDC style analysis. I would recommend trying to rewrite code to avoid compound

expressions. This effectively can reduce testing to simpler decision/branch coverage. Here's my recommendation which also adds the braces which I am surprised didn't get flagged:

```
if ( !the_api ) {
return false;
}

if ( the_api > OBJECTS_APIS_LAST )
return false;
}

return true;
}
```

FWIW I don't think the code as written was hard to read or confusing. I wouldn't have changed based solely on that report. The rules of evaluation in C are clear enough that anyone confused by this shouldn't be touching this code anyway.

Author: Trac Migrate 2023-03-23T15:22:20.000Z

Original author: dppinto

- **Milestone** set to %"6.1"

Author: Trac Migrate 2023-04-26T08:22:47.000Z

Original author: dppinto

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"6979b03b0c9c72c786f06f3f3bb7680668d60983/rtems" 6979b03/rtems]:

```
score: Simplify _Objects_Is_api_valid()

Close #4863.
```

Author: Amar Takhar 2024-04-25T20:50:38.357Z

changed the description

3.9.1.300 4862 - score/ & bsps/: Unused input parameters

Id	4862
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-02-23T12:36:23.000Z
Updated	2024-04-25T20:50:37.831Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::defect, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4862
Merges	0

Original author: dppinto

The following functions list input parameters on their signature that seem not to be used:

File	Function	Line	Resolution
bsps\shared\cache\cacheimp	smp_cache_inst_inv_all	293	Unused due to API constraints
bsps\shared\dev\clock\clock	void Clock_isr	130	Fixed: parameter can be used
bsps\shared\dev\clock\clock	rtems_isr Clock_isr	134	Fixed: parameter can be used
bsps\shared\irq\irq-generic.c	bsp_interrupt_allocate_handler_index	62	Fixed: parameter removed
bsps\sparc\leon3\start\bspcl	bsp_fatal_extension	70	API backward compatibility
cpukit\score\src\threadchan	static void _Thread_Priority_action_change( );	92	Unused due to API constraints
cpukit\score\src\threadq.c	_Thread_queue_MP_callout_do_nothing	157	Unused due to API constraints
cpukit\score\src\threadqenq	_Thread_queue_Deadlock_fatal	382	Unused due to API constraints
cpukit\score\src\threadqops.	_Thread_queue_FIFO_do_initialize	137	Unused due to API constraints
cpukit\score\src\threadqtime	_Thread_queue_Add_timeout_ticks	28	Unused due to API constraints
cpukit\score\src\threadresta	_Thread_Join_flush_filter	84	Unused due to API constraints
cpukit\score\src\userextitera	_User_extensions_Thread_begin_visitor	102	Unused due to API constraints

Could one please double-check if in each case the unused parameters can be safely removed from the function's signature? PS: The first functions are also implemented within .h files and perhaps could be moved to .c files.

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and

Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). The original ISVV reference for this issue is RTEMS-SMP-CODE-VER-028.

Author: Trac Migrate 2023-03-23T16:25:03.000Z

Original author: dppinto

- **Milestone** set to %"6.1"
- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-04-05T12:00:12.000Z

Original author: dppinto

In [changeset:"32fe5724a8d2c943f7354013e2e3556129fc2b51/rtems" 32fe5724/rtems]:

```
bsps: Mark argument as unused

Update #4862.
```

Author: Joel Sherrill 2023-06-22T21:28:32.000Z

Original author: dppinto

Could the actual parameter that isn't referenced be provided? This looks easy to resolve if there were complete information.

Author: Joel Sherrill 2023-06-22T21:29:22.000Z

Original author: dppinto

- **Summary** changed from *Unused input parameters* to *score/ & bsps/: Unused input parameters*

Author: Trac Migrate 2023-06-23T14:14:00.000Z

Original author: dppinto

Most of the functions listed on the initial ticket description only have a single parameter.

Regarding the others, the information is included hereafter:

Author: Trac Migrate 2023-07-18T19:55:24.000Z

Original author: dppinto

There are two obvious reasons, why some of these functions have unused parameters:

1. When functions are used through function pointers, then they may have unused parameters since other functions may need the parameter. Only if the parameter is unused in all functions associated with a function pointer, the parameter is really superfluous.
2. API backwards compatibility.

Could you please remove these false positives from the list.

Author: Trac Migrate 2023-07-28T14:55:19.000Z

Original author: dppinto

In [changeset:"a41611ab4a092dc1a103cc5ea78336333a601be6/rtems" a41611a/rtems]:

```
bsps/irq: Remove unused parameter

Update #4862.
```

Author: Trac Migrate 2024-03-20T15:25:54.000Z

Original author: dppinto

Original author: sebastian.huber

- **Description** changed

```
The following functions list input parameters on their signature that␣
↪seem not to be used:

- ||=**File** =||= **Function** =||= **Line** =||
+ ||=**File** =||= **Function** =||= **Line** =||= **Resolution** ||
?                                                 ++++++++++++++++++

- ||bsps\\shared\\cache\\cacheimpl.h||smp_cache_inst_inv_all    ||293||
+ ||bsps\\shared\\cache\\cacheimpl.h||smp_cache_inst_inv_all   ␣
↪||293||Unused due to API constraints||
?                                                                ␣
↪++++++++++++++++++++++++++++++

- ||bsps\\shared\\dev\\clock\\clockimpl.h||void Clock_isr||130||
+ ||bsps\\shared\\dev\\clock\\clockimpl.h||void Clock_isr||130||Fixed:␣
↪parameter can be used||
?                                                  ␣
↪++++++++++++++++++++++++++++++

- ||bsps\\shared\\dev\\clock\\clockimpl.h||rtems_isr Clock_isr||134||
+ ||bsps\\shared\\dev\\clock\\clockimpl.h||rtems_isr Clock_
```

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```
↪isr||134||Fixed: parameter can be used||
?                                                                 ␣
↪+++++++++++++++++++++++++++++++
 
- ||bsps\\shared\\irq\\irq-generic.c||bsp_interrupt_allocate_handler_
↪index||62||
+ ||bsps\\shared\\irq\\irq-generic.c||bsp_interrupt_allocate_handler_
↪index||62||Fixed: parameter removed||
?                                                                 ␣
↪     ++++++++++++++++++++++++++
 
- ||bsps\\sparc\\leon3\\start\\bspclean.c||bsp_fatal_extension||70||
+ ||bsps\\sparc\\leon3\\start\\bspclean.c||bsp_fatal_extension||70||API␣
↪backward compatibility||
?                                                                 ␣
↪+++++++++++++++++++++++++++
 
- ||cpukit\\score\\src\\threadchangepriority.c||static void _Thread_
↪Priority_action_change( ); ||92||
+ ||cpukit\\score\\src\\threadchangepriority.c||static void _Thread_
↪Priority_action_change( ); ||92||Unused due to API constraints||
?                                                                 ␣
↪                          +++++++++++++++++++++++++++++++
 
- ||cpukit\\score\\src\\threadq.c||_Thread_queue_MP_callout_do_
↪nothing||157||
+ ||cpukit\\score\\src\\threadq.c||_Thread_queue_MP_callout_do_
↪nothing||157||Unused due to API constraints||
?                                                                 ␣
↪  +++++++++++++++++++++++++++++++
 
- ||cpukit\\score\\src\\threadqenqueue.c||_Thread_queue_Deadlock_
↪fatal||382||
+ ||cpukit\\score\\src\\threadqenqueue.c||_Thread_queue_Deadlock_
↪fatal||382||Unused due to API constraints||
?                                                                 ␣
↪  +++++++++++++++++++++++++++++++
 
- ||cpukit\\score\\src\\threadqops.c||_Thread_queue_FIFO_do_
↪initialize||137||
+ ||cpukit\\score\\src\\threadqops.c||_Thread_queue_FIFO_do_
↪initialize||137||Unused due to API constraints||
?                                                                 ␣
↪  +++++++++++++++++++++++++++++++
 
- ||cpukit\\score\\src\\threadqtimeout.c||_Thread_queue_Add_timeout_
↪ticks||28||
+ ||cpukit\\score\\src\\threadqtimeout.c||_Thread_queue_Add_timeout_
↪ticks||28||Unused due to API constraints||
```

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```
?
↪    ++++++++++++++++++++++++++++++

- ||cpukit\\score\\src\\threadrestart.c||_Thread_Join_flush_filter||84||
+ ||cpukit\\score\\src\\threadrestart.c||_Thread_Join_flush_
↪filter||84||Unused due to API constraints||
?
↪++++++++++++++++++++++++++++++

- ||cpukit\\score\\src\\userextiterate.c||_User_extensions_Thread_begin_
↪visitor||102||
+ ||cpukit\\score\\src\\userextiterate.c||_User_extensions_Thread_begin_
↪visitor||102||Unused due to API constraints||
?
↪           ++++++++++++++++++++++++++++++



Could one please double-check if in each case the unused parameters can
↪be safely removed from the function\ |md_0_8217|\ s signature? PS:
↪The first functions are also implemented within .h files and perhaps
↪could be moved to .c files.

**Additional Notes:**
This ticket was raised as an outcome of the Independent SW Verification
↪and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data
↪Packs (https://rtems-qual.io.esa.int). The original ISVV reference
↪for this issue is RTEMS-SMP-CODE-VER-028.
```

Author: Trac Migrate 2024-03-22T06:54:19.000Z

Original author: dppinto

In [changeset:"1eed6f8bfca86b77174412292ff7807708f4ab3a/rtems" 1eed6f8/rtems]:

```
bsps: Avoid unused argument in clock interrupt

Pass the parameter of the clock interrupt handler to
Clock_driver_support_at_tick() and Clock_driver_timecounter_tick(). This makes
it possible to use the interrupt handler argument in clock drivers.

Use the interrupt handler provided by Clock_driver_support_install_isr() to
avoid local delarations of Clock_isr().

Update #4862.
```

Author: Trac Migrate 2024-03-22T07:12:47.000Z

Original author: dppinto

In [changeset:"1df822a922dce3fd42399692a50c626609cbf2dd/rtems" 1df822a/rtems]:

```
Mark parameters as intentionally unused

The parameters are unused due to API constraints.  The functions are
used through function pointers.  Alternative implementations may use the
parameters.

Update #4862.
```

Author: Trac Migrate 2024-03-23T09:49:41.000Z

Original author: dppinto

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"7fafbede33ebea18c4e3fa9886905f436a5bc455/rtems-docs" 7fafbed/rtems-docs]:

```
bsp-howto: Document clock driver arg parameter

Close #4862.
```

Author: Amar Takhar 2024-04-25T20:50:37.906Z

changed the description

3.9.1.301 4860 - Waf Failure on CentOS 8 Stream

Id	4860
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2023-02-17T15:37:03.000Z
Updated	2024-04-25T20:50:37.292Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, tool::waf
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4860
Merges	0

Jeff Mayes reported (https://lists.rtems.org/pipermail/devel/2023-February/074424.html) that builds on the CentOS 8 Stream test host are failing with this:

```
Using rtems for RTEMS source
Testing: sparc erc32-sis
BSP to Build: erc32
Traceback (most recent call last):
File "./waf", line 167, in <module>
from waflib import Scripting
File "/home/tester/rtems-cron-6/rtems/.waf-2.0.20-
↪36f5354d605298f6a89c09e0c7ef6c1d/waflib/Scripting.py", line 7, in <module>
from waflib import Utils,Configure,Logs,Options,ConfigSet,Context,Errors,Build,
↪Node
File "/home/tester/rtems-cron-6/rtems/.waf-2.0.20-
↪36f5354d605298f6a89c09e0c7ef6c1d/waflib/Configure.py", line 6, in <module>
from waflib import ConfigSet,Utils,Options,Logs,Context,Build,Errors
File "/home/tester/rtems-cron-6/rtems/.waf-2.0.20-
↪36f5354d605298f6a89c09e0c7ef6c1d/waflib/Options.py", line 6, in <module>
from waflib import Logs,Utils,Context,Errors
File "/home/tester/rtems-cron-6/rtems/.waf-2.0.20-
↪36f5354d605298f6a89c09e0c7ef6c1d/waflib/Context.py", line 183
raise Errors.WafError('Execution failure: %s'%str(e),ex=e),None,sys.exc_info()[2],
↪None,sys.exc_info()[2]
^
SyntaxError: invalid syntax
FAILED:  Unable to waf distclean rtems
```

In follow up emails, Chris Johns suggested updating waf which Jeff reported fixed the issue.

The action for this ticket is to update waf in the following repositories:

- rtems
- rtems-examples
- rtems-docs
- rtems-libbsd
- rtems-lwip
- rtems-net-legacy (OK – already on latest waf)
- rtems-tools

Author: Joel Sherrill 2023-02-17T20:32:35.000Z

- **Description** changed

```
Jeff Mayes reported (https://lists.rtems.org/pipermail/devel/2023-
↪February/074424.html) that builds on the CentOS 8 Stream test host␣
↪are failing with this:

{{{
```

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```
Using rtems for RTEMS source
Testing: sparc erc32-sis
BSP to Build: erc32
Traceback (most recent call last):
File "./waf", line 167, in <module>
from waflib import Scripting
File "/home/tester/rtems-cron-6/rtems/.waf-2.0.20-
↪36f5354d605298f6a89c09e0c7ef6c1d/waflib/Scripting.py", line 7, in
↪<module>
from waflib import Utils,Configure,Logs,Options,ConfigSet,Context,
↪Errors,Build,Node
File "/home/tester/rtems-cron-6/rtems/.waf-2.0.20-
↪36f5354d605298f6a89c09e0c7ef6c1d/waflib/Configure.py", line 6, in
↪<module>
from waflib import ConfigSet,Utils,Options,Logs,Context,Build,Errors
File "/home/tester/rtems-cron-6/rtems/.waf-2.0.20-
↪36f5354d605298f6a89c09e0c7ef6c1d/waflib/Options.py", line 6, in
↪<module>
from waflib import Logs,Utils,Context,Errors
File "/home/tester/rtems-cron-6/rtems/.waf-2.0.20-
↪36f5354d605298f6a89c09e0c7ef6c1d/waflib/Context.py", line 183
raise Errors.WafError('Execution failure: %s'%str(e),ex=e),None,sys.exc_
↪info()[2],None,sys.exc_info()[2]
^
SyntaxError: invalid syntax
FAILED:  Unable to waf distclean rtems
}}}

In follow up emails, Chris Johns suggested updating waf which Jeff␣
↪reported fixed the issue.

The action for this ticket is to update waf in the following␣
↪repositories:

* rtems
* rtems-examples
* rtems-docs
* rtems-libbsd
* rtems-lwip
- * rtems-net-legacy
+ * rtems-net-legacy (OK -- already on latest waf)
* rtems-tools
```

Author: Trac Migrate 2023-02-20T15:45:34.000Z

In [changeset:"9b4aed1fd1ddc1235138ab9f06eb1daaa39bc3e4/rtems" 9b4aed1/rtems]:

```
waf: Update to waf 2.0.25

Updates #4860
```

Author: Trac Migrate 2023-02-20T15:47:20.000Z

In [changeset:"b0fc22cdf819218ce28d2d595795d99670691111/rtems-libbsd" b0fc22c/rtems-libbsd]:

```
waf: Update to waf 2.0.25

Updates #4860
```

Author: Trac Migrate 2023-02-20T15:47:50.000Z

In [changeset:"1aa4cb8568594aa54238c9fbf2cc0f3ea4edec7f/rtems-libbsd" 1aa4cb8/rtems-libbsd]:

```
waf: Update to waf 2.0.25

Updates #4860
```

Author: Trac Migrate 2023-02-20T15:49:11.000Z

In [changeset:"0b9bb40e766228cf957adea417be5870bfe18980/rtems-tools" 0b9bb40/rtems-tools]:

```
waf: Update to waf 2..0.25

Updates #4860
```

Author: Trac Migrate 2023-02-20T17:43:45.000Z

In [changeset:"2f7ebf719d1aa8e1c2f21a61cef7256cf3f9e044/rtems-docs" 2f7ebf7/rtems-docs]:

```
waf: Update to waf 2.0.25

Updates #4860
```

Author: Joel Sherrill 2023-02-20T22:50:33.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

All repos should be updated to the latest waf. Closing.

Author: Amar Takhar 2024-04-25T20:50:37.415Z

changed the description

3.9.1.302 4855 - Input validity unchecked

Id	4855
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-02-13T14:21:44.000Z
Updated	2024-04-25T20:50:36.737Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::wontfix, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4855
Merges	0

Original author: dppinto

In a generic way, function inputs shall be checked for validity before being used.

When successive calls are done to different functions, one might argue that inputs are to be checked only once and then considered valid in other calls. Yet this has some pitfalls like: * function inputs are not checked in a consistent way throughout all functions: * Each one has to constantly double-check in comments and/or callers if inputs are instead checked elsewhere in the call tree. * Even if for the moment no call tree leads to invalid input issues, future maintenance operations may add new calls without validity checks.

One can assume some exceptions can occur (e.g., when there is a considerable performance impact), but as long such cases are justified within the function's comments one can easily sort out those exceptions.

Bellow, there is a list of cases where input validity could be added:

- bspsincludebspirq-generic.h: bsp_interrupt_entry_load_first function is called by bsp_interrupt_handler_dispatch_unchecked where the argument was already checked.
- bspsincludebspirq-generic.h: bsp_interrupt_handler_index function is called by bsp_interrupt_entry_load_first, bsp_interrupt_entry_remove, bsp_interrupt_spurious, bsp_interrupt_entry_find, bsp_interrupt_entry_install, rtems_interrupt_handler_iterate functions. It was possible to trace in all of them a validation of the argument used in bsp_interrupt_handler_index before being called.
- bspssharedirqirq-default-handler.c: bsp_interrupt_handler_default is only called by bsp_interrupt_spurious and bsp_interrupt_handler_dispatch_unchecked functions and It was possible to trace in all ot them a validation of the argument used in bsp_interrupt_handler_index before being called.

- bspssharedirqirq-entry-remove.c: the *entry argument of bsp_interrupt_entry_do_remove is actually tested and validated inside of that function. That function is also the only place where bsp_interrupt_entry_remove is called. The arguments vector, *entry and **previous_next are all validated by a call to the bsp_interrupt_entry_find and subsequent code that is run prior to call bsp_interrupt_entry_remove function.
- bspssharedirqirq-generic.c: the bsp_interrupt_spurious function argument vector is tested before being called in bsp_interrupt_handler_dispatch_unchecked function.
- bspssharedirqirq-generic.c: bsp_interrupt_entry_install_first function is called once by bsp_interrupt_entry_install function. The validation of the argument vector can be traceback to rtems_interrupt_entry_install function. The argument *entry is also passed by bsp_interrupt_entry_install function and explained in the previous paragraph.
- bspssharedevclockclockimpl.h: in both functions (void Clock_isr and rtems_isr Clock_isr) declaration/definition (they are the same function, just declared differently depending of #if def's), both arguments are not used. Due to the evaluation of the internal #if, this functions are reduced to Clock_driver_ticks += 1; _Timecounter_Tick();
- bspssparcleon3startbspsmp.c: the bsp_start_on_secondary_processor function calls _SMP_Start_multitasking_on_secondary_processor with the same argument as it was called. This argument in that sub-function is used to get a value cpu_index_self, which itself is validated and checked if it is a proper value or not. Indirect validation.
- bspssparcleon3startbspsmp.c: the _CPU_SMP_Send_interrupt function is called in 3 different places: in one place (_SMP_Request_shutdown function in smp.c file) it is inside a for loop that is limited by _SMP_Processor_configured_maximum. This is OK. For the other 2 places (from _SMP_Send_message function in smp.c file and _Thread_Dispatch_request function in threaddispatch.h file it is not clear that the argument of _CPU_SMP_Send_interrupt cannot be limited (when it should be limited at least to _SMP_Processor_configured_maximum).
- bspssparcleon3starteirq.c: bsp_interrupt_get_attributes function actually tests vector argument. But also there is only one call to this function which is from rtems_interrupt_get_attributes function in irq-enable-disable.c file where both arguments are tested prior call to bsp_interrupt_get_attributes function.
- bspssparcsharedstartbspgetworkarea.c: _SPARC_Memory_initialize function receives its *end_of_usable_ram argument from the main function in start.S file. No validation is performed there. The argument is used to initialize a struct, which later on may be used for dynamically allocated memory. The referred pointer argument is never dereferenced, it is used as the end limit of the allocated memory position. It may make sense to test in this initialisation function if it is value is above &_Memory_Areas[0].
- cpukitlibcstringmemset.c: memset function is part of space qualification profile context, and the void *<[dst]> pointer is not tested against NULL.
- cpukitlibcstringmemcpy.c: memcpy function is part of space qualification profile context, and the void *dst and void *src pointers is not tested against NULL.
- cpukitposixsrcclocknanosleep.c: in function clock_nanosleep the *rmtp argument can be NULL if the user does not want to get the remain time, so there is no need to validated it. For the *rqtp (request) argument this should be validated if different than NULL and the tv_nsec field must be validated if between 0 and 999999999.
- cpukitrtemssrcclocktodtoseconds.c: the _TOD_To_seconds function is called by _Timer_Fire_when function from timercreate.c file, by rtems_task_wake_when function

from taskwakewhen.c file and by rtems_clock_set function from clockset.c file. In all three cases the argument with which the _TOD_To_seconds function is called is validated with a call to _TOD_Validate function prior to the call.

- cpukitrtemssrceventsend.c: the _Event_Seize function is called by two similar functions the rtems_event_receive from eventreceive.c file and rtems_event_system_receive from systemeventreceive.c file. The *event_out argument is validated prior the call; all other arguments are declared and defined in the caller functions prior to call the Event_Seize function.

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). The original ISVV reference for this issue is RTEMS-SMP-VAL-029.

Author: Trac Migrate 2023-02-13T14:25:16.000Z

Original author: dppinto

Correction: The original ISVV reference for this issue is **RTEMS-SMP-VER-029**.

Author: Trac Migrate 2023-03-23T16:21:24.000Z

Original author: dppinto

- **Milestone** set to %"6.1"
- **Resolution** set to ~"wontfix"
- **Status** changed from *new* to *closed*

For internal functions it is responsibility of the caller to ensure that arguments are valid.

The C library functions memset() and memcpy() are not required to check for NULL.

clocknanosleep() checks the mentioned error conditions. There are also test cases for them.

The end_of_usable_ram is provided by the boot loader. How can the BSP validate this?

Author: Amar Takhar 2024-04-25T20:50:36.881Z

changed the description

3.9.1.303 4850 - LEON3 - Variable not initialized in any file / missing #ifdefs

Id	4850
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-02-13T12:59:06.000Z
Updated	2024-04-25T20:50:34.989Z
Milestone	6.1
Labels	arch:sparc, priority::normal, qualification, resolution::fixed, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4850
Merges	0

Original author: dppinto

Within **bspssparcleon3includebspleon3.h (lines 207, 309)**

The *LEON3_IrqCtrl_Adev and *LEON3_Timer_Adev are declared but not initialized in any file of the QDP.:

Please consider having these declared within the |md_0_8220|else|md_0_8221| blocks of the |md_0_8220|#if defined(LEON3_IRQAMP_BASE)|md_0_8221| where *LEON3_IrqCtrl_Regs and *LEON3_Timer_Regs are declared.

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). Original ISVV reference for this issue is RTEMS-SMP-CODE-VER-041.

Author: Trac Migrate 2023-03-23T16:22:58.000Z

Original author: dppinto

- **Milestone** set to %"6.1"
- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*

Author: Joel Sherrill 2023-06-22T21:11:55.000Z

Original author: dppinto

- **Summary** changed from *Variable not initialized in any file / missing #ifdefs* to *LEON3 - Variable not initialized in any file / missing #ifdefs*

Author: Trac Migrate 2023-07-28T05:27:56.000Z

Original author: dppinto

- **Resolution** set to ~"fixed"

- **Status** changed from *assigned* to *closed*

In [changeset:"c173f0581a2a3672cb2f6024c7d9f35665849ec8/rtems" c173f05/rtems]:

```
bsp/leon3: Make declarations conditional

The LEON3_IrqCtrl_Adev object is only defined if LEON3_IRQAMP_BASE is
not defined.

The LEON3_Timer_Adev object is only defined if LEON3_GPTIMER_BASE is not
defined.

Close #4850.
```

Author: Amar Takhar 2024-04-25T20:50:35.033Z

changed the description

3.9.1.304 4847 - Goto statements

Id	4847
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-02-09T14:56:10.000Z
Updated	2024-04-25T20:50:34.109Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4847
Merges	0

Original author: dppinto

The use of “goto” statements is strongly discouraged as it results in convoluted program logic, making it challenging to analyse and verify program correctness, particularly in loops. Instead, the “break” and “continue” statements provide alternatives to “goto” and should be utilized to simplify the code.

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). Original ISVV reference for this issue is RTEMS-SMP-CODE-VER-074.

File list: cpukit/score/src/threaddispatch.c (line 290)

Author: Joel Sherrill 2023-02-09T15:05:11.000Z

Original author: dppinto

Although cpukit/score/src/threaddispatch.c (line 290) is not right per the current source, on first examination, I think this goto can be a break. Leaving the label post_switch is probably good for understanding purposes. And adding a comment at that point would probably be a good idea also.

FWIW this goto was not present in versions <= 4.10 but shows up in 4.11 and I think that it could have been a break back then also. The code looks similar.

Author: Trac Migrate 2023-02-09T18:44:59.000Z

Original author: dppinto

Yes, it can be a break. I am not sure if the break improves the code clarity.

Author: Joel Sherrill 2023-02-09T18:59:30.000Z

Original author: dppinto

Looking at the older versions, there was not a loop around the dispatching activities. This was added because with SMP, the other cores could request a dispatch on a core while one was in process.

I'm fine with changing it to a break. I just think anytime you look at code, you should consider if more comments are necessary. I think the post_switch label is acting as a minimal comment and the scenarios for looping more than once or exercising the break could be documented in the comments.

Author: Trac Migrate 2023-02-10T14:58:10.000Z

Original author: dppinto

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"22d845d5b752870282678b78845c8d6052019b36/rtems" 22d845d5/rtems]:

```
score: Replace goto with a break

The goto label was directly after the loop, so we can replace the goto
with a break.

Close #4847.
```

Author: Trac Migrate 2023-02-10T14:58:45.000Z

Original author: dppinto

- **Milestone** set to %"6.1"

Author: Chris Johns 2023-02-14T00:58:54.000Z

Original author: dppinto

Has this ticket and review taken into account the discussion here?

https://lists.rtems.org/pipermail/devel/2014-May/006723.html

I have not seen a similar discussion?

Author: Amar Takhar 2024-04-25T20:50:34.152Z

changed the description

3.9.1.305 4845 - Global variable declared/defined in the wrong file

Id	4845
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-02-09T14:53:20.000Z
Updated	2024-04-25T20:50:33.221Z
Milestone	6.1
Labels	arch:sparc, priority::normal, qualification, resolution::fixed, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4845
Merges	0

Original author: dppinto

This source file contains both declaration and definition of the variable. It is recommended to declare global variables in a header file and define them in separate source files. Please consider this best practice and move the declarations to a header file and corresponding definitions to respective source files.

Additional Notes: LEON3_Boot_Cpu is a global variable and only used by start.S file. And as such cannot be declared as static. Because is used in an assembly file there was no need to declare it as external. But the global variable is in fact declared and defined in same file.

This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). Original ISVV reference for this issue is RTEMS-SMP-CODE-VER-043.

File list: bspssparcleon3startbspstart.c (line 54)

Author: Trac Migrate 2023-02-10T15:01:13.000Z

Original author: dppinto

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"b993111594a2e49273a056bafd14a28dc04f5e19/rtems" b993111/rtems]:

```
bsp/leon3: Move SMP data to start.S

The LEON3_Boot_Cpu global object is only used by start.S.  Move the
↪definition
of this object to start.S and use a local symbol .Lbootcpuindex for it.

Use a compare-and-swap instruction to assign the boot CPU.  This allows
↪a
concurrent initialization.

Close #4845.
```

Author: Trac Migrate	2023-02-10T15:01:47.000Z

Original author: dppinto

- **Milestone** set to %"6.1"

Author: Amar Takhar	2024-04-25T20:50:33.263Z

changed the description

3.9.1.306 4843 - Output value not assigned

Id	4843
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-02-09T14:44:48.000Z
Updated	2024-04-25T20:50:32.251Z
Milestone	6.1
Labels	bsp, priority::normal, qualification, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4843
Merges	0

Original author: dppinto

The Software Document Design (starting on page 181) specifies that there should be two outputs, but the RTEMS_UNSATISFIED is not returned by the function. The only failure detected may be due to the assert function, but the rtems_status_code isn't the returned value. Ensure all output values specified in the SDD are returned.

Additional Notes: From code analysis and from objdumping the librtemsbsp.a library it can be observed that the asserts() currently do nothing: they are translated to #define _Assert(_e) ((void) 0) unless RTEMS_DEBUG or RTEMS_STATIC_ANALYSIS are defined, which in a release environment target are not defined. Since in the documentation it says that it can return RTEMS_UNSATISFIED or RTEMS_SUCCESSFUL either the documentation is wrong, or the code is not correctly implemented.

This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). The original ISVV reference for this issue is RTEMS-SMP-CODE-VER-032.

File list: bspssparcleon3starteirq.c bsp_interrupt_is_pending (line 106) bsp_interrupt_raise (line 127) bsp_interrupt_clear (line 185) bsp_interrupt_vector_enable (line 270) bsp_interrupt_vector_disable (line 299)

Author: Trac Migrate 2023-02-10T14:58:12.000Z

Original author: dppinto

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"519e288a9615ccea12f528c9b49e633baab24c1e/rtems" 519e288/rtems]:

```
bsps/irq: Clarify interrupt vector operations

Clarify that the presence of error conditions is
implementation-defined.

Close #4843.
```

Author: Trac Migrate 2023-02-10T14:59:09.000Z

Original author: dppinto

- **Milestone** set to %"6.1"

Author: Amar Takhar 2024-04-25T20:50:32.296Z

changed the description

3.9.1.307 4842 - SPARC/grlib - Registers definitions wrongly defined when there are reserved bits

Id	4842
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-02-09T14:43:19.000Z
Updated	2024-04-25T20:50:31.771Z
Milestone	6.1
Labels	arch:sparc, priority::normal, qualification, resolution::fixed, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4842
Merges	0

Original author: dppinto

With respect to RTEMS 6 (ESA-promoted RTEMS SMP Qualification Data Pack release 3), the following issues are observed:

File	Lines	Discrepancy
bsps\inclu regs.h	84; 86; 88; 91; 96;98; 101; 106; 109; 115; 120; 123	According to table 365 of page 294 of the GR740 User Manual (v.2.50), the register addresses are incorrectly defined.
bsps\inclu regs.h	225	According to table 406 of page 319 of the GR740 User Manual (v.2,50), the register address is incorrect;
bsps\inclu regs.h	435	According to table 538 of page 403 of the GR740 User Manual (v.2.5), the register address is incorrect according to the table but it is correct according to the table description.
bsps\inclu regs.h	609	According to table 327 of page 259 of the GR740 User Manual (v.2.50), the register address is incorrect according to the table but it is correct according to the table description.
bsps\inclu regs.h	151	According to table 213 of page 200 of the GR740 User Manual (v.2.5), the register address is incorrect according to the table but it is correct according to the table description.
bsps\inclu regs.h	575; 591; 715; 787; 809	According to tables 191, 192, 199, 201, 202, respectively (to each identified line) starting on page 192 of the GR740 User Manual (v.2.5), the register addresses are incorrect according to the table but are correct according to the table description.

It seems that the generation of these registers definitions leads to incorrect bit definitions whenever there are reserved bits specified in the Gaisler User Manual. Can you please double-check these cases?

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). The original ISVV reference for this issue is RTEMS-SMP-CODE-VER-014.

Author: Trac Migrate 2023-02-14T16:27:14.000Z

Original author: dppinto

The DSU4[ITCB0] ITPOINTER field seems to be correct in the description. See also the GRIP manual.

Author: Trac Migrate 2023-02-14T16:27:36.000Z

Original author: dppinto

- **Milestone** set to %"6.1"

Author: Trac Migrate 2023-02-14T17:50:59.000Z

Original author: dppinto

The RTELM - GR1553B RT Event Log mask register should be clarified by Gaisler.

Author: Trac Migrate 2023-02-14T19:16:08.000Z

Original author: dppinto

With respect to the

- Space Wire Plug-and-Play - Active Links
- Interrupt port mask (IPMASK)
- Port interrupt pending (PIP)
- Link running status (LRUNSTAT)

the register block definitions are actually from the GRIP manual. In the latest version, up to 31 links are supported.

Author: Trac Migrate 2023-02-14T19:28:41.000Z

Original author: dppinto

To be check by Gaisler:

- Space Wire Plug-and-Play - Device Vendor and Product ID
- Space Wire Plug-and-Play - Unit Vendor and Product ID

Author: Trac Migrate 2023-02-16T08:06:11.000Z

Original author: dppinto

In [changeset:"a7c2836a78cd97686e937d584df5210cdb07e90a/rtems-central" a7c2836/rtems-central]:

```
spec: Fix FTMCTRL - MCFG1 bit fields

There was an off by one error in all bit fields.  Add the R flag.

Update #4842.
```

Author: Trac Migrate 2023-02-16T08:06:12.000Z

Original author: dppinto

In [changeset:"239d25459fb9769f8345a0671206e3651d104a11/rtems-central" 239d254/rtems-central]:

```
spec: Fix GRGPIO - IRQMAP bit fields

Update #4842.
```

Author: Trac Migrate 2023-02-16T08:06:13.000Z

Original author: dppinto

In [changeset:"dd6f100cf3e650ac1fa020ed8441e31c1e96a45d/rtems-central" dd6f100/rtems-central]:

```
spec: Fix SpaceWire RMAP - Product ID

Update #4842.
```

Author: Trac Migrate 2023-02-16T08:06:14.000Z

Original author: dppinto

In [changeset:"4fdeb568448d83251d7cab1e542bca5172567856/rtems-central" 4fdeb56/rtems-central]:

```
spec: Expand SpaceWire port bit fields

Use the maximum width supported by the SpaceWire standard even if this
exceeds the configuration limits of a particular IP instance.

Update #4842.
```

Author: Joel Sherrill 2023-06-22T21:05:31.000Z

Original author: dppinto

- **Owner** set to sebastian.huber

- **Status** changed from *new* to *assigned*
- **Summary** changed from *Registers definitions wrongly defined when there are reserved bits* to *SPARC/grlib - Registers definitions wrongly defined when there are reserved bits*

Author: Joel Sherrill 2023-06-22T22:30:42.000Z

Original author: dppinto

This will be closed before 6. Please clone for 7 if continued.

Author: Trac Migrate 2023-07-14T09:58:53.000Z

Original author: dppinto

In [changeset:"d4c13016a96108e3d5b094f6ba42abce1247d018/rtems-central" d4c1301/rtems-central]:

```
spec: Add GRCAN - CanTxIRQ

Update #4842.
```

Author: Trac Migrate 2023-07-14T09:58:54.000Z

Original author: dppinto

In [changeset:"b46ff7e51ce611d87e0519128382612890689c39/rtems-central" b46ff7e/rtems-central]:

```
spec: Expand GRCLKGATE register bit fields

Use the maximum width supported by the GRLIB even if this exceeds the
configuration limits of a particular IP instance.

Update #4842.
```

Author: Trac Migrate 2023-07-14T09:58:55.000Z

Original author: dppinto

In [changeset:"89b89fe97d1cd2aa3a522964bae817c369c3d229/rtems-central" 89b89fe/rtems-central]:

```
spec: Move GR740-specific register blocks

Update #4842.
```

Author: Trac Migrate 2023-07-14T09:58:57.000Z

Original author: dppinto

In [changeset:"d6c4baf4fc352ae974b771f94a596de76ac6a2bc/rtems-central" d6c4baf/rtems-central]:

```
spec: Use GRLIB definition of GRSPW2

Update #4842.
```

Author: Trac Migrate 2023-07-14T09:58:58.000Z

Original author: dppinto

In [changeset:"d0771617464d6a9e5af6576a3933207b7ba50355/rtems-central" d077161/rtems-central]:

```
spec: Remove obsolete register block

This register block was an incomplete duplicate of
spec:/dev/grlib/if/grspw2.

Update #4842.
```

Author: Trac Migrate 2023-07-14T09:58:59.000Z

Original author: dppinto

In [changeset:"57715603d93b7fc61ca797b50730f087b6f06ebf/rtems-central" 5771560/rtems-central]:

```
spec: Use GRLIB definition of GRSPWROUTER

Rename item to match with GRLIB naming.

Update #4842.
```

Author: Trac Migrate 2023-07-14T10:01:08.000Z

Original author: dppinto

In [changeset:"e56cecf50181b4c8ca781448cba7f4f754cde8d3/rtems" e56cecf5/rtems]:

```
bsps/grlib: Fix FTMCTRL - MCFG1 bit fields

There was an off by one error in all bit fields.  Add the R flag.

Update #4842.
```

Author: Trac Migrate 2023-07-14T10:01:10.000Z

Original author: dppinto

In [changeset:"b7eb7d1f59ac6681a547c6ef60f58eed5adc60f3/rtems" b7eb7d1f/rtems]:

```
bsps/grlib: Fix GRGPIO - IRQMAP bit fields

Update #4842.
```

Author: Trac Migrate 2023-07-14T10:01:12.000Z

Original author: dppinto

In [changeset:"75758902009a5272aca8474aca75fa76608b18b1/rtems" 7575890/rtems]:

```
bsps/grlib: Fix SpaceWire RMAP - Product ID

Update #4842.
```

Author: Trac Migrate 2023-07-14T10:01:14.000Z

Original author: dppinto

In [changeset:"fe23259633518b8cfa9d4e7206b6e3bac7938e12/rtems" fe232596/rtems]:

```
bsps/grlib: Expand SpaceWire port bit fields

Use the maximum width supported by the SpaceWire standard even if this
exceeds the configuration limits of a particular IP instance.

Update #4842.
```

Author: Trac Migrate 2023-07-14T10:01:16.000Z

Original author: dppinto

In [changeset:"845422b859378a3e06f7a5f77873d622e871e88f/rtems" 845422b/rtems]:

```
bsps/grlib: Fix SPWTDP register name

Update #4842.
```

Author: Trac Migrate 2023-07-14T10:01:18.000Z

Original author: dppinto

In [changeset:"e6427f1ea9bce657de4ae02118bfb24ac1732fd6/rtems" e6427f1e/rtems]:

```
bsps/grlib: Add GRCAN - CanTxIRQ

Update #4842.
```

Author: Trac Migrate 2023-07-14T10:01:20.000Z

Original author: dppinto

In [changeset:"584be21c3d97e34c96d9e5ad407c776ed3d94472/rtems" 584be21/rtems]:

```
bsps/grlib: Expand GRCLKGATE register bit fields

Use the maximum width supported by the GRLIB even if this exceeds the
configuration limits of a particular IP instance.

Update #4842.
```

Author: Trac Migrate 2023-07-14T10:01:22.000Z

Original author: dppinto

In [changeset:"cba956b5d0700194161586d7bf21b95bd0fae541/rtems" cba956b/rtems]:

```
bsps/grlib: Move GR740-specific registers

Update #4842.
```

Author: Trac Migrate 2023-07-14T10:01:24.000Z

Original author: dppinto

In [changeset:"181d989530ae413216a8a0a64ecff98eea511124/rtems" 181d989/rtems]:

```
bsps/grlib: Use GRLIB definition of GRSPW2

Update #4842.
```

Author: Trac Migrate 2023-07-14T10:01:26.000Z

Original author: dppinto

In [changeset:"06f631546f878956625a8a95fa545589c668206d/rtems" 06f63154/rtems]:

```
bsps/grlib: Remove obsolete header file

This header file was an incomplete duplicate of <grlib/grspw2-regs.h>.

Update #4842.
```

Author: Trac Migrate 2023-07-14T10:01:28.000Z

Original author: dppinto

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"49ad450d707a5edc1dd28e8883cc2e518bf54201/rtems" 49ad450/rtems]:

```
bsps/grlib: Use GRLIB definition of GRSPWROUTER

Rename parts to match with GRLIB naming.

Close #4842.
```

Author: Amar Takhar 2024-04-25T20:50:31.833Z

changed the description

3.9.1.308 4832 - CLANG flagged error

Id	4832
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-01-27T16:13:18.000Z
Updated	2024-04-25T20:50:27.369Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::wontfix, rtems::score, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4832
Merges	0

Original author: dppinto

Description: SPAMR/CLANG point out to a possible deference to a null pointer. However, this issue has already been checked by the RTEMS team and flagged as false positive (see rtems-6-sparc-gr740-smp-3/doc/paf/spamr/spamr.pdf page 29).

Yet, the justification sentence ends with “Why CLANG complains about a possible null pointer at this place in code and not everywhere or nowhere remains a mystery” which sounds awkward and lead us to think that a complete analysis as not been done on the error.

Looking at it now, “_Chain_Initialize_one” is declared as static inline in a .h. That makes it public and so not all calls are controlled. Within the function, there is already an assert operation for one of the inputs. Now, one needs to add it also to the other one. Note that this assert is only active when compiler options RTEMS_DEBUG or RTEMS_STATIC_ANALYSIS are used which shall remove the CLANG error and not influence the flight executable.

(Missions might do an early compilation with RTEMS_DEGUG to spot any problem on this).

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). Original ISVV reference for this issue is RTEMS-SMP-CODE-VER-062.

File list: cpukitincludertemsscorechainimpl.h (line 525)

Author: Trac Migrate 2023-01-27T19:27:51.000Z

Original author: dppinto

- **Milestone** set to %”6.1”
- **Resolution** set to ~”wontfix”
- **Status** changed from *new* to *closed*
- **Version** set to ~”6”

Functions starting with an underscore are reserved for the RTEMS implementation and not a part of the API.

Adding an _Assert(x != NULL) to pointer parameters of internal functions in general makes no sense.

I reviewed the related clang analysis. The problem is that clang doesn’t know that _Scheduler_Count is greater than zero.

Author: Trac Migrate 2023-01-28T16:43:22.000Z

Original author: dppinto

In [changeset:”453939753b7fd758b49631c6a8cba10d8fdddaf7/rtems” 45393975/rtems]:

```
score: Help static analysis in thread init

Add an assert to _Thread_Initialize_scheduler_and_wait_nodes() which may
help a static analyzer.  Use a do/while loop since we have at least one
scheduler.

Update #4832.
```

Author: Amar Takhar 2024-04-25T20:50:27.417Z

changed the description

3.9.1.309 4828 - Macro defined but magic number used instead

Id	4828
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-01-27T16:09:22.000Z
Updated	2024-04-25T20:50:25.611Z
Milestone	6.1
Labels	bsp, priority::normal, qualification, resolution::fixed, tickettype::defect, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4828
Merges	0

Original author: dppinto

Description: Each register has a dedicated SHIFT macro, however, it is not utilized in subsequent macro definitions where the shift operation is performed. To improve consistency and maintainability, consider incorporating the defined shift macro in the subsequent macro definitions instead of using hardcoded shift values.

Additional Notes: These findings are related to the fact that a bunch of macros like AHBSTAT_AHBS_HMASTER_SHIFT are defined and then are not used right in the next few lines.

define AHBSTAT_AHBS_HMASTER_SHIFT 3

define AHBSTAT_AHBS_HMASTER_MASK 0x78U

define AHBSTAT_AHBS_HMASTER_GET(_reg) \

(((_reg) >> 3) & 0xfU)

define AHBSTAT_AHBS_HMASTER(_val) ((_val) << 3)

As stated, in every one of these files, “This file is part of the RTEMS quality process and was automatically generated”. There are YAML files where these registers are defined and the Waf build system generates the header files automatically with the current configuration.

This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). Original ISVV reference for this issue is RTEMS-SMP-CODE-VER-013.

File list: bspsincludegrlibahbstat-regs.h bspsincludegrlibahbtrace-regs.h bspsincludegrlibapbuart-regs.h bspsincludegrlibdsu4-regs.h bspsincludegrlibftmctrl-regs.h bspsincludegrlibgptimer-regs.h bspsincludegrlibgr1553b-regs.h bspsincludegrlibgr740thsens-regs.h bspsincludegrlibgrcan-regs.h bspsincludegrlibgrclkgate-regs.h bspsincludegrlibgrethgbit-regs.h bspsincludegrlibgrgpio-regs.h bspsincludegrlibgrgprbank-regs.h bspsincludegrlibgrgpreg-regs.h bspsincludegrlibgriommu-regs.h bspsincludegrlibgrpci2-regs.h bspsincludegrlibgrspw2-regs.h bspsincludegrlibgrspwrouter-regs.h bspsincludegrlibirqamp-regs.h bspsincludegrlibl4stat-regs.h bspsincludegrlibmemscrub-regs.h bspsincludegrlibl2cache-

regs.h bspsincludegrlibmmctrl-regs.h bspsincludegrlibspictrl-regs.h bspsincludegrlibspwpnp-regs.h bspsincludegrlibspwrmap-regs.h

Author: Trac Migrate 2023-01-28T17:24:25.000Z

Original author: dppinto

- **Milestone** set to %”7.1”
- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*
- **Version** set to ~”6”

Author: Trac Migrate 2023-01-31T17:50:55.000Z

Original author: dppinto

The files are generated, so changing the format would be easy. Is this the desired format?

```
#define AHBSTAT_AHBS_HMASTER_SHIFT 3
#define AHBSTAT_AHBS_HMASTER_MASK 0x78U
#define AHBSTAT_AHBS_HMASTER_GET( _reg ) \\
( ( ( _reg ) & AHBSTAT_AHBS_HMASTER_MASK ) >> AHBSTAT_AHBS_HMASTER_
↪SHIFT )
#define AHBSTAT_AHBS_HMASTER( _val ) ( ( _val ) << AHBSTAT_AHBS_HMASTER_
↪SHIFT )
```

It makes the lines longer and the files larger.

Author: Trac Migrate 2023-02-08T10:33:48.000Z

Original author: dppinto

Hello! Yes, we think this format is better, despite being longer and more extensive; this way, the logic is clearer and unambiguous.

Author: Trac Migrate 2023-03-15T07:30:30.000Z

Original author: dppinto

In [changeset:”ea3eadfc56e29cba361615ca61c15e0796c6a846/rtems-central” ea3eadf/rtems-central]:

```
interface: Improve register bit field macros

Update #4828.
```

Author: Trac Migrate 2023-07-14T09:52:16.000Z

Original author: dppinto

- **Milestone** changed from %”7.1” to %”6.1”
- **Owner** set to sebastian.huber
- **Status** changed from *assigned* to *accepted*

Author: Trac Migrate 2023-07-14T10:01:06.000Z

Original author: dppinto

- **Resolution** set to ~”fixed”
- **Status** changed from *accepted* to *closed*

In [changeset:”2d71cba033bcd11d9bf469a5c51b6fb79b26ade8/rtems” 2d71cba0/rtems]:

```
bsps/grlib: Add generated headers

Close #4828.
```

Author: Amar Takhar 2024-04-25T20:50:25.661Z

changed the description

3.9.1.310 4822 - Function returning unchanged function input

Id	4822
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-01-24T11:35:33.000Z
Updated	2024-04-25T20:50:24.332Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4822
Merges	0

Original author: dppinto

Description: These functions appear to be returning their input without making any changes. To improve their functionality, it is recommended to re-write them to return void.

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). Original ISVV reference for this issue is RTEMS-SMP-CODE-VER-057.

File: cpukitscoresrcsmp.c **Function:** _SMP_Process_message **Line:** 284

Author: Trac Migrate 2023-01-24T15:41:24.000Z

Original author: dppinto

- **Milestone** set to %"6.1"
- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*
- **Version** set to ~"6"

Author: Trac Migrate 2023-01-24T18:24:52.000Z

Original author: dppinto

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"48f693a97e3ab7698d3ce3a9eb8b22cb37b5104a/rtems" 48f693a9/rtems]:

```
score: Remove unused return value

Several SMP message processing functions returned a value.  This value
was always unused.

Close #4822.
```

Author: Amar Takhar 2024-04-25T20:50:24.377Z

changed the description

3.9.1.311 4820 - Hazardous cast

Id	4820
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-01-23T11:45:27.000Z
Updated	2024-04-25T20:50:23.888Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::defect, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4820
Merges	0

Original author: dppinto

Description: Converting a function pointer to a different type of pointer can lead to unpredictable and undefined behavior. It is important to note that attempting to convert a pointer to a function to a pointer of a different type of function is particularly dangerous and should be avoided.

The attached excel lists in a systematic way the sources where this issue applies.

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). Original ISVV reference for this issue is RTEMS-SMP-CODE-VER-079.

File list (please check the attached excel for more information): bspssharedirqirq-handler-iterate.c bspssparcleon3includetm27.h

- RTEMS-SMP-CODE-VER-079.xlsx

Author: Trac Migrate	2023-01-23T11:45:39.000Z

Original author: dppinto

- **Attachment** RTEMS-SMP-CODE-VER-079.xlsx added

Author: Trac Migrate	2023-01-24T10:26:27.000Z

Original author: dppinto

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"10ee41a8a37ac5e8d3537cb1c7d98b647903b97c/rtems" 10ee41a8/rtems]:

```
tm27: Avoid function pointer casts

Add TM27_USE_VECTOR_HANDLER to select the interrupt handler type used by
the <tm27.h> implementation.

Close #4820.
```

Author: Trac Migrate 2023-01-24T10:27:54.000Z

Original author: dppinto

- **Milestone** set to %"6.1"
- **Version** set to ~"6"

Author: Amar Takhar 2024-04-25T20:50:23.931Z

changed the description

3.9.1.312 4818 - Incomplete Statement in "cpu->heir"

Id	4818
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-01-23T11:42:22.000Z
Updated	2024-04-25T20:50:22.996Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4818
Merges	0

Original author: dppinto

Description: The assignment statement "cpu->heir = " is incomplete and missing a value and semicolon at the end. It is recommended to revise this statement to ensure the code is not broken by the missing semicolon.

The attached excel lists in a systematic way the sources where this issue applies.

Additional Notes: This ticket was raised as an outcome of the Independent SW Verification and Validation (ISVV) for ESA-promoted RTEMS SMP Qualification Data Packs (https://rtems-qual.io.esa.int). Original ISVV reference for this issue is RTEMS-SMP-CODE-VER-058.

File list (please check the attached excel for more information): cpukitscoresrcthreadcreateidle.c

- RTEMS-SMP-CODE-VER-058.xlsx

Author: Trac Migrate 2023-01-23T11:42:43.000Z

Original author: dppinto

- **Attachment** RTEMS-SMP-CODE-VER-058.xlsx added

Author: Trac Migrate 2023-01-24T10:26:25.000Z

Original author: dppinto

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"9ecb73f368fa21bd943afb30809e8fe2b5dca2b3/rtems" 9ecb73f/rtems]:

```
score: Clarify code block

Do not use a chained assignment for code clarity.

Close #4818.
```

Author: Trac Migrate 2023-01-24T10:28:10.000Z

Original author: dppinto

- **Milestone** set to %"6.1"
- **Version** set to ~"6"

Author: Amar Takhar 2024-04-25T20:50:23.042Z

changed the description

3.9.1.313 4741 - Fix GCC PR 107248

Id	4741
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-10-14T13:04:19.000Z
Updated	2024-04-25T20:50:01.964Z
Milestone	6.1
Labels	arch:sparc, priority::normal, qualification, resolution::fixed, ticket-type::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4741
Merges	0

Original author: sebastian.huber

https://gcc.gnu.org/bugzilla/show_bug.cgi?id=107248

Author: Trac Migrate 2022-10-15T08:19:57.000Z

Original author: sebastian.huber

In [changeset:"36a3d88044ad7df506536223d2beaa69757f9e64/rtems-source-builder" 36a3d88/rtems-source-builder]:

```
6: Update GCC 10 and 12

Update #4741.
```

Author: Trac Migrate 2022-10-15T08:19:58.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"e24641bda7412277c3e6490b663a12aceb093dec/rtems-source-builder" e24641b/rtems-source-builder]:

```
7: Update Binutils, GDB, and GCC

Close #4741.
```

Author: Amar Takhar 2024-04-25T20:50:02.005Z

changed the description

3.9.1.314 4706 - Installed header break C++

Id	4706
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2022-08-19T04:49:52.000Z
Updated	2024-04-25T20:50:00.878Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4706
Merges	0

Some headers generate C++ errors and so cannot be included.

Author: Chris Johns 2022-08-19T04:54:06.000Z

To test create a C++ source file with all the installed headers and compile. The exact source to build needs some defines and some include ti show the real issues:

```
#define _DEFAULT_SOURCE 1
#define CONFIGURE_SCHEDULER_CBS 1
#define BSP_GPIO_PIN_COUNT 128
#define BSP_GPIO_PINS_PER_BANK 8
#include <sys/time.h>
#include <bsp.h>
#include <libfdt_env.h>
```

Only the beagle defines the GPIO pins.

Author: Chris Johns 2022-08-19T06:31:52.000Z

Adding `RTEMS_SMP` generates the following:

```
In file included from ../cxx-headers.cc:28:
/opt/work/rtems/6-bsps/aarch64-rtems6/xilinx_versal_lp64_vck190/lib/
↪include/bsp/irq-generic.h: In function 'void bsp_interrupt_entry_
↪store_release(rtems_interrupt_entry**, rtems_interrupt_entry*)':
/opt/work/rtems/6-bsps/aarch64-rtems6/xilinx_versal_lp64_vck190/lib/
↪include/bsp/irq-generic.h:405:71: error: invalid conversion from
↪'rtems_interrupt_entry*' to 'std::atomic<long unsigned int>::__
↪integral_type' {aka 'long unsigned int'} [-fpermissive]
405 |   _Atomic_Store_uintptr(
|
↪^
|
```

(continues on next page)

(continued from previous page)

```
↪|
7 |                                                                    ␣
↪rtems_interrupt_entry*
8 In file included from /opt/work/rtems/6-bsps/aarch64-rtems6/xilinx_
↪versal_lp64_vck190/lib/include/rtems/score/cpustdatomic.h:63,
9 from /opt/work/rtems/6-bsps/aarch64-rtems6/xilinx_versal_lp64_vck190/
↪lib/include/rtems/score/cpuatomic.h:40,
10 from /opt/work/rtems/6-bsps/aarch64-rtems6/xilinx_versal_lp64_vck190/
↪lib/include/rtems/score/atomic.h:40,
11 from /opt/work/rtems/6-bsps/aarch64-rtems6/xilinx_versal_lp64_vck190/
↪lib/include/rtems/score/smplockticket.h:44,
12 from /opt/work/rtems/6-bsps/aarch64-rtems6/xilinx_versal_lp64_vck190/
↪lib/include/rtems/score/smplock.h:67,
13 from /opt/work/rtems/6-bsps/aarch64-rtems6/xilinx_versal_lp64_vck190/
↪lib/include/rtems/score/isrlock.h:41,
14 from /opt/work/rtems/6-bsps/aarch64-rtems6/xilinx_versal_lp64_vck190/
↪lib/include/rtems/rtems/intr.h:70,
15 from /opt/work/rtems/6-bsps/aarch64-rtems6/xilinx_versal_lp64_vck190/
↪lib/include/rtems.h:69,
16 from /opt/work/rtems/6-bsps/aarch64-rtems6/xilinx_versal_lp64_vck190/
↪lib/include/bsp/default-initial-extension.h:40,
17 from /opt/work/rtems/6-bsps/aarch64-rtems6/xilinx_versal_lp64_vck190/
↪lib/include/bsp.h:49,
18 from ../cxx-headers.cc:12:
19 /opt/work/rtems/6/lib/gcc/aarch64-rtems6/12.1.1/include/c++/
↪atomic:904:40: note:   initializing argument 1 of 'constexpr␣
↪std::atomic<long unsigned int>::atomic(__integral_type)'
20 904 |       constexpr atomic(__integral_type __i) noexcept : __base_
↪type(__i) { }
21 |                        ~~~~~~~~~~~~~~~~^~~
```

It looks like the `<Atomic_Uintptr*>` cast is not working.

I will ignore SMP builds but I think this should be **fixed** for RTEMS 6.

Author: Trac Migrate 2022-08-21T23:30:18.000Z

In [changeset:"f5233fe51c24d7806badd8fc72aa86899e0afafa/rtems" f5233fe/rtems]:

```
1 cpukit/include: Fixes for C++
2
3 Updates #4706
```

Author: Trac Migrate 2022-08-21T23:30:20.000Z

In [changeset:"a329579ed5ef8e7d75e41b43e62b040007835b75/rtems" a329579/rtems]:

```
cpukit/include: Fix including in C++

UPdates #4706
```

Author: Trac Migrate 2022-08-29T07:05:55.000Z

In [changeset:"23b42f79f9197f66e90aa09016420fe17303bd4a/rtems" 23b42f7/rtems]:

```
score: Fix format

Update #4706.
```

Author: Trac Migrate 2022-08-29T07:10:17.000Z

In [changeset:"9b16f24d9c6a2591be4ce2e4e9e629bd81a2806b/rtems" 9b16f24/rtems]:

```
score: Fix format

Update #4706.
```

Author: Chris Johns 2022-11-29T22:53:46.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Author: Amar Takhar 2024-04-25T20:50:00.912Z

changed the description

3.9.1.315 4697 - Documentation for libbsd Configure options

Id	4697
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2022-08-04T20:43:26.000Z
Updated	2024-04-25T20:50:00.044Z
Milestone	6.1
Labels	doc, libbsd, library::libbsd, priority::normal, resolution::invalid, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4697
Merges	0

libbsd appears to have some options to configure it similar to confdefs.h. We need user facing documentation on those options.

Author: Chris Johns 2022-11-29T23:59:46.000Z

- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*

There are options in the README in LibBSD.

Author: Amar Takhar 2024-04-25T20:50:00.078Z

changed the description

3.9.1.316 4691 - Add support for FACE Technical Standard Restriction on POSIX Absolute Timers

Id	4691
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Created	2022-08-01T15:13:58.000Z
Updated	2024-04-25T20:49:59.493Z
Milestone	6.1
Labels	api::posix, priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4691
Merges	0

Overview

Most of the time, the FACE Technical Standard (https://opengroup.org/face) defines a subset (e.g. profile) of a standard. It currently includes four profiles of the POSIX 1003.1-2008 standard with a few optional features like multiple processes and IPV6. However, in one case, it defines an error case for something POSIX defines as required behavior. This ticket is intended to track adding support for an application being able to configure whether it wants the POSIX behavior or that defined by the FACE Technical Standard.

3.9.1.316.1.1 FACE Technical Standard Requirements

POSIX allows for setting a timer on CLOCK_REALTIME[1] while the FACE Technical Standard defines this as an error. This behavior and deviation from POSIX has been in the FACE Technical Standard since the beginning and was present in Edition 1.0[2]. This is the language from Edition 1.0 of the FACE Technical Standard which was written in the tone of a white paper rather than as a set of requirements:

3.9.4 Time Management

Partial support for the POSIX CLOCK_REALTIME, which permits a calendar-based clock time to be set that becomes available to all partitions. Due to safety and security-related considerations in the POSIX definitions of this clock's behavior, the configuration data will specify which partitions (preferably one partition) have permissions to set (using the clock_settime API) this clock. All partitions may have access to read this clock, but an error will be returned for any partition that attempts to set an alarm based on this clock that is based on absolute time (setting of an alarm based on a relative time is supported). Partitions authorized to set the calendar time will also be authorized to set the time zone value that is visible to all other partitions.

Subsequent editions of the FACE Technical Standard have fine-tuned the language and made requirements clearer with simpler direct "shall" statements.

Also, although the term OSS UoC was defined in Edition 1.0, the requirements now use this acronym for Operating System Segment Unit of Conformance to refer to the operating system and foundational services. Other types of segments are defined for applications, communications, and device management. In Edition 3.1[3], the language has the same intent as Edition 1.0 but the requirements are stated in a more direct and clearer manner.

> 4.1.1.3 OSS POSIX Clock Requirements An OSS UoC provides support for POSIX clocks. 1. An OSS UoC shall support the POSIX Monotonic Clock option (CLOCK_MONOTONIC), including setting absolute and relative timers on this clock. 2. An OSS UoC shall support clock read-access based POSIX CLOCK_REALTIME clock (calendar-based clock time). 3. An OSS UoC shall support setting a relative timer-based POSIX CLOCK_REALTIME clock (calendar-based clock time). 4. An OSS UoC shall support clock time write access for POSIX CLOCK_REALTIME clock value under the constraint that configuration data specifies the partition is authorized to set the clock time (using the clock_settime() API). Note: The time value set by one partition becomes visible to all other partitions. The timezone value set by one POSIX process using the tzset() or setenv() APIs is local to that POSIX process. 5. An OSS UoC shall return an error when a software component attempts to set an absolute timer on the POSIX CLOCK_REALTIME clock. Note: The behavior is necessary (e.g., to prevent backwards and forwards shifts in sequential timers) due to the setting of POSIX_CLOCK_REALTIME clock impacting all partitions.
>
> The use of the word "partition" is intentional because the FACE Technical Standard includes ARINC 653 and POSIX standards. ARINC 653 defines a time and space partitioned real-time environment. POSIX or ARINC 653 applications can be hosted in a partition. In three of the four profiles, ARINC 653 is required while in the fourth it is optional. RTEMS can be hosted in an ARINC 653 partition using a paravirtualized configuration with a BSP that adapts it to the environment.
>
> The requirement being addressed by this ticket is (5) since RTEMS currently meets the other requirements. (5) contradicts the POSIX standard and modifying RTEMS to not support absolute POSIX timers is not an acceptable option.
>
> The proposed solution is to add a confdefs.h configure option that en-

ables this behavior when the OSS UoC (e.g. operating system) must provide FACE conformant behavior. When not defined, the POSIX behavior will be in effect.

This will require additions to the confdefs.h family of headers, adding a test, and updating documentation.

[1] POSIX timer_create - https://pubs.opengroup.org/onlinepubs/9699919799/functions/timer_create.html

[2] FACE Technical Standard, Edition 1.0. January 2012. https://publications.opengroup.org/c122.

[3] FACE Technical Standard, Edition 3.1. July 2020. https://publications.opengroup.org/c207.

Author: Chris Johns 2022-08-02T01:24:38.000Z

What structure and naming convention do you propose for `confdefs.h`?

Could I configure the following to get all FACE related configures enabled:

```
#define CONFIGURE_FACE
```

?

Author: Trac Migrate 2022-08-10T19:07:27.000Z

In [changeset:"4b04589b097896795648de38b1e9bbc7570d9696/rtems" 4b04589b/rtems]:

```
Add support for CONFIGURE_POSIX_TIMERS_FACE_BEHAVIOR

This adds the configure option CONFIGURE_POSIX_TIMERS_FACE_BEHAVIOR
which allows the application to choose whether to have the POSIX
timer_create() function follow the behavior defined by POSIX or
the FACE Technical Standard.

Updates #4691.
```

Author: Trac Migrate 2022-08-11T05:46:29.000Z

In [changeset:"c655c72d052cfc76aa1c62e3c25d0a05a7b55461/rtems" c655c72d/rtems]:

```
build/cpukit: Add confdefs/face.h to install rule

Updates #4691
```

Author: Trac Migrate 2022-08-11T18:01:47.000Z

In [changeset:"996d18c2125aa5fd8ad05db44fdbe7e867841731/rtems" 996d18c/rtems]:

```
psxtimer_face01: Improve coverage and documentation

Updates #4691.
```

Author: Trac Migrate 2022-08-31T11:09:53.000Z

In [changeset:"b3d2e3fefe382ac2b26512f16d414cbfb93fc8f2/rtems" b3d2e3fe/rtems]:

```
config: Include <rtems/posix/timer.h> on demand

Updates #4691.
```

Author: Trac Migrate 2022-09-05T06:47:03.000Z

In [changeset:"b1fd62357742decea316972fd15d475606ee6009/rtems-central" b1fd623/rtems-central]:

```
Add POSIX Timer FACE Behavior Configuration

Updates #4691.
```

Author: Trac Migrate 2022-09-05T06:47:04.000Z

In [changeset:"1a5be0d04da65e20d4af60f1557afe1dfc549471/rtems-central" 1a5be0d/rtems-central]:

```
spec: Add glossary link

Updates #4691.
```

Author: Trac Migrate 2022-09-05T06:48:21.000Z

In [changeset:"b06ec5b6d7e21a81b7d6de24ac817dfbf3051702/rtems" b06ec5b6/rtems]:

```
config: Document CONFIGURE_POSIX_TIMERS_FACE_BEHAVIOR

Update #4691.
```

Author: Trac Migrate 2022-09-05T06:53:06.000Z

- **Resolution** set to ~"fixed"

- **Status** changed from *assigned* to *closed*

In [changeset:"4f9e9e522f2eee484edffe9d220ae6717367b95b/rtems-docs" 4f9e9e5/rtems-docs]:

```
c-user/config/face.rst: New file -- add CONFIGURE_POSIX_TIMERS_FACE_
↪BEHAVIOR

Closes #4691.
```

Author: Amar Takhar 2024-04-25T20:49:59.630Z

changed the description

3.9.1.317 4690 - CLOCK_REALTIME thread queue not updated as part of clock_settime call

Id	4690
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2022-08-01T04:22:51.000Z
Updated	2024-04-25T20:49:58.975Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4690
Merges	0

Setting the `CLOCK_REALTIME` clock using `clock_settime(CLOCK_REALTIME, , )` clock does not update thread relative period entries on the watchdog timer queue.

A system's stability is effected if a user calls `clock_settime` on the `CLOCK_REALTIME` clock. The watchdog's REALTIME clock queue is references against the realtime clock and movement of the time means

The effected parts are:

1. User C code that calls `nanosleep`, `usleep`, `sleep` or `clock_nanosleep(CLOCK_REALTIME, , )`.
2. User C++ code that uses `std::this_thread::sleep_for()` as GCC uses the `nanosleep()` call.
3. LibBSD uses `CLOCK_REALTIME`.

The nanosleep call is explained in more detail in the [clock_nanosleep](https://pubs.opengroup.org/onlinepubs/9699919799/functions/clock_nanosleep.html) rational. The `nanosleep` clock must be `CLOCK_REALTIME`. The clock_settime standard says:

Setting the value of the CLOCK_REALTIME clock via clock_settime() shall have no effect on threads that are blocked waiting for a relative time service based upon this clock, including the

nanosleep() function; nor on the expiration of relative timers based upon this clock. Consequently, these time services shall expire when the requested relative interval elapses, independently of the new or old value of the clock.

- init-4.c

Author: Chris Johns 2022-08-01T04:23:04.000Z

- **Summary** changed from *CLOCK_REALTIME thread queue no updated as part of clock_settime call* to *CLOCK_REALTIME thread queue not updated as part of clock_settime call*

Author: Chris Johns 2022-08-01T06:56:47.000Z

The attached test checks the times. It will show the failure however it does not pass the initial check because the expected ticks is not the actual ticks. The failure is:

```
Clock settime while sleeping: step=0
clock: nanosleep: sec=0 nsec=500000000 ticks=51 expected-ticks=50
../../../testsuites/psxtests/psxclock/init.c: 120 ctx->ticks == ticks
```

Should the ticks the sleeper sees be `51` or `50`?

Author: Chris Johns 2022-08-01T08:07:48.000Z

- **Attachment** init-4.c added

testsuites/psxtests/psxclock/init.c

Author: Chris Johns 2022-08-02T00:53:45.000Z

Replying to Chris Johns:

> The attached test checks the times. It will show the failure however it does not pass the initial check because the expected ticks is not the actual ticks. The failure is: {{{ Clock settime while sleeping: step=0 clock: nanosleep: sec=0 nsec=500000000 ticks=51 expected-ticks=50 ../../../testsuites/psxtests/psxclock/init.c: 120 ctx->ticks == ticks }}} Should the ticks the sleeper sees be `51` or `50`?
>
> https://lists.rtems.org/pipermail/devel/2022-August/072735.html
>
> The extra 1 is needed.

Author: Trac Migrate 2022-08-04T05:47:27.000Z

In [changeset:"c64c638f6dee6c0e92804bbe378ff91cc75f620e/rtems" c64c638/rtems]:

```
posix: Fix relative CLOCK_REALTIME sleep

A relative CLOCK_REALTIME time out shall not be affected by CLOCK_
↪REALTIME
changes through clock_settime().  Since our CLOCK_REALTIME is basically␣
↪just
CLOCK_MONOTONIC plus an offset, we can simply use the CLOCK_MONOTONIC␣
↪watchdog
for relative CLOCK_REALTIME time outs.

Update #4690.
```

Author: Trac Migrate 2022-08-04T05:53:26.000Z

In [changeset:"11121d0280b9f8ebb45d3793f14e10cd4062c4bf/rtems-central" 11121d0/rtems-central]:

```
spec: Fix relative CLOCK_REALTIME sleep

A relative CLOCK_REALTIME time out shall not be affected by CLOCK_
↪REALTIME
changes through clock_settime().  Since our CLOCK_REALTIME is basically␣
↪just
CLOCK_MONOTONIC plus an offset, we can simply use the CLOCK_MONOTONIC␣
↪watchdog
for relative CLOCK_REALTIME time outs.

Update #4690.
```

Author: Trac Migrate 2022-08-04T21:48:28.000Z

- **Owner** set to Chris Johns <chrisj@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"1a883b9b55ab720fc90d2d62c92419601cb57fd2/rtems" 1a883b9/rtems]:

```
testsuite/psxclock: Check setting realtime clock does not effect␣
↪sleeping tasks

Closes #4690
```

Author: Trac Migrate 2022-08-05T06:12:49.000Z

In [changeset:"c3c4525a322a29d596861b5fe5aceb0adbfa49c0/rtems" c3c4525/rtems]:

```
posix: Avoid dead code in clock_nanosleep()

This issue was reported by Coverity Scan for RTEMS:

CID 1507760: Control flow issues (DEADCODE)

Closes #4690.
```

Author: Amar Takhar 2024-04-25T20:49:59.090Z

changed the description

3.9.1.318 4680 - POSIX tasks cancelled through rtems_task_delete() should have an exit value of PTHREAD_CANCELED

Id	4680
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-07-19T08:23:19.000Z
Updated	2024-04-25T20:49:58.536Z
Milestone	6.1
Labels	api::posix, priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4680
Merges	0

Original author: sebastian.huber

The `rtems_task_delete()` directive is basically just a combined `pthread_cancel()` and `pthread_join()`. In addition, it removes the `PTHREAD_DETACHED` state. The exit value returned by `pthread_join()` of threads cancelled by `rtems_task_delete()` should reflect this by getting a PTHREAD_CANCELED value and not NULL.

Author: Trac Migrate 2022-07-28T05:45:21.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"8a864bc62cd57fbd6dd35141e5beb582de9b7bff/rtems" 8a864bc6/rtems]:

```
score: Use PTHREAD_CANCELED for _Thread_Cancel()

The rtems_task_delete() directive is basically just a combined pthread_
```

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```
↪cancel()
and pthread_join().  In addition, it removes the PTHREAD_DETACHED state.
↪  The
exit value returned by pthread_join() of threads cancelled by
rtems_task_delete() should reflect this by getting a PTHREAD_CANCELED␣
↪value
instead of NULL which could be a normal exit value.

Close #4680.
```

Author: Amar Takhar 2024-04-25T20:49:58.575Z

changed the description

3.9.1.319 4679 - Use priority inheritance for thread join

Id	4679
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-07-19T06:40:24.000Z
Updated	2024-04-25T20:49:58.081Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4679
Merges	0

Original author: sebastian.huber

Threads may join the thread termination of another thread using the `pthread_join()` or `rtems_task_delete()` directives. Currently, the thread cancel operation uses a special case priority boosting mechanism:

```
static void _Thread_Raise_real_priority(
Thread_Control   *the_thread,
Priority_Control  priority
)
{
Thread_queue_Context queue_context;

_Thread_queue_Context_initialize( &queue_context );
_Thread_queue_Context_clear_priority_updates( &queue_context );
_Thread_Wait_acquire( the_thread, &queue_context );

if ( priority < the_thread->Real_priority.priority ) {
_Thread_Priority_change(
```

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```
the_thread,
&the_thread->Real_priority,
priority,
PRIORITY_GROUP_LAST,
&queue_context
);
}

_Thread_Wait_release( the_thread, &queue_context );
_Thread_Priority_update( &queue_context );
}
```

The problem is that this approach is not transitive, it does not account for priority adjustments of the calling task while waiting for the join, clustered scheduling is not supported, and deadlocks are not detected. All these problems are fixed by using a priority inheritance thread queue for the join operation.

Author: Trac Migrate 2022-07-19T06:44:07.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
- Threads may join the thread termination of another thread using the␣
↪`pthread_join()` or `rtems_task_delete()` directives. Currently, the␣
↪thread join operation uses a special case priority boosting mechanism:
?                                                                      ␣
↪                                                                      ␣
↪    ^^^^^^^^^^^^^^

+ Threads may join the thread termination of another thread using the␣
↪`pthread_join()` or `rtems_task_delete()` directives. Currently, the␣
↪thread cancel operation uses a special case priority boosting␣
↪mechanism:
?                                                                      ␣
↪                                                                      ␣
↪    ^^^^^^^^^^^^^^^^

{{{#!c
static void _Thread_Raise_real_priority(
Thread_Control   *the_thread,
Priority_Control  priority
)
{
Thread_queue_Context queue_context;

_Thread_queue_Context_initialize( &queue_context );
_Thread_queue_Context_clear_priority_updates( &queue_context );
```

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```
_Thread_Wait_acquire( the_thread, &queue_context );

if ( priority < the_thread->Real_priority.priority ) {
_Thread_Priority_change(
the_thread,
&the_thread->Real_priority,
priority,
PRIORITY_GROUP_LAST,
&queue_context
);
}

_Thread_Wait_release( the_thread, &queue_context );
_Thread_Priority_update( &queue_context );
}
}}}
The problem is that this approach is not transitive, it does not␣
↪account for priority adjustments of the calling task while waiting␣
↪for the join, clustered scheduling is not supported, and deadlocks␣
↪are not detected. All these problems are fixed by using a priority␣
↪inheritance thread queue for the join operation.
```

Author: Trac Migrate 2022-07-28T05:36:09.000Z

Original author: sebastian.huber

In [changeset:"81fd510a5cd92998f0a3ec65ce88d057e33da91d/rtems-docs" 81fd510/rtems-docs]:

```
c-user: Document task life states

Update #4679.
```

Author: Trac Migrate 2022-07-28T05:36:11.000Z

Original author: sebastian.huber

In [changeset:"f4377b4479efdefc37f0e84c88568318eb89a9d2/rtems-docs" f4377b4/rtems-docs]:

```
c-user: Document new rtems_task_delete() behaviour

Update #4679.
```

Author: Trac Migrate 2022-07-28T05:45:19.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"31036f1dc8a963fb0bc3fc103f63028988314fea/rtems" 31036f1d/rtems]:

```
score: Use priority inheritance for thread join

Threads may join the thread termination of another thread using the
pthread_join() or rtems_task_delete() directives.  The thread cancel␣
↪operation
used a special case priority boosting mechanism implemented by
_Thread_Raise_real_priority().  The problem was that this approach

* is not transitive,

* does not account for priority adjustments of the calling task
while waiting for the join,

* does not support clustered scheduling, and

* does not detect deadlocks.

All these problems are fixed by using a priority inheritance thread␣
↪queue for
the join operation.

Close #4679.
```

Author: Amar Takhar 2024-04-25T20:49:58.123Z

changed the description

3.9.1.320 4672 - Thread-local storage should be usable once an idle thread exists

Id	4672
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-06-29T09:13:44.000Z
Updated	2024-04-25T20:49:56.718Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4672
Merges	0

Original author: sebastian.huber

At some point during system initialization the idle threads are created. Afterwards the boot processor basically executes within the context of an idle thread with thread dispatching disabled. On some architectures, the thread-local storage state must be applied to processor registers. Add a new CPU port function to do this: `_CPU_Use_thread_local_storage( Context_Control *executing )`.

Author: Trac Migrate 2022-07-04T06:03:20.000Z

Original author: sebastian.huber

In [changeset:"d07d6498c64a5d9a5bb31ade0e06a6416b468af3/rtems" d07d6498/rtems]:

```
samples/cdtest: Test exceptions during system init

Update #4668.
Update #4672.
```

Author: Trac Migrate 2022-07-05T05:38:53.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"03e4d1e931cdd6582ccc92b3a4dc883b446b5647/rtems" 03e4d1e9/rtems]:

```
score: Add _CPU_Use_thread_local_storage()

At some point during system initialization, the idle threads are␣
↪created.
Afterwards, the boot processor basically executes within the context of␣
↪an idle
thread with thread dispatching disabled.  On some architectures, the
thread-local storage area of the associated thread must be set in␣
↪dedicated
processor registers.  Add the new CPU port function to do this:

void _CPU_Use_thread_local_storage( const Context_Control *context )

Close #4672.
```

Author: Amar Takhar 2024-04-25T20:49:56.756Z

changed the description

3.9.1.321 4668 - Use thread-local storage in libstdc++

Id	4668
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-06-22T05:56:28.000Z
Updated	2024-04-25T20:49:55.757Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, tool::gcc, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4668
Merges	0

Original author: sebastian.huber

Fix the libstdc++ configuration so that TLS is used on targets with TLS support. Using TLS is more robust against shortages of system resources which lead to unexpected behaviour.

- gcc-10-RTEMS-Enable-some-features-in-libstdc.patch
- gcc-12-RTEMS-Enable-some-features-in-libstdc.patch
- v2-0001-Enable-some-features-for-RTEMS-in-libstdc.patch

Author: Trac Migrate 2022-06-22T05:57:29.000Z

Original author: sebastian.huber

- **Attachment** v2-0001-Enable-some-features-for-RTEMS-in-libstdc.patch added

Author: Trac Migrate 2022-07-04T06:03:20.000Z

Original author: sebastian.huber

In [changeset:"d07d6498c64a5d9a5bb31ade0e06a6416b468af3/rtems" d07d6498/rtems]:

```
samples/cdtest: Test exceptions during system init

Update #4668.
Update #4672.
```

Author: Trac Migrate 2022-08-08T10:53:13.000Z

Original author: sebastian.huber

- **Attachment** gcc-10-RTEMS-Enable-some-features-in-libstdc.patch added

Author: Trac Migrate 2022-08-08T10:53:33.000Z

Original author: sebastian.huber

- **Attachment** gcc-12-RTEMS-Enable-some-features-in-libstdc.patch added

Author: Trac Migrate 2022-08-17T04:55:33.000Z

Original author: sebastian.huber

In [changeset:"4fd9fbd7c90c66dcce70e97a5c863dc89d0db2e3/rtems-source-builder" 4fd9fbd/rtems-source-builder]:

```
6: Enable some libstdc++ features

Enable TLS support for all RTEMS targets except bfin, lm32, m68k, mips,
↪moxie,
or1k, and v850.  For all RTEMS targets, define HAVE_ALIGNED_ALLOC,
HAVE_AT_QUICK_EXIT, HAVE_LINK, HAVE_QUICK_EXIT, HAVE_READLINK, HAVE_
↪SETENV,
HAVE_SLEEP, HAVE_STRERROR_L, HAVE_SYMLINK, HAVE_TRUNCATE, and HAVE_
↪USLEEP.

Update #4668.
```

Author: Trac Migrate 2022-09-08T05:24:43.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Integrated in GCC master branch and RSB for GCC 10 and 12 as patches.

Author: Amar Takhar 2024-04-25T20:49:55.801Z

changed the description

3.9.1.322 4667 - include/sys/_bitset.h defines struct bitset, pollutes namespace

Id	4667
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-06-22T04:10:04.000Z
Updated	2024-04-25T20:49:55.310Z
Milestone	6.1
Labels	arch:aarch64, priority::normal, qualification, resolution::fixed, ticket-type::defect, tool::newlib, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4667
Merges	0

Original author: aoliva

sys/_bitset.h gets indirectly (*) included by sys/types.h, and should thus define only names that C and C++ standards reserve for the implementation. However, the line:

BITSET_DEFINE(bitset, 1);

expands to a definition of struct bitset in the global namespace.

Some of GCC's libstdc++ tests were failing on aarch64-rtems6.0 because of the naming ambiguity that arises. https://gcc.gnu.org/pipermail/gcc-patches/2022-June/596918.html

It would be best if user programs didn't have to resort to such trickery. In C++, it's not so hard; in C, it can be trickier.

I have not checked whether this struct bitset is actually used for any purpose on aarch64-rtems, or whether it's present on other ports. Maybe it could just be removed or renamed? Maybe upstream (FreeBSD?) would consider dropping it?

(*) sys/types.h includes sys/_pthreadtypes.h includes sys/cpuset.h includes sys/_cpuset.h includes sys/_bitset.h

Author: Trac Migrate 2022-06-22T06:53:40.000Z

Original author: aoliva

It seems the namespace pollution is already fixed in FreeBSD. We have to add the FreeBSD patches to Newlib.

Author: Trac Migrate 2022-06-22T08:23:03.000Z

Original author: aoliva

- **Owner** set to sebastian.huber
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2022-06-24T05:32:25.000Z

Original author: aoliva

In [changeset:"89e910f1aa44b6ebd7d70def336a907137f1e7f8/rtems" 89e910f1/rtems]:

```
spcpuset01: Account for <sys/cpuset.h> API changes

Update #4667.
```

Author: Trac Migrate 2022-06-24T05:32:27.000Z

Original author: aoliva

In [changeset:"a76988c881d84c394478a9e02689aed5e19f8763/rtems" a76988c/rtems]:

```
score: Remove unused _Processor_mask_Nand()

Update #4667.
```

Author: Trac Migrate 2022-06-24T05:32:29.000Z

Original author: aoliva

In [changeset:"ba56e23999af3d31defb3b4977ef388022ddc12b/rtems" ba56e239/rtems]:

```
score: Account for <sys/bitset.h> API changes

Update #4667.
```

Author: Trac Migrate 2022-06-24T09:47:44.000Z

Original author: aoliva

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"5295c711ca8efaaa85134dd90991ee824f79fb16/rtems-source-builder" 5295c711/rtems-source-builder]:

```
6/7: Update Newlib

This Newlib update fixes a namespace pollution issue with <sys/bitset.h>
↪.

Close #4667.
```

Author: Trac Migrate 2022-06-30T15:33:56.000Z

Original author: aoliva

In [changeset:"9a88b07c3376a716ed9e9a42624e24ed00ca7783/rtems-libbsd" 9a88b07/rtems-libbsd]:

```
user-space: Request FreeBSD bitset API

This is required for recent Newlib versions.

Update #4667.
```

Author: Trac Migrate 2022-06-30T15:34:20.000Z

Original author: aoliva

In [changeset:"f009252227957e340ba822effbf7a73a57523756/rtems-libbsd" f009252/rtems-libbsd]:

```
user-space: Request FreeBSD bitset API

This is required for recent Newlib versions.

Update #4667.
```

Author: Trac Migrate 2022-07-01T12:34:37.000Z

Original author: aoliva

In [changeset:"c8f49c22d0429ba1bed256ed665645fe91a2227c/rtems-source-builder" c8f49c2/rtems-source-builder]:

```
6/7: Update Newlib

This Newlib update fixes a FreeBSD kernel space issue with <sys/cpuset.
↪h>.

Update #4667.
```

Author: Amar Takhar 2024-04-25T20:49:55.356Z

changed the description

3.9.1.323 4662 - Fix GCC 12 warnings

Id	4662
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2022-06-08T04:12:05.000Z
Updated	2024-04-25T20:49:54.396Z
Milestone	6.1
Labels	priority::highest, priority::normal, qualification, resolution::fixed, ticket-type::defect, tool::gcc, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4662
Merges	0

The move to GCC 12 has resulted in an increase in the number of warning. This ticket covers fixing these warning.

Author: Chris Johns 2022-06-13T22:22:46.000Z

In [changeset:"66dc06efcefcd4ea5b5981f81c371ae30633c6ad/rtems" 66dc06e/rtems]:

```
bsp/aarch64: Fix array warning

Updates #4664
```

Author: Trac Migrate 2022-06-15T02:56:27.000Z

In [changeset:"5262b9c2ab43373ff03d31543c9c2ea72ae9ad51/rtems" 5262b9c/rtems]:

```
score/cpu: Silence ARM and AARCH64 GCC 12 false trigger array warning

The false trigger is covered in:

https://gcc.gnu.org/bugzilla/show_bug.cgi?id=99578

GCC 11 and 12 has been patched for constant pointer casts above
4K. This code casts a constant pointer within the first 4K
page. As a result the patch disables the warning.

Updates #4662
```

Author: Trac Migrate 2022-06-15T02:56:30.000Z

In [changeset:"0cf0914efef17832ac963cc144f7288845d9b883/rtems" 0cf0914/rtems]:

```
cpukit: Change _COMPILING_NEWLIB to _LIBC for helper functions decls

Updates #4662
```

Author: Chris Johns 2022-06-20T00:39:36.000Z

The `rtems/test.h` code has a few warnings that are confusing:

```
In file included from ../../../testsuites/libtests/ttest01/test-leak.
↪c:1:
../../../cpukit/include/rtems/test.h: In function 'T_case_body_missing_
↪free':
../../../cpukit/include/rtems/test.h:225:9: warning: 'p' may be used␣
↪uninitialized [-Wmaybe-uninitialized]
225 |         T_check_not_null(&T_check_instance, a);                ␣
↪      \\
|           ^~~~~~~~~~~~~~~~
../../../cpukit/include/rtems/test.h:219:6: note: by argument 2 of type
↪'const void *' to 'T_check_not_null' declared here
219 | void T_check_not_null(const T_check_context_msg *, const void *);
|      ^~~~~~~~~~~~~~~~
```

There are some more. Why does the code have tabs? It makes it difficult to update.

Author: Chris Johns 2022-06-20T01:19:56.000Z

The warning in comment:4 looks similar to:

```
[3173/4451] Compiling testsuites/psxtests/psxkey07/init.c
../../../testsuites/psxtests/psxkey07/init.c: In function 'Test_Thread':
../../../testsuites/psxtests/psxkey07/init.c:59:8: warning: 'value_p'␣
↪may be used uninitialized [-Wmaybe-uninitialized]
59 |   sc = pthread_setspecific( Key, value_p );
|        ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
In file included from ../../../testsuites/psxtests/psxkey07/init.c:34:
/opt/work/rtems/6/arm-rtems6/include/pthread.h:309:9: note: by argument␣
↪2 of type 'const void *' to 'pthread_setspecific' declared here
309 | int     pthread_setspecific (pthread_key_t __key, const void *__
↪value);
|         ^~~~~~~~~~~~~~~~~~~
```

The code is also similar to the comment:4 test case:

```
int *value_p, *value_p2;

value_p = malloc( sizeof( int ) );
rtems_test_assert(value_p != NULL);
```

Note, I added the `NULL` assert. Is this a false trigger for gcc 12 or something related to the `malloc` decl?

Author: Chris Johns 2022-06-20T01:30:06.000Z

There are a number of validation warnings. This is the bug notice of these warning as per the header.

Author: Chris Johns 2022-08-03T07:18:28.000Z

I would prefer not to have to touch this trail:

```
../../../cpukit/score/src/percpudata.c: In function '_Per_CPU_Data_
↪initialize':
../../../cpukit/score/src/percpudata.c:88:7: warning: 'memcpy' offset 0␣
↪is out of the bounds [0, 0] of object '_Linker_set__Per_CPU_Data_begin
↪' with type 'char[0]' [-Warray-bounds]
88 |       memcpy( cpu->data, RTEMS_LINKER_SET_BEGIN( _Per_CPU_Data ),␣
↪size);
|       ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
↪~
In file included from ../../../cpukit/include/rtems/score/percpudata.
↪h:41,
from ../../../cpukit/score/src/percpudata.c:41:
../../../cpukit/include/rtems/linkersets.h:38:3: note: '_Linker_set__
↪Per_CPU_Data_begin' declared here
38 |   _Linker_set_##set##_begin
|   ^~~~~~~~~~~~
../../../cpukit/include/rtems/linkersets.h:95:39: note: in expansion of␣
↪macro 'RTEMS_LINKER_SET_BEGIN'
95 |   RTEMS_LINKER_SET_ALIGN( type ) type RTEMS_LINKER_SET_BEGIN( set␣
↪)[ 0 ] \\
|                                       ^~~~~~~~~~~~~~~~~~~~~
../../../cpukit/score/src/percpudata.c:49:1: note: in expansion of␣
↪macro 'RTEMS_LINKER_RWSET'
49 | RTEMS_LINKER_RWSET(
| ^~~~~~~~~~~~~~~~~~
```

Built with `config.ini`:

```
[DEFAULT]
RTEMS_DEBUG = True
RTEMS_POSIX_API = True

[arm/xilinx_zynq_a9_qemu]
RTEMS_SMP = True
BUILD_TESTS = True
```

Author: Chris Johns 2022-08-03T07:44:09.000Z

This warning looks like a bug in our heap allocator:

```
../../../testsuites/libtests/malloctest/init.c: In function 'test_early_
↪malloc':
↪                                                                      ␣
↪                                                    |                 ␣
↪                                                                      ␣
↪                                                                      ␣
↪                                                |
../../../testsuites/libtests/malloctest/init.c:1531:7: warning: pointer
↪'q' used after 'free' [-Wuse-after-free]
↪                                                    |  r =␣
↪realloc( q, 128 );
↪                                                                      ␣
↪                                                                      ␣
↪                                                   |/**
1531 |   r = realloc( q, 128 );
↪                                                                      ␣
↪                                                                      ␣
↪                                                     |  rtems_test_
↪assert( r == q );
↪                                                                      ␣
↪                                                                      ␣
↪                                                |-=--:----F1  libio_.h  ␣
↪    12% (110,15)  Git-master  (C++//l Abbrev) [ruru] ----------------
↪--------------------------------------------------------------------
↪---------------------------------
|       ^~~~~~~~~~~~~~~~~
↪                                                                      ␣
↪                                                                      ␣
↪                                                    |                 ␣
↪                                                                      ␣
↪                                                                      ␣
↪                                          | * defined state even if no␣
↪root file system was mounted.
../../../testsuites/libtests/malloctest/init.c:1529:3: note: call to
↪'free' here
↪                                                                      ␣
↪                                                        |  s =␣
↪malloc( 1 );
↪                                                                      ␣
↪                                                                      ␣
↪                                                   | */
1529 |   free( q );
↪                                                                      ␣
↪                                                                      ␣
↪                                                     |  rtems_test_
↪assert( s != NULL );
↪                                                                      ␣
↪                                                                      ␣
↪                                                |extern rtems_filesystem_
↪global_location_t rtems_filesystem_global_location_null;
|   ^~~~~~~~~
↪                                                                      ␣
↪                                                                      ␣
↪                                                    |                 ␣
↪                                                                      ␣
↪                                                                      ␣
↪                                          |
```

The pointer `q` has been free so I am wondering if the `realloc` works because the

same block in the heap is allocated?

Author: Chris Johns 2022-08-03T10:18:25.000Z

I think this warning is due to the pointer being captured in a `static const` variable:

```
In file included from ../../../testsuites/libtests/ttest01/test-leak.c:1:
../../../cpukit/include/rtems/test.h: In function 'T_case_body_missing_free':
../../../cpukit/include/rtems/test.h:225:9: warning: 'p' may be used uninitialized [-Wmaybe-uninitialized]
225 |         T_check_not_null(&T_check_instance, a);                 \
    |         ^~~~~~~~~~~~~~~~
../../../cpukit/include/rtems/test.h:219:6: note: by argument 2 of type 'const void *' to 'T_check_not_null' declared here
219 | void T_check_not_null(const T_check_context_msg *, const void *);
    |      ^~~~~~~~~~~~~~~~
```

It should be OK so I am wondering if this is a false warning?

Author: Chris Johns 2022-08-03T10:24:17.000Z

Replying to Chris Johns:

> I think this warning is due to the pointer being captured in a `static const` variable: The pointer is not part of the `static const` data.

Author: Trac Migrate 2022-08-04T21:48:31.000Z

In [changeset:"46131ce0e182114285cc7e98ec4843c04b8a5a86/rtems" 46131ce0/rtems]:

```
libdl: Fix warnings on 64bit architectures

Updates #4662
```

Author: Trac Migrate 2022-08-04T21:48:34.000Z

In [changeset:"c36d6080796cf5ae0a8b2db7e07e20bfae11fbea/rtems" c36d608/rtems]:

```
testsuite: Fix warnings

Updates #4662
```

Author: Trac Migrate 2022-08-19T20:46:14.000Z

In [changeset:"ec7d6c092f6135eef4d0da2048034fd2a7c0856d/rtems" ec7d6c0/rtems]:

```
threads.h: Add pragmas to get rid of gcc 12 errors

Updates #4662
```

Author: Trac Migrate 2022-08-19T20:46:17.000Z

In [changeset:"f930206724e65f188fe3b095826ceb1b11000f65/rtems" f9302067/rtems]:

```
linkersets.h: Fix gcc 12 warning

Changing the offset from 0 to 1 got rid of a warning stating that␣
↪offset 0 is
out of bounds.

Updates #4662
```

Author: Trac Migrate 2022-08-19T20:46:19.000Z

In [changeset:"df3fa4e0056aa46a4323ccc06fdffef1e1ffe721/rtems" df3fa4e0/rtems]:

```
interr.h: Fix gcc 12 warning

The warning that this fixes states that "ISO C restricts enumerator␣
↪values to
range of 'int'."

Updates #4662
```

Author: Trac Migrate 2022-08-19T20:46:21.000Z

In [changeset:"c55bd160377f52548a9be1dea1a1261213fcd830/rtems" c55bd160/rtems]:

```
percpu.h: Add pragma for gcc 12 warning

Updates #4662
```

Author: Trac Migrate 2022-08-19T20:46:23.000Z

In [changeset:"5b875915152a248079855bcb98e871f70ac314cc/rtems" 5b875915/rtems]:

```
schedulerpriority.h: Fix gcc 12 warning

Changed the size of the array to 1 to get rid of the warning.

Updates #4662
```

Author: Trac Migrate 2022-08-19T20:46:26.000Z

In [changeset:"9e2289785b7a12684d96c72e219523e2810f0f10/rtems" 9e228978/rtems]:

```
test.h: Add pragma for gcc 12 warning

Updates #4662
```

Author: Trac Migrate 2022-08-19T20:46:28.000Z

In [changeset:"b092ad57e2adddb00411147c7644344c874a0ae4/rtems" b092ad57/rtems]:

```
cpu.h: Fix gcc 12 warnings

Added two pragmas to address, and changed the value of
AARCH64_EXCEPTION_MAKE_ENUM_64_BIT to INT_MAX because the old value was␣
↪not
in range of an int.

Updates #4662
```

Author: Trac Migrate 2022-08-19T20:46:30.000Z

In [changeset:"dc0dcccf419c8edcdcd673e019e9ebffbddc59b0/rtems" dc0dccc/rtems]:

```
dl09/dl-load.c: Fix gcc 12 warning

Changed format of size_t variable being printed.

Updates #4662
```

Author: Trac Migrate 2022-08-19T20:46:33.000Z

In [changeset:"a447b9b377ac77e0cd9604b61451821967cf017d/rtems" a447b9b3/rtems]:

```
malloctest/init.c: Added pragmas to address gcc 12 warnings

Updates #4662
```

Author: Trac Migrate 2022-08-19T20:46:35.000Z

In [changeset:"978022eeb0b7f01d84a32df78e37cdddcc2d780a/rtems" 978022ee/rtems]:

```
ttest01/test-checks.c: Initialize variables

These uninitialized variables were causing warnings to be generated.

Updates #4662
```

Author: Trac Migrate 2022-08-19T20:46:37.000Z

In [changeset:"f60f349d8629a2f0db0384c513cff1aad586ede0/rtems" f60f349/rtems]:

```
psxclock/init.c: Change print format for warning

Updates #4662
```

Author: Trac Migrate 2022-08-19T20:46:39.000Z

In [changeset:"f045b9ddd82108215a985bfcc6f2c0f604a6b24c/rtems" f045b9d/rtems]:

```
psxkey07/init.c: Add pragma for gcc 12 warning

Updates #4662
```

Author: Trac Migrate 2022-08-30T04:50:29.000Z

In [changeset:"c2269908364cd60f78ba5aa747f9082a168e459b/rtems" c226990/rtems]:

```
score: Do not expose <limits.h> to <rtems.h>

The <rtems.h> header file should not unnecessarily include standard C
header files.  The <string.h> and <limits.h> header includes were
removed in 2017.

Update #4662.
```

Author: Trac Migrate 2022-08-30T05:32:54.000Z

In [changeset:"44b3bc65af947e45482dd47c5d86747114310aa6/rtems" 44b3bc65/rtems]:

```
validation: Fix use of uninitialized variables

Update #4662.
```

Author: Trac Migrate 2022-08-30T13:11:48.000Z

In [changeset:"c1453c6f9c05bfac4066bc7a37a8087d9ff1cdcf/rtems-central" c1453c6/rtems-central]:

```
spec: Fix warnings in validation code

Update #4662.
```

Author: Trac Migrate 2022-08-31T11:12:58.000Z

In [changeset:"1be6dc18d33bc026f64e8244c66792c30b88b130/rtems" 1be6dc18/rtems]:

```
libtest: Fix warnings without a pragma

It seems that recent GCC versions expect that functions with a "const␣
↪type *"
parameter will read from the referenced location.

Update #4662.
```

Author: Trac Migrate 2022-08-31T11:13:00.000Z

In [changeset:"dad6d32271ea919e18abe3e18496ea88e282c53c/rtems" dad6d322/rtems]:

```
Fix pedanic warnings without a storage increase

Use RTEMS_ZERO_LENGTH_ARRAY for flexible array member.

Update #4662.
```

Author: Trac Migrate 2022-09-09T05:59:44.000Z

In [changeset:"8d32b9884c102cab4ed66ffa121019b87ee0ac1b/rtems" 8d32b988/rtems]:

```
validation: Fix integer type warning

Update #4662.
```

Author: Chris Johns 2022-11-29T23:55:39.000Z

- **Priority** changed from ~"normal" to ~"highest"

Author: Joel Sherrill 2023-01-27T23:37:14.000Z

Filed #4833 for warnings in grlib/pci/grpci2dma.c which will require some insight to resolve properly. They look simple to fix for the **RIGHT** person.

Author: Trac Migrate 2023-01-30T16:28:57.000Z

In [changeset:"29a3ad1ba94d7d2614201831c9119560a1885343/rtems" 29a3ad1b/rtems]:

```
grlib: Fix snprintf() overflow warnings from gcc 12

Updates #4662.
```

Author: Trac Migrate 2023-02-07T16:30:27.000Z

In [changeset:"ebb9e8c0a601bd089a56f637ed22a6be14ae8042/rtems" ebb9e8c/rtems]:

```
score: Fix maybe uninitialized warning

There are different cases for _ISR_lock_ISR_disable() and
_ISR_lock_ISR_enable() in the case RTEMS_SMP is defined or
RTEMS_PROFILING is defined, so remove the related code.

../../../cpukit/include/rtems/score/threaddispatch.h: In function '_
↪Thread_Dispatch_disable':
../../../cpukit/include/rtems/score/threaddispatch.h:231:14: warning:
↪'lock_context' may be used uninitialized [-Wmaybe-uninitialized]
231 |   cpu_self = _Thread_Dispatch_disable_critical( &lock_context );
|              ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
../../../cpukit/include/rtems/score/threaddispatch.h:210:32: note: by␣
↪argument 1 of type 'const ISR_lock_Context *' to '_Thread_Dispatch_
↪disable_critical' declared here
210 | static inline Per_CPU_Control *_Thread_Dispatch_disable_critical(
|                                ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
../../../cpukit/include/rtems/score/threaddispatch.h:225:21: note:
↪'lock_context' declared here
```

(continues on next page)

(continued from previous page)

```
225 |   ISR_lock_Context  lock_context;
|                     ^~~~~~~~~~~~
Update #4662.
```

Author: Joel Sherrill	2023-06-22T20:55:25.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Looks like most, if not all, have been resolved.

Author: Amar Takhar	2024-04-25T20:49:54.431Z

changed the description

3.9.1.324 4617 - Potential non-monotonic CLOCK_MONOTONIC

Id	4617
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-02-23T08:52:16.000Z
Updated	2024-04-25T20:49:36.649Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4617
Merges	0

Original author: sebastian.huber

The RTEMS timecounter implementation could lead to a non-monotonic CLOCK_MONOTONIC if the clock interrupt is delayed for more than one second.

Author: Trac Migrate	2022-02-23T08:53:07.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

This bug was fixed by 870cf9695f688c06743dd7fe8a7113e0cb5e3607.

Author: Amar Takhar	2024-04-25T20:49:36.686Z

changed the description

3.9.1.325 4572 - Improve Clarity for New Clock Manager Directives

Id	4572
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2021-12-15T22:27:35.000Z
Updated	2024-04-25T20:49:28.112Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4572
Merges	0

Looking through the Clock Manager at the new APIs, I noticed that there is nothing about what bintime and sbintime are in the "Time and Date Data Structures" section. Explaining what these time representations are is needed.

struct timeval and timespec are also not described in "Time and Data Data Structures" but this may be OK since they are from C and/or POSIX.

There is no discussion of what coarse is versus the non-coarse and what this means in practice.

There is no background on what the various clock sources are.

There may be other similar typos but rtems_clock_get_monotonic() describes its sole argument as being of the wrong type.

Without some background on the various time formats, sources, and terminology, the distinction between these APIs and their intended uses is impossible to figure out.

Author: Trac Migrate 2021-12-16T06:41:56.000Z

In [changeset:"732d8bca8f2d83212c76df22a40df84e0b197924/rtems-docs" 732d8bc/rtems-docs]:

```
c-user: Fix Clock Manager parameter descriptions

Update #4572.
```

Author: Trac Migrate 2021-12-16T07:16:25.000Z

- **Status** changed from *assigned* to *accepted*

Author: Trac Migrate 2021-12-16T14:38:16.000Z

In [changeset:"786b89ac86a0832f08277483941fbc80c27d29f6/rtems-docs" 786b89a/rtems-docs]:

```
c-user: Clarify time formats

Update #4572.
```

Author: Trac Migrate 2021-12-22T07:11:55.000Z

In [changeset:"d40477161eebe53460b6219901bdc4e33efd43ed/rtems" d404771/rtems]:

```
rtems: Fix Clock Manager parameter descriptions

Update #4572.
```

Author: Trac Migrate 2022-01-11T08:19:52.000Z

In [changeset:"e77e04d2dc3794c3e69e023b431a47856fc4af40/rtems-docs" e77e04d/rtems-docs]:

```
c-user: Clarify Clock Manager dependencies

Update #4572.
```

Author: Trac Migrate 2022-01-26T13:27:01.000Z

Joel, please close this issue or complain.

Author: Joel Sherrill 2022-01-26T18:36:34.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

I think it covers the concepts now.

Author: Amar Takhar 2024-04-25T20:49:28.151Z

changed the description

3.9.1.326 4566 - Atomic store does not use the order parameter for C++

Id	4566
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-12-07T11:06:56.000Z
Updated	2024-04-25T20:49:26.278Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, smp, tick-ettype::defect, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4566
Merges	0

Original author: sebastian.huber

This could result in invalid inline code for the SMP ticket locks if used from C++.

Author: Trac Migrate 2021-12-07T11:25:05.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"69d643f711abca5027f755ef65a4b25180eb807b/rtems" 69d643f7/rtems]:

```
score: Fix atomic stores for C++

Close #4566.
```

Author: Amar Takhar 2024-04-25T20:49:26.317Z

changed the description

Author: Amar Takhar 2024-04-25T20:49:27.726Z

mentioned in issue #4567

3.9.1.327 4550 - Add –rtems-version to rtems-test

Id	4550
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Chris Johns
Created	2021-11-19T22:02:13.000Z
Updated	2024-04-25T20:49:20.832Z
Milestone	6.1
Labels	priority::normal, resolution::duplicate, tickettype::defect, tool, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4550
Merges	0

The rtems-test does not have a way to override the RTEMS version. This results in some tools defaulting to rtems6 when you want to test with the rtems7 version.

Author: Kinsey Moore 2021-12-16T20:34:35.000Z

- **Resolution** set to ~"duplicate"
- **Status** changed from *assigned* to *closed*

This is a duplicate of #3671

Author: Amar Takhar 2024-04-25T20:49:20.866Z

changed the description

3.9.1.328 4528 - rate monotonic: reset of CPU usage time not always detected

Id	4528
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-10-11T18:03:13.000Z
Updated	2024-04-25T20:49:14.179Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4528
Merges	0

Original author: frank_k

`rtems_rate_monotonic_get_statistics()` and `rtems_rate_monotonic_get_status()` must detect whether the used CPU time was resetted during a period (`rtems_cpu_usage_reset()`). This

is achieved by storing the CPU usage time counter value when the period is started. To detect whether there was a reset, the CPU usage time value from the period start and the current value are compared. If the current value is lower than the one from the start there was a reset.

The bug is that when the current CPU usage time value is greater than the value at the start, a reset may still have occurred.

For example, when the period starts the used CPU time is at 1000 and 1000 is stored. Then the CPU time counter is resetted - so it is 0. Assume the period thread does some work and the CPU usage time is at 100 when `rtems_rate_monotonic_get_status()` is called. In this case the current code detects the reset and returns correctly `RTEMS_NOT_DEFINED`. Yet, when more CPU usage time passes without `rtems_rate_monotonic_period()` being called - lets say the used CPU time is at 1200 - and `rtems_rate_monotonic_get_status()` is called, the stored value (1000) is smaller than the current one (1200) so the reset is not detected.

This bug has been found with a test which manipulates the time directly. I doubt this bug is very relevant in practice. It requires that there are periods with long intervals and much CPU load and that either the system is shortly started or `rtems_cpu_usage_reset()` is used frequently.

The background:

The Classic API guide https://docs.rtems.org/branches/master/c-user/rate-monotonic/directives.html#rtems-rate-monotonic-get-status says for `rtems_rate_monotonic_get_status()`:

`RTEMS_NOT_DEFINED`: There was no status available due to a reset of the processor time usage of the owner task of the period.

The directive `rtems_cpu_usage_reset()` sets `the_thread->cpu_time_used` 0 in line 43 of `cpukit/libmisc/cpuuse/cpuusagereset.c`.

The detection whether there was an reset or not is done in file `cpukit/rtems/src/ratemonperiod.c` line 56 in function `_Rate_monotonic_Get_status()`:

```
[...]
/*
*  Determine cpu usage since period initiated.
*/
_Thread_Get_CPU_time_used( owning_thread, &used );

/*
*  The cpu usage info was reset while executing.  Can't
*  determine a status.
*/
if ( _Timestamp_Less_than( &used, &the_period->cpu_usage_period_initiated ) )
return false;
[...]
```

The directive `rtems_rate_monotonic_get_statistics()` is affected indirectly because collecting its data is skipped when there was a reset. `cpukit/rtems/src/ratemonperiod.c` line 149 in function `_Rate_monotonic_Update_statistics()` (which in turn calls the above code).

For the records:

```
RTEMS_VERSION    = 6.0.0
remote origin    = git://git.rtems.org/sebh/rtems.git
commit HEAD      = 1df2666ca1d73807a338e0d209ed1f42f67f00a9  (HEAD, origin/qual-
↪43)
config.ini       =
[arm/realview_pbx_a9_qemu]
RTEMS_DEBUG = True
RTEMS_NETWORKING = True
RTEMS_POSIX_API = True
RTEMS_SMP = True
BUILD_SAMPLES = False
BUILD_VALIDATIONTESTS = True
BUILD_UNITTESTS = True
NEWLIB_VERSION   = 3.2.0
SOURCE_BUILDER   = Set Builder, 6 (f12dee02d52d)
GCC_VERSION      = arm-rtems6-gcc (GCC) 10.3.1 20210409 (RTEMS 6, RSB␣
↪c938bd7cbe16bd03d3b382f2d7cfee6a86aa9424, Newlib 0c0f3df)
BINUTILS_VERSION = GNU ld (GNU Binutils) 2.36.1.20210409
```

Author: Trac Migrate 2021-10-12T06:22:08.000Z

Original author: frank_k

- **Milestone** changed from %”Indefinite” to %”6.1”
- **Status** changed from *assigned* to *accepted*

Author: Trac Migrate 2021-10-25T06:00:31.000Z

Original author: frank_k

In [changeset:”0221da5f56353c9b238ef51d5a24802ba67b8c56/rtems” 0221da5f/rtems]:

```
rtems: Fix rate monotonic statistics

The rate monotonic period statistics were affected by
rtems_cpu_usage_reset().  The logic to detect and work around a CPU
usage reset was broken.

The Thread_Contol::cpu_time_used is changed to contain the processor
time used throughout the entire lifetime of the thread.  The new member
Thread_Contol::cpu_time_used_at_last_reset is added to contain the
processor time used at the time of the last reset through
rtems_cpu_usage_reset().  This decouples the resets of the CPU usage and
the rate monotonic period statistics.

Update #4528.
```

Author: Trac Migrate 2021-10-25T06:10:54.000Z

Original author: frank_k

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"feb46875584c05f0dbd005e4b4e7eaa1af414d88/rtems-docs" feb4687/rtems-docs]:

```
c-user: rtems_rate_monotonic_get_status()

Mention that resetting the processor usage time of tasks has no impact
on the period status and statistics.

Remove no longer relevant RTEMS_NOT_DEFINED error status.

Close #4528.
```

Author: Trac Migrate 2021-10-25T06:12:52.000Z

Original author: frank_k

In [changeset:"24922d0f54eb6cff02428dc9176fc7b67e6ac9bc/rtems" 24922d0/rtems]:

```
rtems: rtems_rate_monotonic_get_status()

Mention that resetting the processor usage time of tasks has no impact
on the period status and statistics.

Remove no longer relevant RTEMS_NOT_DEFINED error status.

Update #4528.
```

Author: Trac Migrate 2021-10-25T16:01:04.000Z

Original author: frank_k

In [changeset:"75c133bda040eb844d6cb6e1d5fb8a3a91049e34/rtems" 75c133bd/rtems]:

```
sptests/sp69: Remove test case

This error condition no longer exists.

Update #4528.
```

Author: Amar Takhar 2024-04-25T20:49:14.306Z

changed the description

3.9.1.329 4524 - Re-add lost capability for custom stack allocator to allocate IDLE thread stacks

Id	4524
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2021-10-07T22:21:23.000Z
Updated	2024-04-25T20:49:13.693Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4524
Merges	0

The move to statically allocate the stacks for the IDLE threads resulted in the loss of the capability for a custom stack allocator to be able to allocate the idle threads' stacks. This occurred close to the 5 branching point and is addressed for the 5 branch by #4520. This ticket is for the master (6).

Author: Trac Migrate 2021-10-11T13:39:59.000Z

- **Owner** set to Joel Sherrill <joel@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"822ebb4cae2bb8bc9fe55915bd4acc4942fcd8ce/rtems" 822ebb4c/rtems]:

```
Add support for IDLE Thread stack allocator

Add a stack allocator hook specifically for allocation of IDLE thread␣
↪stacks.
This allows the user to decide if IDLE thread stacks are statically␣
↪allocated
or handled by the same custom allocator mechanism as other thread␣
↪stacks.

Closes #4524.
```

Author: Trac Migrate 2021-10-12T18:44:34.000Z

In [changeset:"df5be4c97a80e9c6772ba4ca9179890724d22cee/rtems-docs" df5be4c/rtems-docs]:

```
task-stack-alloc.rst: Add CONFIGURE_TASK_STACK_FROM_ALLOCATOR

Updates #4524.
```

Author: Trac Migrate 2021-10-25T06:00:27.000Z

In [changeset:"9be97a34db3b712a8a962b3e0d0c134f5055e6d4/rtems" 9be97a3/rtems]:

```
score: Optimize default idle task stack allocator

Update #4524.
```

Author: Trac Migrate 2021-10-25T06:00:37.000Z

In [changeset:"f1723d129306855a7ae730e250bc20beafba81d4/rtems" f1723d12/rtems]:

```
rtems: Regenerate for IDLE task allocator option

Update #4524.
```

Author: Trac Migrate 2021-10-25T06:10:52.000Z

In [changeset:"46dbb6dd7f92ef60ea5ba74b1b0cd6865cad5619/rtems-docs" 46dbb6d/rtems-docs]:

```
c-user: Regenerate for IDLE task allocator option

Update #4524.
```

Author: Trac Migrate 2022-02-23T08:29:13.000Z

In [changeset:"2f8be4b627c67676f9e1d32ad4b1ac8eefc87841/rtems-docs" 2f8be4b/rtems-docs]:

```
c-user: Document CONFIGURE_SCHEDULER_TABLE_ENTRIES

Update #4524.
```

Author: Trac Migrate 2022-02-23T14:30:15.000Z

The last commit does not belong to this ticket. It references the wrong ticket number.

Author: Trac Migrate 2022-10-14T09:41:45.000Z

In [changeset:"2846b17d7e34f1bdcac579ea1e0fbcb251aff1cb/rtems" 2846b17/rtems]:

```
config: Changeable size for IDLE stack allocator

Allow the IDLE stack allocator to change the stack size.  This can be
used by applications with a very dynamic thread-local storage size to
adjust the thread storage area of the IDLE tasks dynamically.

Update #4524.
```

Author: Trac Migrate 2022-10-14T09:42:01.000Z

In [changeset:"45ee958552ca35b6834985718ecd59b27fc52f86/rtems" 45ee958/rtems]:

```
config: Add CONFIGURE_IDLE_TASK_STORAGE_SIZE

By default, allocate the IDLE task storage areas from the RTEMS␣
↪Workspace.
This avoids having to estimate the thread-local storage size in the␣
↪default
configuration.

Add the application configuration option CONFIGURE_IDLE_TASK_STORAGE_
↪SIZE to
request a static allocation of the task storage area for IDLE tasks.

Update #3835.
Update #4524.
```

Author: Trac Migrate 2022-10-14T09:42:03.000Z

In [changeset:"64fbeaa0d1b4321cb439923c86993d134fbd3acb/rtems" 64fbeaa/rtems]:

```
score: INTERNAL_ERROR_IDLE_THREAD_STACK_TOO_SMALL

Ensure that the IDLE storage allocator did allocate a suffiently large␣
↪area.

Update #3835.
Update #4524.
```

Author: Amar Takhar 2024-04-25T20:49:13.736Z

changed the description

3.9.1.330 4513 - Document parts of the Cache Manager in the Classic API Guide

Id	4513
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-09-10T08:29:13.000Z
Updated	2024-04-25T20:49:12.827Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4513
Merges	0

Original author: sebastian.huber

The Cache Manager directives are available via <rtems.h>. Document most of them in the Classic API Guide.

Author: Trac Migrate 2021-09-16T07:43:08.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

The documentation was updated.

Author: Amar Takhar 2024-04-25T20:49:12.867Z

changed the description

3.9.1.331 4509 - Message queue priority dicipline is broken in SMP configurations

Id	4509
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-31T08:18:18.000Z
Updated	2024-04-25T20:49:11.959Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4509
Merges	0

Original author: sebastian.huber

The message queue handler uses the thread queue extract operation to dequeue a receiver thread. This is wrong in SMP configurations since the extract thread queue operation does not ensure FIFO fairness across schedulers. The thread queue surrender operation should be used instead.

Author: Trac Migrate 2021-09-02T05:48:07.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"d9249c9bffe4238e3853996d1f0758d9f55fbe67/rtems" d9249c9/rtems]:

```
score: Fix blocking message queue receive

In order to ensure FIFO fairness across schedulers, the thread queue
surrender operation must be used to dequeue a thread from the thread
queue.  The thread queue extract operation is intended for timeouts.

Add _Thread_queue_Resume() which may be used to make extracted or
surrendered threads ready again.

Remove the now unused _Thread_queue_Extract_critical() function.

Close #4509.
```

Author: Amar Takhar 2024-04-25T20:49:11.997Z

changed the description

3.9.1.332 4508 - rtems_message_queue_receive(): flush() does not release waiting tasks

Id	4508
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-30T14:21:12.000Z
Updated	2024-04-25T20:49:11.413Z
Milestone	6.1
Labels	priority::low, qualification, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4508
Merges	0

Original author: frank_k

The _RTEMS Classic API **Guide**_ https://docs.rtems.org/branches/master/c-user/index.html in _Message **Manager**_ → _Directives_ → section 14.4.8 _rtems_message_queue_receive()_ says:

> `RTEMS_UNSATISFIED`: The queue was flushed while the calling task was waiting to receive a message.
>
> Yet, when I tested it, this does not happen. A waiting task is not released from the message queue when calling `rtems_message_queue_flush()`. Moreover, I did not find any sign in the source code of `rtems_message_queue_flush()` which look liked it would dequeue waiting threads. (In contrast `rtems_message_queue_delete()` does!) Furthermore, there is no other hint in the documentation of either function that `flush()` would kick out waiting receivers.
>
> I may misinterpret the documentation above or oversee something in the code. Yet, I believe the text I cited above is a mistake in the documentation and should simply be removed.
>
> How to reproduce/How I tested:
>
> The debug output of my test looks like (the worker task is not released by `rtems_message_queue_flush()` but afterwards by a timeout of 3 ticks):

```
P:574:0:UI1/Valid/Valid/Valid/Flushed/Local/Fifo/Timeout/Empty/Nop:tc-
↪message-re
ceive.c:1316
L:#### rtems_message_queue_construct() with
L:####    .maximum_pending_messages = 3
L:####    .maximum_message_size = 5
L:####    .storage_size = 72
L:####    .storage_free = 0
L:####    .attributes = 0 (LOCAL=0, FIFO=0, PRIORITY=4)
L:#### rtems_task_restart BEFORE
L:#### rtems_message_queue_receive(option_set=0, timeout_param=3 ) BEGIN
L:#### rtems_task_restart AFTER
L:#### rtems_message_queue_flush() BEFORE
L:#### rtems_message_queue_flush() AFTER
L:#### WaitForWorker wait ticks BEFORE
L:#### rtems_message_queue_receive() END status = 6 (0=RTEMS_SUCCESSFUL,
↪ 13=RTEMS_UNSATISFIED, 6=RTEMS_TIMEOUT )
L:#### WorkerTask send event
L:#### WaitForWorker wait ticks AFTER
F:586:0:UI1/Valid/Valid/Valid/Flushed/Local/Fifo/Timeout/Empty/Nop:tc-
↪message-receive.c:1004:RTEMS_TIMEOUT == RTEMS_UNSATISFIED
F:587:0:UI1/Valid/Valid/Valid/Flushed/Local/Fifo/Timeout/Empty/Nop:tc-
↪message-receive.c:1043:3 == 0
L:#### rtems_message_queue_delete()
```

> For the records:
>
> RTEMS_VERSION = 6.0.0 remote origin = git://git.rtems.org/sebh/rtems.git /* The HASH is also in git://git.rtems.org/rtems.git */ commit HEAD = bb77a82f619752ba147c317d982ac47f56f4afec config.ini = [arm/realview_pbx_a9_qemu] RTEMS_DEBUG = True RTEMS_NETWORKING = True RTEMS_POSIX_API = True RTEMS_SMP = True BUILD_TESTS

= True NEWLIB_VERSION = 3.2.0 SOURCE_BUILDER = Set Builder, 6 (f12dee02d52d) GCC_VERSION = arm-rtems6-gcc (GCC) 10.3.1 20210409 (RTEMS 6, RSB c938bd7cbe16bd03d3b382f2d7cfee6a86aa9424, Newlib 0c0f3df) BINUTILS_VERSION = GNU ld (GNU Binutils) 2.36.1.20210409

Author: Trac Migrate 2021-09-16T07:34:37.000Z

Original author: frank_k

In [changeset:"dbb7c956e63ea72c0b663eeec518c8904c34599d/rtems" dbb7c956/rtems]:

```
rtems: Fix message manager documentation

Correct the description of the ``count`` parameter of
rtems_message_queue_flush().

Update #4508.
```

Author: Trac Migrate 2021-09-16T07:37:35.000Z

Original author: frank_k

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"7afc7a0f31af13b54bd9b04d1333a6910f0bb8f5/rtems-docs" 7afc7a0/rtems-docs]:

```
rtems: Fix message manager documentation

Correct the description of the ``count`` parameter of
rtems_message_queue_flush().

Close #4508.
```

Author: Amar Takhar 2024-04-25T20:49:11.553Z

changed the description

3.9.1.333 4482 - Document kernel character I/O support in Classic API Guide

Id	4482
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-07-30T06:44:20.000Z
Updated	2024-04-25T20:49:09.296Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4482
Merges	0

Original author: sebastian.huber

Directives like printk() are available for a long time. Document them in the Classic API Guide.

Author: Trac Migrate 2021-08-02T05:15:51.000Z

Original author: sebastian.huber

In [changeset:"d999f865eaef44b887b5c40799572e849ac4ca78/rtems" d999f865/rtems]:

```
rtems: Generate <rtems/bspIo.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Place the group into the I/O Manager group.  Add all source files to the
group.

Update #3899.
Update #3993.
Update #4482.
```

Author: Trac Migrate 2021-08-03T08:40:04.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"efb8e7c6c3fe534ac36ca44553831c61179fe771/rtems-docs" efb8e7c/rtems-docs]:

```
c-user: Add "Kernel Character I/O Support" chapter

Close #4482.
```

Author: Amar Takhar 2024-04-25T20:49:09.335Z

changed the description

3.9.1.334 4458 - Simplify trap table initialization

Id	4458
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-06-18T13:57:12.000Z
Updated	2024-04-25T20:49:08.422Z
Milestone	6.1
Labels	arch:sparc, priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4458
Merges	0

Original author: sebastian.huber

Currently, the trap table is statically initialized (see start.S). Unexpected traps end up in system error mode. Later during startup most traps are changed to jump to _ISR_Handler(). This is a side-effect of bsp_spurious_initialize(). The used functions for this dynamic initialization are a bit complex and need cache manager directives which involve all online processors. This should be simplified to cover only basic requirements.

1. The _ISR_Vector_table should be initialized by _CPU_Initialize_vectors() to an new default handler _SPARC_ISR_handler_default() which just invokes _Terminate().

2. The traps associated with external interrupts (0x11 up to including 0x1f) should be statically initialized in start.S to jump to _ISR_Handler().

3. Standard synchronous exceptions such as * 0x01 instruction access exception * 0x02 illegal instruction * 0x03 privileged instruction * 0x04 fp disabled * 0x07 memory address not aligned * 0x08 fp exception * 0x09 data access exception * 0x0A tag overflow * 0x24 cp_disabled * 0x28 cp_exception

should also be statically initialize to jump to _ISR_Handler() to invoke the fatal error handler.

If software needs to change the default initialization, then it can use set_vector() or alternatives on demand.

Author: Trac Migrate 2021-06-18T15:20:54.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
Currently, the trap table is statically initialized (see start.S).
↪Unexpected traps end up in system error mode. Later during startup
↪most traps are changed to jump to _ISR_Handler(). This is a side-
↪effect of bsp_spurious_initialize(). The used functions for this
↪dynamic initialization are a bit complex and need cache manager
↪directives which involve all online processors. This should be
↪simplified to cover only basic requirements.

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↪vectors() to an new default handler _SPARC_ISR_handler_default()
↪which just invokes _Terminate().

2. The traps associated with external interrupts (0x11 up to including
↪0x1f) should be statically initialized in start.S to jump to _ISR_
↪Handler().

+ 3. Standard synchronous exceptions such as
+    * 0x01 instruction access exception
+    * 0x02 illegal instruction
+    * 0x03 privileged instruction
+    * 0x04 fp disabled
+    * 0x05 window overflow
+    * 0x06 window underflow
+    * 0x07 memory address not aligned
+    * 0x08 fp exception
+    * 0x09 data access exception
+    * 0x0A tag overflow
+    * 0x24 cp_disabled
+    * 0x28 cp_exception
+
+    should also be statically initialize to jump to _ISR_Handler() to
↪invoke the fatal error handler.
+
+
If software needs to change the default initialization, then it can use
↪set_vector() or alternatives on demand.
```

Author: Trac Migrate 2021-06-18T15:22:45.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
Currently, the trap table is statically initialized (see start.S).
↪Unexpected traps end up in system error mode. Later during startup
```

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```
most traps are changed to jump to _ISR_Handler(). This is a side-effect of bsp_spurious_initialize(). The used functions for this dynamic initialization are a bit complex and need cache manager directives which involve all online processors. This should be simplified to cover only basic requirements.

1. The _ISR_Vector_table should be initialized by _CPU_Initialize_vectors() to an new default handler _SPARC_ISR_handler_default() which just invokes _Terminate().

2. The traps associated with external interrupts (0x11 up to including 0x1f) should be statically initialized in start.S to jump to _ISR_Handler().

3. Standard synchronous exceptions such as
* 0x01 instruction access exception
* 0x02 illegal instruction
* 0x03 privileged instruction
* 0x04 fp disabled
-   * 0x05 window overflow
-   * 0x06 window underflow
* 0x07 memory address not aligned
* 0x08 fp exception
* 0x09 data access exception
* 0x0A tag overflow
* 0x24 cp_disabled
* 0x28 cp_exception

should also be statically initialize to jump to _ISR_Handler() to invoke the fatal error handler.


If software needs to change the default initialization, then it can use set_vector() or alternatives on demand.
```

Author: Trac Migrate 2021-06-24T10:30:27.000Z

Original author: sebastian.huber

In [changeset:"7a140e2ed5b2085823f91a726b580cee485e7159/rtems" 7a140e2/rtems]:

```
bsps/sparc: Add a symbol for each trap table entry

This makes it easier to review start.o and set break points to trap table
entries.  This change was checked by inspecting the trap table in start.o with
objdump.
```

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```
6
7 Update #4458.
```

Author: Trac Migrate 2021-06-24T10:30:30.000Z

Original author: sebastian.huber

In [changeset:"955c045b3c66c26899d65dde744d5647588ca91c/rtems" 955c045b/rtems]:

```
1 sparc: Move ISR handler install routines
2
3 Move _CPU_ISR_install_raw_handler() and _CPU_ISR_install_vector() to␣
  ↪separate
4 files.  The goal is to make their use optional.
5
6 Update #4458.
7 Update #4459.
```

Author: Trac Migrate 2021-06-24T10:30:37.000Z

Original author: sebastian.huber

In [changeset:"5c30e3d376fea2ec18b28a72c349d153973a983d/rtems" 5c30e3d3/rtems]:

```
1 bsps/sparc: Use rtems_interrupt_handler_install()
2
3 Avoid using set_vector() which depends on _ISR_Vector_table().  Prepare␣
  ↪for a
4 statically initialized trap table.
5
6 Update #4458.
```

Author: Trac Migrate 2021-06-24T10:30:40.000Z

Original author: sebastian.huber

In [changeset:"b9d5f516301865efac42649129c05951c2ab7cb5/rtems" b9d5f516/rtems]:

```
1 sparc: Move FP frame offset defines to cpuimpl.h
2
3 This makes them usable in multiple files.
4
5 Update #4458.
```

Author: Trac Migrate 2021-06-24T10:30:47.000Z

Original author: sebastian.huber

In [changeset:"be96cb4345554fac614b252fe8f78dbf32c3a981/rtems" be96cb43/rtems]:

```
sparc: Simplify trap table initialization

Move _ISR_Handler() to a separate file since it is now only used if a handler
is installed by _CPU_ISR_install_raw_handler().

Statically initialize the traps for external interrupts to use the new
_SPARC_Interrupt_trap() which directly dispatches the interrupt handlers
installed by rtems_interrupt_handler_install() via the BSP-provided
_SPARC_Interrupt_dispatch().

Since the trap table is now fully statically initialized, there is no longer a
dependency on the Cache Manager in the default configuration.

Update #4458.
```

Author: Trac Migrate 2021-08-12T12:49:04.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

The trap table is now statically initialized.

Author: Trac Migrate 2023-06-15T17:43:50.000Z

Original author: sebastian.huber

In [changeset:"97a4b306f4842a707ea727e05a610bdb75f8b3b1/rtems" 97a4b306/rtems]:

```
bsp/leon2: Include missing header file

Update #4458.
```

Author: Amar Takhar 2024-04-25T20:49:08.471Z

changed the description

3.9.1.335 4455 - bsps/i386: TSC calibration inaccurate

Id	4455
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-06-11T06:31:54.000Z
Updated	2024-04-25T20:49:06.548Z
Milestone	6.1
Labels	arch:i386, priority::normal, resolution::fixed, rtems::clock, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4455
Merges	0

Original author: soja

The current implementation of the TSC calibration during startup yields inaccurate results.

There are 2 issues:

1. Rounding error:

The `calibrate_tsc` function calibrates for 1s by waiting for `rtems_clock_get_ticks_per_second()` ticks via the PIT.

The PIT has a frequency of 1193182 Hz. For a rtems tick of 1ms this yields 1193. Waiting for 1s means then waiting for 1193000 PIT ticks (instead of the full 1193182). For a 1 GHz TSC clock this would yield already ~150 kHz less then the correct TSC frequency.

2. Waiting for the first loop at begin of timer period

```
for (i = rtems_clock_get_ticks_per_second() * pc386_isrs_per_tick;
i != 0; --i ) {
/* We know we've just completed a tick when timer goes from low to high */
then_lsb = then_msb = 0xff;
do {                            <== First loop does not start at begin of clock␣
↪period
READ_8254(now_lsb, now_msb);
if ((then_msb < now_msb) ||
((then_msb == now_msb) && (then_lsb < now_lsb)))
break;
then_lsb = now_lsb;
then_msb = now_msb;
} while (1);
}
```

This can yield deviations of several MHz for the TSC frequency. For example, for a tested CPU with a TSC frequency of 19167.1 MHz yields a calibration result of 1912.3 MHz.

Proposed solution

- Just wait 1193182 PIT ticks for 1 s instead of a number of rtems ticks
- Use the raw timer value instead of waiting for clock ticks.

Author: Trac Migrate 2021-06-11T06:32:17.000Z

Original author: soja

- **Owner** set to soja
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-06-21T08:11:43.000Z

Original author: soja

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"93f96455957a943f1a4c17655a09612a93a34bf4/rtems" 93f9645/rtems]:

```
bsps/i386: Update calibration of TSC to be more accurate

Closes #4455
```

Author: Amar Takhar 2024-04-25T20:49:06.679Z

changed the description

Author: Amar Takhar 2024-04-25T20:49:07.663Z

mentioned in issue #4456

3.9.1.336 4454 - bsps/i386: TSC calibration inaccurate

Id	4454
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-06-11T06:31:44.000Z
Updated	2024-04-25T20:49:05.635Z
Milestone	6.1
Labels	arch:i386, bsp, priority::normal, resolution::duplicate, rtems::clock, tick-ettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4454
Merges	0

Original author: soja

The current implementation of the TSC calibration during startup yields inaccurate results.

There are 2 issues:

1. Rounding error:

The `calibrate_tsc` function calibrates for 1s by waiting for `rtems_clock_get_ticks_per_second()` ticks via the PIT.

The PIT has a frequency of 1193182 Hz. For a rtems tick of 1ms this yields 1193. Waiting for 1s means then waiting for 1193000 PIT ticks (instead of the full 1193182). For a 1 GHz TSC clock this would yield already ~150 kHz less then the correct TSC frequency.

2. Waiting for the first loop at begin of timer period

```
for (i = rtems_clock_get_ticks_per_second() * pc386_isrs_per_tick;
i != 0; --i ) {
/* We know we've just completed a tick when timer goes from low to high */
then_lsb = then_msb = 0xff;
do {                            <== First loop does not start at begin of clock␣
↪period
READ_8254(now_lsb, now_msb);
if ((then_msb < now_msb) ||
((then_msb == now_msb) && (then_lsb < now_lsb)))
break;
then_lsb = now_lsb;
then_msb = now_msb;
} while (1);
}
```

This can yield deviations of several MHz for the TSC frequency. For example, for a tested CPU with a TSC frequency of 19167.1 MHz yields a calibration result of 1912.3 MHz.

Proposed solution

- Just wait 1193182 PIT ticks for 1 s instead of a number of rtems ticks
- Use the raw timer value instead of waiting for clock ticks.

Author: Joel Sherrill 2021-12-17T17:21:14.000Z

Original author: soja

Any progress on this?

Author: Trac Migrate 2022-01-06T08:35:02.000Z

Original author: soja

Seems I created this ticket twice by accident. It is a duplicate of #4455 which was fixed by this commit https://git.rtems.org/rtems/commit/?id=93f96455957a943f1a4c17655a09612a93a34bf4 .

Author: Trac Migrate 2022-01-06T08:35:21.000Z

Original author: soja

- **Resolution** set to ~"duplicate"
- **Status** changed from *new* to *closed*

Author: Amar Takhar 2024-04-25T20:49:05.768Z

changed the description

3.9.1.337 4448 - covoar reports uncovered ranges of size 1

Id	4448
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-06-02T14:15:25.000Z
Updated	2024-04-25T20:49:05.176Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverage, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4448
Merges	0

Original author: Alex

The uncovered range reports produced by covoar for the ARM architecture contain ranges of size 1. When clicked, they link to instructions that appears to be covered.

This should be fixed to remove these erroneous ranges.

Author: Trac Migrate 2021-06-02T14:15:35.000Z

Original author: Alex

- **Owner** set to Alex
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-06-04T19:25:14.000Z

Original author: Alex

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"c17664fb7b95f16e7012e4bbcbfd301e7a58b3a8/rtems-tools" c17664f/rtems-tools]:

```
covoar: Fix single-byte uncovered ranges

This fixes a bug where covoar reports uncovered ranges of size 1. When a
NOP instruction is encountered at the end of a function, the remaining
non-instruction bytes are marked as executed. The loop that marks the
remaining bytes as executed was not considering the last address of the
function.

Closes #4448
```

Author: Amar Takhar 2024-04-25T20:49:05.216Z

changed the description

3.9.1.338 4442 - CID 1399721: Copy into fixed size buffer

Id	4442
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Gedare Bloom
Created	2021-05-26T17:52:45.000Z
Updated	2024-04-25T20:49:04.652Z
Milestone	6.1
Labels	library, priority::low, resolution::fixed, scan::coverity, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4442
Merges	0

Original author: hgerber

In pci_cfg_print_device: A source buffer of statically unknown size is copied into a fixed-size destination buffer (CWE-120)

Author: Gedare Bloom 2021-05-26T18:10:12.000Z

Original author: hgerber

- **Milestone** set to %"6.1"
- **Owner** set to @gedare
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-05-26T22:45:46.000Z

Original author: hgerber

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"e2011dca26b5efcf3ff14527af4be3d43142bd14/rtems" e2011dc/rtems]:

```
cpukit/libpci: fix potential buffer overflow in pci_cfg_print_code.c

See also CID 1399721

Closes #4442
```

Author: Amar Takhar 2024-04-25T20:49:04.757Z

changed the description

3.9.1.339 4435 - Thread cancellation may produce ready threads with an active thread timer

Id	4435
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-20T15:15:13.000Z
Updated	2024-04-25T20:49:04.199Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4435
Merges	0

Original author: sebastian.huber

The _Thread_Cancel() (in contrast to _Thread_Restart() which uses a similar code block) may produce ready threads with an active timer in case the thread to cancel has its thread life protection enabled. The problem is this code block:

```
Priority_Control priority;

_Thread_Add_life_change_request( the_thread );

if ( _Thread_Is_life_change_allowed( previous ) ) {
_Thread_State_release( the_thread, &lock_context );

_Thread_queue_Extract_with_proxy( the_thread );
_Thread_Timer_remove( the_thread );
} else {
_Thread_Clear_state_locked( the_thread, STATES_SUSPENDED );
_Thread_State_release( the_thread, &lock_context );
}

priority = _Thread_Get_priority( executing );
_Thread_Raise_real_priority( the_thread, priority );
_Thread_Remove_life_change_request( the_thread );
```

The life change request should only be added/removed if a life change is allowed (see _Thread_Restart()).

Author: Trac Migrate 2021-05-26T12:41:24.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"ce6319ade410d304c187de6d107b52da4a32e255/rtems" ce6319a/rtems]:

```
score: Fix _Thread_Cancel()

The _Thread_Cancel() (in contrast to _Thread_Restart() which used a
similar code block) may have produced ready threads with an active timer
in case the thread to cancel had its thread life protection enabled. The
problem was this code block:

Priority_Control priority;

_Thread_Add_life_change_request( the_thread );

if ( _Thread_Is_life_change_allowed( previous ) ) {
_Thread_State_release( the_thread, &lock_context );

_Thread_queue_Extract_with_proxy( the_thread );
_Thread_Timer_remove( the_thread );
} else {
_Thread_Clear_state_locked( the_thread, STATES_SUSPENDED );
_Thread_State_release( the_thread, &lock_context );
}

priority = _Thread_Get_priority( executing );
_Thread_Raise_real_priority( the_thread, priority );
_Thread_Remove_life_change_request( the_thread );

The life change request should only be added/removed if a life change is
allowed (see _Thread_Restart()).  Add _Thread_Try_life_change_request()
and use it in _Thread_Cancel() and _Thread_Restart().

Close #4435.
```

Author: Amar Takhar 2024-04-25T20:49:04.243Z

changed the description

3.9.1.340 4432 - GcovFunctionData.cc: Uninitialized pointer field error spotted by coverity

Id	4432
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-19T16:08:42.000Z
Updated	2024-04-25T20:49:03.684Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4432
Merges	0

Original author: rlong

CID 1399640: Uninitialized pointer field in GcovFunctionData().

```
20  GcovFunctionData::GcovFunctionData()
21  {
22    numberOfArcs = 0;
23    numberOfBlocks = 0;
24    coverageMap = NULL;
2. uninit_member: Non-static class member id is not initialized in this␣
↪constructor nor in any functions that it calls.
4. uninit_member: Non-static class member checksum is not initialized in this␣
↪constructor nor in any functions that it calls.
6. uninit_member: Non-static class member firstLineNumber is not initialized in␣
↪this constructor nor in any functions that it calls.
CID 1399640 (#1 of 1): Uninitialized pointer field (UNINIT_CTOR)8. uninit_member:␣
↪Non-static class member symbolInfo is not initialized in this constructor nor␣
↪in any functions that it calls.
25  }
```

Author: Trac Migrate 2021-05-19T16:09:58.000Z

Original author: rlong

- **Summary** changed from *DesiredSymbols.h: Uninitialized pointer field error spotted by coverity* to *GcovFunctionData.cc: Uninitialized pointer field error spotted by coverity*

Author: Trac Migrate 2021-09-27T22:18:28.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"247d39ac7156d730a9f1b35a319f60786568e3b4/rtems-tools" 247d39a/rtems-tools]:

```
GcovFunctionData.cc: Initialize member variables

CID 1399640: Uninitialized pointer field

Closes #4432
```

Author: Amar Takhar 2024-04-25T20:49:03.792Z

changed the description

3.9.1.341 4430 - DesiredSymbols.cc: Uninitialized pointer read error spotted by Coverity

Id	4430
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-19T14:14:38.000Z
Updated	2024-04-25T20:49:02.683Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4430
Merges	0

Original author: rlong

CID 1503005: Uninitialized pointer read in load().

```
111         if (sym.type() == sym.st_func) {
20. alloc_fn: Calling operator new which returns uninitialized memory.
CID 1503005 (#2 of 2): Uninitialized pointer read (UNINIT)21. uninit_use_in_call:␣
↪Using uninitialized value (new Coverage::SymbolInformation).sourceFile when␣
↪calling operator =. [show details]
112           set[sym.name()] = *(new SymbolInformation);
```

Author: Trac Migrate 2021-08-04T18:04:04.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Author: Amar Takhar 2024-04-25T20:49:02.788Z

changed the description

3.9.1.342 4428 - ReportsBase.cc: Dereference after null check error spotted by Coverity

Id	4428
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-18T16:24:15.000Z
Updated	2024-04-25T20:49:02.184Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4428
Merges	0

Original author: rlong

CID 1503710: Dereference after null check in WriteAnnotatedReport().

```
12. var_compare_op: Comparing info.uncoveredRanges to null implies that info.
↪uncoveredRanges might be null.
13. Condition info.uncoveredBranches == NULL, taking false branch.
219    if ((info.uncoveredRanges == NULL) &&
220        (info.uncoveredBranches == NULL))
5. Continuing loop.
9. Continuing loop.
221      continue;
222
223    // If uncoveredRanges and uncoveredBranches are empty, then everything
224    // must have been covered for this symbol.  Just skip it.
CID 1503710 (#1 of 1): Dereference after null check (FORWARD_NULL)14. var_deref_
↪model: Passing null pointer info.uncoveredRanges->set to empty, which␣
↪dereferences it. [show details]
225    if ((info.uncoveredRanges->set.empty()) &&
226        (info.uncoveredBranches->set.empty()))
227      continue;
```

Author: Trac Migrate	2021-10-07T14:29:59.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"724505095ae634b485d1b1b8888b147e3a130ea0/rtems-tools" 7245050/rtems-tools]:

```
ReportsBase.cc: Add assert for member variables

The uncoveredRanges and uncoveredBranch member variables are allocated
as a pair. They are both either NULL or not NULL. Coverity does not know
this though, so this assert is added to ensure they are not NULL before
being dereferenced.

CID 1503710: Dereference after null check

Closes #4428
```

Author: Amar Takhar 2024-04-25T20:49:02.292Z

changed the description

3.9.1.343 4427 - GcovData.cc: Dereference after null check error spotted by Coverity

Id	4427
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-18T16:19:41.000Z
Updated	2024-04-25T20:49:01.682Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4427
Merges	0

Original author: rlong

CID 1399597: Dereference after null check in readGcnoFile().

```
53    strcpy( gcnoFileName, fileName );
54    strcpy( gcdaFileName, fileName );
55    strcpy( textFileName, fileName );
56    strcpy( cFileName, fileName );
57    tempString = strstr( gcdaFileName,".gcno" );
58    tempString2 = strstr( textFileName,".gcno" );
59    tempString3 = strstr( cFileName,".gcno" );
60
2. Condition tempString == NULL, taking true branch.
3. var_compare_op: Comparing tempString to null implies that tempString might be␣
↪null.
4. Condition tempString2 == NULL, taking false branch.
61    if ( (tempString == NULL) && (tempString2 == NULL) ){
62      fprintf(stderr, "ERROR: incorrect name of *.gcno file\\n");
```

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```
63    }
64    else
65    {
CID 1399597 (#1 of 1): Dereference after null check (FORWARD_NULL)5. var_deref_
↪model: Passing null pointer tempString to strcpy, which dereferences it.
66      strcpy( tempString, ".gcda");            // construct gcda file name
67      strcpy( tempString2, ".txt");            // construct report file name
68      strcpy( tempString3, ".c");              // construct source file name
69    }
```

Author: Trac Migrate 2021-08-04T17:59:59.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Author: Amar Takhar 2024-04-25T20:49:01.789Z

changed the description

3.9.1.344 4425 - GcovFunctionData.cc: Copy into fixed size buffer errors spotted by Coverity

Id	4425
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-17T21:51:03.000Z
Updated	2024-04-25T20:49:00.736Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4425
Merges	0

Original author: ralo96

CID 1063892: Copy into fixed size buffer in addBlock().

```
CID 1399613 (#1 of 1): Copy into fixed size buffer (STRING_OVERFLOW)1. fixed_size_
↪dest: You might overrun the 256-character fixed-size string block.
↪sourceFileName by copying sourceFileName without checking the length.
2. parameter_as_source: Note: This defect has an elevated risk because the source␣
↪argument is a parameter of the current function.
184    strcpy (block.sourceFileName, sourceFileName);
```

CID 1399616: Copy into fixed size buffer in setBlockFileName().

```
CID 1399616 (#1 of 1): Copy into fixed size buffer (STRING_OVERFLOW)1. fixed_size_
↪dest: You might overrun the 256-character fixed-size string block->
↪sourceFileName by copying fileName without checking the length.
2. parameter_as_source: Note: This defect has an elevated risk because the source␣
↪argument is a parameter of the current function.
298    strcpy(block->sourceFileName, fileName);
```

Author: Trac Migrate 2021-05-17T21:57:02.000Z

Original author: ralo96

Replying to Ryan Long:

> CID 1063892: Copy into fixed size buffer in addBlock(). CID is actually 1399613
>
> > {{{ CID 1399613 (#1 of 1): Copy into fixed size buffer (STRING_OVERFLOW)1. fixed_size_dest: You might overrun the 256-character fixed-size string block.sourceFileName by copying sourceFileName without checking the length. 2. parameter_as_source: Note: This defect has an elevated risk because the source argument is a parameter of the current function. 184 strcpy (block.sourceFileName, sourceFileName); }}} CID 1399616: Copy into fixed size buffer in setBlockFileName(). {{{ CID 1399616 (#1 of 1): Copy into fixed size buffer (STRING_OVERFLOW)1. fixed_size_dest: You might overrun the 256-character fixed-size string block->sourceFileName by copying fileName without checking the length. 2. parameter_as_source: Note: This defect has an elevated risk because the source argument is a parameter of the current function. 298 strcpy(block->sourceFileName, fileName); }}}

Author: Trac Migrate 2021-12-16T20:49:57.000Z

Original author: ralo96

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Author: Amar Takhar 2024-04-25T20:49:00.846Z

changed the description

3.9.1.345 4424 - rtems-bin2c.c: Copy into fixed size buffer spotted by Coverity

Id	4424
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-17T20:57:47.000Z
Updated	2024-04-25T20:49:00.230Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4424
Merges	0

Original author: ralo96

CID 1063892: Copy into fixed size buffer in process().

```
141  char *ifbasename;
142  ifbasename = basename(ifbasename_to_free);
143
CID 1063892 (#1 of 1): Copy into fixed size buffer (STRING_OVERFLOW)13. fixed_
↪size_dest: You might overrun the 1025-character fixed-size string buf by␣
↪copying ifbasename without checking the length.
144  strcpy(buf, ifbasename);
```

Author: Trac Migrate 2021-09-29T14:58:29.000Z

Original author: ralo96

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"05dab02722b7df3f1f231884e5f58cc7be969b75/rtems-tools" 05dab02/rtems-tools]:

```
rtems-bin2c.c: Check length of buffer to be copied

CID 1063892: Copy into fixed size buffer in process().

Closes #4424
```

Author: Amar Takhar 2024-04-25T20:49:00.336Z

changed the description

3.9.1.346 4423 - record-client.c: Unchecked return value error spotted by Coverity

Id	4423
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-17T19:14:04.000Z
Updated	2024-04-25T20:48:59.733Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4423
Merges	0

Original author: rlong

CID 1503011: Unchecked return value in resolve_hold_back().

```
191    for ( index = begin_index; index < per_cpu->item_index; ++index ) {
192      const rtems_record_item_64 *item;
193
194      item = &per_cpu->items[ index ];
CID 1503011 (#1 of 1): Unchecked return value (CHECKED_RETURN)12. check_return:␣
↪Calling visit without checking return value (as is done elsewhere 4 out of 5␣
↪times).
195      visit( ctx, item->event, item->data );
```

Author: Trac Migrate 2021-09-30T16:07:40.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"7c37893893fe879c21724fbf7ffda3c50a1bd086/rtems-tools" 7c37893/rtems-tools]:

```
record-client.c: Ignore return value from visit()

CID 1503011: Unchecked return value in resolve_hold_back().

Closes #4423
```

Author: Amar Takhar 2024-04-25T20:48:59.839Z

changed the description

3.9.1.347 4422 - ReportsBase.cc: Resource leak error spotted by Coverity

Id	4422
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-17T16:50:30.000Z
Updated	2024-04-25T20:48:59.214Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4422
Merges	0

Original author: rlong

CID 1503711: Resource leak in WriteSummaryReport().

```
548    fprintf(
549      report,
550      "Percentage branch paths covered  : %4.4g\\n",
551      100.0 - percentageBranches
552    );
553  }
CID 1503711 (#1 of 1): Resource leak (RESOURCE_LEAK)34. leaked_storage: Variable report going out of scope leaks the storage it points to.
554}
555
```

Author: Trac Migrate 2021-06-04T17:23:28.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"5278060818cf0119f1ceb8b53187667c90359bf8/rtems-tools" 52780608/rtems-tools]:

```
ReportsBase.cc: Fix Resource leak

CID 1503711: Resource leak in WriteSummaryReport().

Closes #4422
```

Author: Amar Takhar 2024-04-25T20:48:59.322Z

changed the description

3.9.1.348 4421 - DesiredSymbols.cc: Resource leak error spotted by Coverity

Id	4421
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-17T16:48:44.000Z
Updated	2024-04-25T20:48:58.712Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4421
Merges	0

Original author: rlong

CID 1503018: Resource leak in load().

```
13. alloc_fn: Storage is returned from allocation function operator new.
14. noescape: Resource new Coverity::SymbolInformation is not freed or pointed-to in operator =. [show details]
CID 1503018 (#2 of 2): Resource leak (RESOURCE_LEAK)15. leaked_storage: Failing to save or free storage allocated by new Coverity::SymbolInformation leaks it.
104           set[sym.name()] = *(new SymbolInformation);
```

Author: Trac Migrate 2021-06-04T17:23:26.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"9527f6580e4e624f0b4e095beca5adaa05717bf0/rtems-tools" 9527f65/rtems-tools]:

```
DesiredSymbols.cc: Fix resource leak

CID 1503018: Resource leak in load().

Closes #4421
```

Author: Amar Takhar 2024-04-25T20:48:58.817Z

changed the description

3.9.1.349 4420 - TraceWriterQEMU.cc: Resource leak error spotted by Coverity

Id	4420
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-17T16:35:57.000Z
Updated	2024-04-25T20:48:58.204Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4420
Merges	0

Original author: rlong

CID 1399621: Resource leak in writeFile().

```
5. noescape: Resource traceFile is not freed or pointed-to in fwrite.
116    status = ::fwrite( &header, sizeof(trace_header), 1, traceFile );
6. Condition status != 1, taking true branch.
117    if (status != 1) {
118      std::cerr << "Unable to write header to " << file << std::endl;
CID 1399621 (#1 of 1): Resource leak (RESOURCE_LEAK)7. leaked_storage: Variable traceFile going out of scope leaks the storage it points to.
119      return false;
```

Author: Trac Migrate 2021-06-04T17:23:24.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"a0b54f09b91da3b9a8bb099a222caa721b28a5c8/rtems-tools" a0b54f0/rtems-tools]:

```
TraceWriterQEMU.cc: Fix resource leak

CID 1399621: Resource leak in writeFile().

Closes #4420
```

Author: Amar Takhar 2024-04-25T20:48:58.312Z

changed the description

3.9.1.350 4419 - TraceReaderLogQEMU.cc: Resource leak error spotted by Coverity

Id	4419
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-17T16:28:49.000Z
Updated	2024-04-25T20:48:57.698Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4419
Merges	0

Original author: rlong

CID 1399615: Resource leak in processFile().

```
113    //
114    //  Discard Header section
115    //
6. noescape: Resource logFile is not freed or pointed-to in ReadUntilFound. [show details]
7. Condition ReadUntilFound(logFile, "----------------"), taking true branch.
116    if (! ReadUntilFound( logFile, QEMU_LOG_SECTION_END ) ) {
117      fprintf( stderr, "Unable to locate end of log file header\\n" );
CID 1399615 (#2 of 2): Resource leak (RESOURCE_LEAK)8. leaked_storage: Variable logFile going out of scope leaks the storage it points to.
118      return false;
```

Author: Trac Migrate 2021-06-04T17:23:19.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"dfe012de71ec8550f158fc51e9c48fb06e37d32e/rtems-tools" dfe012d/rtems-tools]:

```
TraceReaderLogQEMU.cc: Fix resource leak

CID 1399615: Resource leak in processFile().

Closes #4419
```

Author: Amar Takhar 2024-04-25T20:48:57.806Z

changed the description

3.9.1.351 4418 - GcovData.cc: Resource leak error spotted by Coverity

Id	4418
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-17T16:20:07.000Z
Updated	2024-04-25T20:48:57.180Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4418
Merges	0

Original author: rlong

CID 1399610: Resource leak in readFrame().

```
250        newFunction = new GcovFunctionData;
5. noescape: Resource newFunction is not freed or pointed-to in readFunctionFrame.
↪ [show details]
6. Condition !this->readFunctionFrame(header, gcovFile, newFunction), taking true␣
↪branch.
251        if ( !readFunctionFrame(header, gcovFile, newFunction) ){
252          fprintf( stderr, "Error while reading FUNCTION from gcov file...\\n"␣
↪);
CID 1399610 (#1 of 1): Resource leak (RESOURCE_LEAK)7. leaked_storage: Variable␣
↪newFunction going out of scope leaks the storage it points to.
253          return false;
254        }
```

Author: Trac Migrate	2021-06-04T17:23:22.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"08d9f37d521f5540086c3e7d8de98faf03fb10ff/rtems-tools" 08d9f37/rtems-tools]:

```
GcovData.cc: Fix resource leak

CID 1399610: Resource leak in readFrame().

Closes #4418
```

Author: Amar Takhar 2024-04-25T20:48:57.292Z

changed the description

3.9.1.352 4417 - Explanations.cc: Resource leak error spotted by Coverity

Id	4417
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-17T16:17:31.000Z
Updated	2024-04-25T20:48:56.670Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4417
Merges	0

Original author: rlong

CID 1399608: Resource leak in load().

```
CID 1399608 (#1 of 1): Resource leak (RESOURCE_LEAK)9. leaked_storage: Variable␣
↪explain going out of scope leaks the storage it points to.
```

Author: Trac Migrate 2021-05-17T16:21:48.000Z

Original author: rlong

Replying to Ryan Long:

> CID 1399608: Resource leak in load().
>
> ```
> CID 1399608 (#1 of 1): Resource leak (RESOURCE_LEAK)9. leaked_
> ↪storage: Variable explain going out of scope leaks the␣
> ↪storage it points to.
> }}}
> Also,
> CID 1399611: Resource leak in load().
> {{{
> 48    while ( 1 ) {
> 4. alloc_fn: Storage is returned from allocation function␣
> ↪operator new.
> 5. var_assign: Assigning: e = storage returned from new␣
> ↪Coverage::Explanation.
> CID 1399611 (#2 of 2): Resource leak (RESOURCE_LEAK)21.␣
> ↪overwrite_var: Overwriting e in e = new␣
> ```
>
> (continues on next page)

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```
↪Coverage::Explanation leaks the storage that e points to.
49      e = new Explanation;
```

Author: Trac Migrate 2021-06-04T17:23:17.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"9f4887ccafa77d8c477e7a1d6995b6cbc3b20476/rtems-tools" 9f4887c/rtems-tools]:

```
Explanations.cc: Fix resource leaks

CID 1399608: Resource leak in load().
CID 1399611: Resource leak in load().

Closes #4417
```

Author: Amar Takhar 2024-04-25T20:48:56.774Z

changed the description

3.9.1.353 4416 - rtems-exeinfo.cpp: Division or modulo by zero errors spotted by Coverity

Id	4416
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-17T15:29:32.000Z
Updated	2024-04-25T20:48:56.157Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4416
Merges	0

Original author: rlong

CID 1503008: Division or modulo by zero in output_inlined().

```
CID 1503008 (#1 of 1): Division or modulo by zero (DIVIDE_BY_ZERO)9. divide_by_
↪zero: In expression funcs_inlined.size() * 100UL / total, division by␣
```

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```
↪expression total which may be zero has undefined behavior.
801       std::cout << "inlined funcs   : " << funcs_inlined.size () << std::endl
802                 << "    total funcs : " << total << std::endl
803                 << " % inline funcs : " << (funcs_inlined.size () * 100) /␣
↪total << '%'
804                 << std::endl
```

CID 1503015: Division or modulo by zero in output_inlined().

```
CID 1503015 (#1-2 of 2): Division or modulo by zero (DIVIDE_BY_ZERO)18. divide_by_
↪zero: In expression inlined_size * 100UL / total_size, division by expression␣
↪total_size which may be zero has undefined behavior.
805                 << "     total size : " << total_size << std::endl
806                 << "    inline size : " << inlined_size << std::endl
807                 << "  % inline size : " << (inlined_size * 100) / total_size <
↪< '%'
808                 << std::endl;
```

Author: Trac Migrate 2021-06-29T21:01:12.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"7d3b8acf605f64430baa2c0568cf6f99596bc284/rtems-tools" 7d3b8ac/rtems-tools]:

```
rtems-exeinfo.cpp: Fix division by zero errors

CID 1503008: Division or modulo by zero
CID 1503015: Division or modulo by zero

Closes #4416
```

Author: Amar Takhar 2024-04-25T20:48:56.270Z

changed the description

3.9.1.354 4415 - ReportsBase.cc: Division or modulo by float zero error spotted by Coverity

Id	4415
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-17T14:47:47.000Z
Updated	2024-04-25T20:48:55.646Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverity, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4415
Merges	0

Original author: rlong

CID 1503709: Division or modulo by float zero in WriteSummaryReport().

```
485  percentage = (double) notExecuted;
CID 1503709 (#1 of 1): Division or modulo by float zero (DIVIDE_BY_ZERO)7. divide_
↪by_zero: In expression percentage /= (double)totalBytes, division by expression␣
↪totalBytes which may be zero has undefined behavior.
486  percentage /= (double) totalBytes;
487  percentage *= 100.0;
```

Author: Trac Migrate 2021-06-29T21:01:09.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"ffbf3139286122e3b5c7ed90eb83cba590f9a9e4/rtems-tools" ffbf313/rtems-tools]:

```
ReportsBase.cc: Remove possible division by zero

CID 1503709: Division or modulo by float zero

Closes #4415
```

Author: Amar Takhar 2024-04-25T20:48:55.753Z

changed the description

3.9.1.355 4414 - Return RTEMS_CALLED_FROM_ISR in rtems_task_delete()

Id	4414
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-14T16:52:47.000Z
Updated	2024-04-25T20:48:55.186Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4414
Merges	0

Original author: sebastian.huber

Calling rtems_task_delete() from within interrupt context has an unpredictable behaviour. It depends on which thread is interrupted. Return an error status instead.

Author: Trac Migrate 2021-05-26T12:41:13.000Z

Original author: sebastian.huber

In [changeset:"b81d1ffd236574dcb9fca539c1efb631165877ea/rtems" b81d1ffd/rtems]:

```
rtems: Return RTEMS_CALLED_FROM_ISR

If rtems_task_delete() is called from within interrupt context, then
return RTEMS_CALLED_FROM_ISR.  This makes the behaviour predictable.

Update #4414.
```

Author: Trac Migrate 2021-05-27T05:08:57.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"2509b62106c32560a2fad001eaef63cac8d53fd4/rtems-docs" 2509b62/rtems-docs]:

```
c-user: Document new rtems_task_delete() error

Close #4414.
```

Author: Trac Migrate 2021-05-27T05:13:14.000Z

Original author: sebastian.huber

In [changeset:"2fdd00fcdc4361f46c727a601d9ee5ece01ca230/rtems" 2fdd00f/rtems]:

```
rtems: Document new rtems_task_delete() error

Update #4414.
```

Author: Amar Takhar 2024-04-25T20:48:55.242Z

changed the description

3.9.1.356 4413 - Allow pthread_cancel() from within interrupt context

Id	4413
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-14T15:39:21.000Z
Updated	2024-04-25T20:48:54.746Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4413
Merges	0

Original author: sebastian.huber

The pthread_cancel() does not immediately delete resources if invoked for threads other than the executing thread. With minor changes it may be called also from within interrupt context.

Author: Trac Migrate 2021-05-14T16:35:56.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
- The rtems_task_delete() and pthread_cancel() do not immediately␣
↪delete resources if invoked for threads other than the executing␣
↪thread. With minor changes they can be called also from within␣
↪interrupt context.
?    ------------------------                                    ␣
↪                                                                ␣
↪                 ^^ ----

+ The pthread_cancel() does not immediately delete resources if invoked␣
```

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```
↪for threads other than the executing thread. With minor changes it␣
↪may be called also from within interrupt context.
?                          ++                                          ␣
↪                                                          + ^^^
```

- **Summary** changed from *Allow rtems_task_delete() and pthread_cancel() from within interrupt context* to *Allow pthread_cancel() from within interrupt context*

Author: Trac Migrate 2021-05-26T12:41:20.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"29187be532c7d6c7b81f2e7def132bbfba7c916c/rtems" 29187be/rtems]:

```
posix: Allow pthread_cancel() from within ISRs

Close #4413.
```

Author: Amar Takhar 2024-04-25T20:48:54.785Z

changed the description

3.9.1.357 4412 - Unexpected rtems_task_restart() behaviour if called from within interrrupt context

Id	4412
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-14T12:49:57.000Z
Updated	2024-04-25T20:48:54.299Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4412
Merges	0

Original author: sebastian.huber

In rtems_task_restart() there is a check if the executing thread is restarted. However, in interrupt context, this simple check results in an internal error INTERNAL_ERROR_BAD_THREAD_DISPATCH_DISABLE_LEVEL if the executing thread is restarted.

Check also if an ISR is in progress to make sure the thread restart works within interrupt context.

Author: Joel Sherrill 2021-05-14T13:01:36.000Z

Original author: sebastian.huber

This service is not documented as being allowed from an ISR. Only task suspend and resume are documented as allowed. I assume by “works” you mean that it returns an error without an internal error.

Author: Trac Migrate 2021-05-14T13:08:57.000Z

Original author: sebastian.huber

The rtems_task_restart() works well if called from within interrupt context if you use _ISR_Is_in_progress() to determine a self restart. This directive doesn't use a mutex internally only ISR locks.

Author: Trac Migrate 2021-05-14T15:05:31.000Z

Original author: sebastian.huber

- **Resolution** set to ~”fixed”
- **Status** changed from *assigned* to *closed*

In [changeset:”73ebf9a27ed5cd0fd3e0dc0da98345d7faa610a2/rtems” 73ebf9a/rtems]:

```
rtems: Fix task restart within interrupt context

rtems_task_restart() may be called from within interrupt context.  So
checking only that the thread to restart is equal to the executing
thread is insufficient to determine a self restart.  We have to also
check that no ISR is in progress.  Merge _Thread_Restart_other() and
_Thread_Restart_self() into one _Thread_Restart() since they share a lot
of common code.

Close #4412.
```

Author: Trac Migrate 2021-05-26T12:41:27.000Z

Original author: sebastian.huber

In [changeset:”de694b753ca11136adce7600d55642695c8ef39d/rtems” de694b75/rtems]:

```
score: Direct thread dispatch in a self restart

Commit 73ebf9a27ed5cd0fd3e0dc0da98345d7faa610a2 accidentally removed the
direct thread dispatch in a self thread restart.  In case of a self
restart (always in task context) the directive shall not return.  If
this is not possible due to a bad thread dispatch disable level, then a
fatal error shall occur.

Update #4412.
```

Author: Amar Takhar 2024-04-25T20:48:54.338Z

changed the description

3.9.1.358 4411 - rtems_task_restart() should set the real priority to the initial priority

Id	4411
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-14T11:58:30.000Z
Updated	2024-04-25T20:48:53.854Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4411
Merges	0

Original author: sebastian.huber

The rtems_task_restart() directive should set the real priority to the initial priority. If another task is restarted this is only under certain conditions. The RTEMS 4.5.0 behaviour was to unconditionally set the real priority to the initial priority during a task restart.

Author: Trac Migrate 2021-05-14T12:46:18.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
- The rtems_task_restart() directive should set the real priority to␣
↪the initial priority.  Currently, this is only done if another task␣
↪is restarted and only under certain conditions.  The RTEMS 4.5.0␣
↪behaviour was to unconditionally set the real priority to the initial␣
↪priority during a task restart.
```

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```
?
↪                    ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^                    ␣
↪         ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
3
+ The rtems_task_restart() directive should set the real priority to␣
↪the initial priority.  If another task is restarted this is only␣
↪under certain conditions.  The RTEMS 4.5.0 behaviour was to␣
↪unconditionally set the real priority to the initial priority during␣
↪a task restart.
?
↪                     ^                              ^^^^^^^^^^^^^^^^^^^^␣
↪^^^^^^^^^^^^^^^^^
```

Author: Trac Migrate 2021-05-14T15:05:27.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"b9083c5597d4130c23549fba66bd83d02663f463/rtems" b9083c55/rtems]:

```
rtems: Always set the real priority during restart

Unconditionally set the real priority of the task to its initial
priority during a task restart.

Close #4411.
```

Author: Amar Takhar 2024-04-25T20:48:53.892Z

changed the description

3.9.1.359 4406 - rtems: Constify rtems_task_wake_when()

Id	4406
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-11T11:40:31.000Z
Updated	2024-04-25T20:48:52.599Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4406
Merges	0

Original author: sebastian.huber

The time of day pointer can be made constant in this directive.

Author: Trac Migrate 2021-05-12T19:27:04.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"523867de9d274d2bdc29ce649d764b42a9167c0e/rtems" 523867d/rtems]:

```
rtems: Constify rtems_task_wake_when()

Add a parameter to _TOD_Validate() to disable the validation of the
ticks member.

There are two reasons for this change.  Firstly, in
rtems_task_wake_when() was a double check for time_buffer == NULL (one
in rtems_task_wake_when() and one in _TOD_Validate()).  Secondly, the
ticks member is ignored by rtems_task_wake_when().  This was done with a
write of zero to the ticks member and thus a modification of the
user-provided structure.  Now the structure is no longer modified.
Using a mask parameter is quite efficient. You just have to load an
immediate value and there are no additional branches in _TOD_Validate().

Close #4406.
```

Author: Trac Migrate 2021-05-12T19:32:26.000Z

Original author: sebastian.huber

In [changeset:"2588e8bf3540390a0e9066d40adcf1afb2a89c54/rtems-docs" 2588e8b/rtems-docs]:

```
c-user: Constify rtems_task_wake_when()

Update #4406.
```

Author: Trac Migrate 2021-05-14T06:10:25.000Z

Original author: sebastian.huber

In [changeset:"45a34953256b237171a2ceea310b370b309cd29b/rtems" 45a34953/rtems]:

```
rtems: Add TOD_Ticks_validation

Replace defines with an enum.

Update #4406.
```

Author: Trac Migrate 2021-05-17T06:05:46.000Z

Original author: sebastian.huber

In [changeset:"98cb84ea2fd5a65d3f98363a9ecaed012fbc2231/rtems" 98cb84e/rtems]:

```
arm/altera-cyclone-v: Fix compile error

Update #4406.
```

Author: Amar Takhar 2024-04-25T20:48:52.639Z

changed the description

3.9.1.360 4401 - rtems: Change rtems_scheduler_get_processor_set() status

Id	4401
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-05T11:33:35.000Z
Updated	2024-04-25T20:48:52.094Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4401
Merges	0

Original author: sebastian.huber

In case the processor set is not large enough to contain the processor set of the scheduler return RTEMS_INVALID_SIZE instead of RTEMS_INVALID_NUMBER. This is more in line with other directives since the issue is related to the size of an object.

A similar change was done in #4393.

Author: Trac Migrate 2021-05-06T13:15:03.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"48898b3a5d27a73a65f2b7520ceb53005d45c984/rtems" 48898b3/rtems]:

```
rtems: rtems_scheduler_get_processor_set() status

In case the processor set is not large enough to contain the processor
set owned by the scheduler return RTEMS_INVALID_SIZE instead of
RTEMS_INVALID_NUMBER. This is more in line with other directives since
the issue is related to the size of an object.

Close #4401.
```

Author: Trac Migrate 2021-05-07T06:09:35.000Z

Original author: sebastian.huber

In [changeset:"6822af7579e9ffcd947b4e3990c14eeb4e932b29/rtems" 6822af7/rtems]:

```
rtems: rtems_scheduler_get_processor_set() docs

Document changed error status.

Update #4401.
```

Author: Trac Migrate 2021-05-07T06:19:33.000Z

Original author: sebastian.huber

In [changeset:"e8cd4d3bec627680e83cf352bd93086b36192c0a/rtems-docs" e8cd4d3/rtems-docs]:

```
c-user: rtems_scheduler_get_processor_set()

Document changed error status.

Update #4401.
```

Author: Amar Takhar 2024-04-25T20:48:52.142Z

changed the description

3.9.1.361 4393 - rtems: Change rtems_task_get_affinity() status

Id	4393
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-27T17:37:41.000Z
Updated	2024-04-25T20:48:51.656Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4393
Merges	0

Original author: sebastian.huber

In case the processor set is not large enough to contain the processor affinity set of the task return RTEMS_INVALID_SIZE instead of RTEMS_INVALID_NUMBER. This is more in line with other directives since the issue is related to the size of an object.

Author: Trac Migrate 2021-04-27T17:53:19.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"4b7c77bce370d2ff88c9fb9036e5f3a3b1da9cb7/rtems" 4b7c77b/rtems]:

```
rtems: Change rtems_task_get_affinity() status

In case the processor set is not large enough to contain the processor
affinity set of the task return RTEMS_INVALID_SIZE instead of
RTEMS_INVALID_NUMBER. This is more in line with other directives since
the issue is related to the size of an object.

Close #4393.
```

Author: Amar Takhar 2024-04-25T20:48:51.695Z

changed the description

Author: Amar Takhar 2024-04-25T20:48:52.202Z

mentioned in issue #4401

3.9.1.362 4392 - rtems: Constify timer fire when directives

Id	4392
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-27T17:33:36.000Z
Updated	2024-04-25T20:48:51.211Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4392
Merges	0

Original author: sebastian.huber

The time of day pointer can be made constant in the timer fire when directives.

Author: Trac Migrate 2021-04-27T17:34:49.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"2684f2a38096dcace313e9ba953782bd756e4fc8/rtems" 2684f2a3/rtems]:

```
rtems: Constify timer fire when directives

Close #4392.
```

Author: Trac Migrate 2021-04-28T07:04:08.000Z

Original author: sebastian.huber

In [changeset:"de8fe65f57c92ef54edbac2cf9965a3581335470/rtems-docs" de8fe65/rtems-docs]:

```
c-user: Constify timer fire when directives

Update #4392.
```

Author: Amar Takhar 2024-04-25T20:48:51.250Z

changed the description

3.9.1.363 4390 - Make zero size allocation result consistent across directives

Id	4390
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-20T18:37:10.000Z
Updated	2024-04-25T20:48:50.771Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4390
Merges	0

Original author: sebastian.huber

There is a special case in malloc() which results in a malloc(0) == NULL invariant. This special case should move to rtems_heap_allocate_aligned_with_boundary() to have a consistent behaviour across the API level memory allocation directives.

Author: Trac Migrate 2021-04-20T18:37:24.000Z

Original author: sebastian.huber

- **Summary** changed from *Make zero size allocation result consistent accross directives* to *Make zero size allocation result consistent across directives*

Author: Joel Sherrill 2021-04-20T22:41:58.000Z

Original author: sebastian.huber

This is an area of undefined behavior per POSIX. It might be worth considering having this be a debug failure.

https://pubs.opengroup.org/onlinepubs/009695399/functions/malloc.html

Author: Trac Migrate 2021-04-21T04:43:41.000Z

Original author: sebastian.huber

It is not undefined behaviour in the latest POSIX edition:

https://pubs.opengroup.org/onlinepubs/9699919799/functions/malloc.html

It is implementation-defined behaviour. The implementation has two options. The RTEMS malloc(0) returns NULL. Linux seems to return a unique pointer.

The rtems_memalign(&p, 8, 0) returns a unique pointer. I think this size == 0 behaviour should be consistent in RTEMS.

Author: Trac Migrate 2021-05-04T11:08:10.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"d692c62dfbf834c16ef7f171ea3161b3f3fac06b/rtems" d692c62d/rtems]:

```
Make zero size allocation result consistent

The zero size allocations had no consistent behaviour in RTEMS.  For
example, malloc( 0 ) returned NULL and posix_memalign( &p, align, 0 )
returned in p a unique pointer (or NULL if no memory is available).  In
POSIX, zero size memory allocations are implementation-defined
behaviour.  The implementation has two options:

https://pubs.opengroup.org/onlinepubs/9699919799/functions/malloc.html

https://pubs.opengroup.org/onlinepubs/9699919799/functions/posix_
↪memalign.html

Linux and FreeBSD return a unique pointer for zero size memory
allocations.  Use this approach for RTEMS as well throughout the memory
allocation directives

Close #4390.
```

Author: Trac Migrate 2021-05-06T13:15:09.000Z

Original author: sebastian.huber

In [changeset:"2c5199bb049efe8e29cd12461dc57bd6e30388e8/rtems" 2c5199b/rtems]:

```
Return NULL for zero size allocations

In POSIX, zero size memory allocations are implementation-defined
behaviour.  The implementation has two options:

https://pubs.opengroup.org/onlinepubs/9699919799/functions/malloc.html

https://pubs.opengroup.org/onlinepubs/9699919799/functions/posix_
↪memalign.html

Linux and FreeBSD return a unique pointer for zero size memory
allocations.  Return NULL on RTEMS to more likely catch the use of a
zero size memory area by erroneous applications.
```

(continues on next page)

(continued from previous page)

```
13
14 Update #4390.
```

Author: Trac Migrate 2021-05-07T05:08:44.000Z

Original author: sebastian.huber

In [changeset:"c46d125569a215226602a7d4b9c346ee074fe365/rtems" c46d125/rtems]:

```
1 Check the alignment in posix_memalign() earlier
2
3 Make sure all conditions to do a proper memory allocation are satisfied
4 before a zero size memory allocation is performed.
5
6 Update #4390.
```

Author: Amar Takhar 2024-04-25T20:48:50.809Z

changed the description

3.9.1.364 4389 - Undefined behaviour if the area size calculation in calloc() and rtems_calloc() overflows

Id	4389
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-20T18:32:51.000Z
Updated	2024-04-25T20:48:50.337Z
Milestone	6.1
Labels	library, priority::normal, qualification, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4389
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2021-04-21T05:03:30.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"51defd927427b5b74c3a0c0f0b5c161929547cfc/rtems" 51defd92/rtems]:

```
Fix calloc() behaviour in case of overflow

The multiplication to calculate the length of the memory area to
allocate may overflow.  Return NULL in case of an overflow.

Close #4389.
```

Author: Amar Takhar 2024-04-25T20:48:50.373Z

changed the description

3.9.1.365 4387 - covoar marks taken/not taken incorrectly for AArch64

Id	4387
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-16T18:11:01.000Z
Updated	2024-04-25T20:48:49.904Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverage, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4387
Merges	0

Original author: Alex

The AArch64 annotated assembly produced by covoar reveals that branches that are never taken are marked “ALWAYS TAKEN” and branches that are always taken are marked “NEVER TAKEN”.

It appears that this is caused by incorrect return values in `TargetBase::qemuTakenBit()` and `TargetBase::qemuNotTakenBit()`. These methods should be overridden in `Target_aarch64` so that the return values are switched.

Author: Trac Migrate 2021-04-16T18:11:12.000Z

Original author: Alex

- **Owner** set to Alex
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-04-16T22:29:05.000Z

Original author: Alex

- **Resolution** set to ~”fixed”
- **Status** changed from *accepted* to *closed*

In [changeset:"0c4884a0d071dd56e6eb8f67ea6d1a5092d6830e/rtems-tools" 0c4884a/rtems-tools]:

```
covoar/Target_aarch64: Swap QEMU taken/not taken bits

This overrides the `TargetBase` behavior to allow branches to be marked
correctly as either taken or not taken.

Closes #4387
```

Author: Amar Takhar 2024-04-25T20:48:49.943Z

changed the description

3.9.1.366 4386 - covoar missing conditional branch instructions on ARM

Id	4386
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-16T14:36:58.000Z
Updated	2024-04-25T20:48:49.445Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverage, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4386
Merges	0

Original author: Alex

Two ARM instructions, `cbz` and `cbnz`, are not being treated as conditional branch instructions by covoar currently. They should be added to the list of conditional branch instructions in `Target_arm`.

Author: Trac Migrate 2021-04-16T14:37:50.000Z

Original author: Alex

- **Owner** set to Alex
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-04-16T22:29:01.000Z

Original author: Alex

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"292363de55ca2d8b22500498400efaa68cc42473/rtems-tools" 292363d/rtems-tools]:

```
covoar/Target_arm: Add cbz and cbnz as branch instructions

This adds `cbz` and `cbnz` as conditional branch instructions for ARM as
they appear to have been missed.

Closes #4386
```

Author: Amar Takhar 2024-04-25T20:48:49.483Z

changed the description

3.9.1.367 4383 - covoar keeps DWARF info in memory too long

Id	4383
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-08T17:50:07.000Z
Updated	2024-04-25T20:48:49.004Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverage, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4383
Merges	0

Original author: Alex

To get covoar working again, the ELF and DWARF info cleanup was moved from the `ExecutableInfo` constructor to the `ExecutableInfo` destructor. Without this change, covoar would report the locations of symbols as `unknown:-1`. This is because the DWARF info is used later in the `ExecutableInfo::getSourceAndLine()` method with a call to `debug.get_source()`.

This caused a new issue: the ELF and DWARF info is now held in memory for the life of the program. This causes very high memory usage when running covoar, more than 10 GB for some BSPs.

A quick and dirty solution is to find what is being referenced in `debug.get_source()` and preserve it after `debug.end()` is called. It appears that refraining from calling `cus.clear()` in `rld::dwarf::file::end()` would be a good place to start. Additionally, the `rld::dwarf::sources` class will likely need to be changed to copy out the DWARF source file info.

Author: Trac Migrate 2021-04-08T17:50:19.000Z

Original author: Alex

- **Owner** set to Alex
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-06-17T21:05:37.000Z

Original author: Alex

In [changeset:"a88be93a882379b59491e6661fad7dab0b358933/rtems-tools" a88be93/rtems-tools]:

```
covoar: Store only the file name in ExecutableInfo

This changes the ExecutableInfo class to only store the executable
file's name rather than an entire instance of rld::files::object. This
allows the rld::files::object to be cleaned up in the ExecutableInfo
constructor.

Updates #4383
```

Author: Trac Migrate 2021-06-17T21:05:39.000Z

Original author: Alex

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"ac56fce7c17e40c6ecd7980fa828a76550bbacb3/rtems-tools" ac56fce/rtems-tools]:

```
covoar: Store address-to-line info outside of DWARF

This adds the AddressToLineMapper class and supporting classes to
assume responsibility of tracking address-to-line information.

This allows the DWARF library to properly cleanup all of its resources
and leads to significant memory savings.

Closes #4383
```

Author: Amar Takhar 2024-04-25T20:48:49.047Z

changed the description

3.9.1.368 4378 - covoar/symbol-sets add libuuid to symbol-sets.ini

Id	4378
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-05T18:58:31.000Z
Updated	2024-04-25T20:48:48.571Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverage, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4378
Merges	0

Original author: Alex

`libuuid` should be added to the list of symbol sets in the symbol-sets.ini configuration file.

Author: Trac Migrate 2021-05-18T14:22:19.000Z

Original author: Alex

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Fixed in [https://git.rtems.org/rtems-tools/commit/?id=eecde471ccd4a87d9f51f6f0cce9e6791bf27835]

Author: Amar Takhar 2024-04-25T20:48:48.609Z

changed the description

3.9.1.369 4377 - covoar/Explanations Explanations::writeNotFound() NULL check of wrong variable

Id	4377
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-05T18:54:03.000Z
Updated	2024-04-25T20:48:48.133Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverage, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4377
Merges	0

Original author: Alex

The `Explanations::writeNotFound()` method contains two `NULL` checks for the `fileName` variable. The second check should be checking if `notFoundFile` is `NULL` because it relates to the error being reported in the `true` case.

It appears that this was a simple mistake that was never caught until now.

Author: Trac Migrate 2021-04-07T15:21:05.000Z

Original author: Alex

- **Owner** set to Alex
- **Status** changed from *new* to *accepted*

Author: Joel Sherrill 2021-04-07T15:23:52.000Z

Original author: Alex

Didn't this get caught as part of reviewing a Coverity issue? Please cite one.

Author: Trac Migrate 2021-04-07T15:26:54.000Z

Original author: Alex

No, it got caught as part of my testing. It may have also been a Coverity issue, but I ran into a NULL pointer dereference with this.

Author: Joel Sherrill 2021-04-07T15:49:26.000Z

Original author: Alex

CID #1399602 is about a NULL reference in the same method which traces back to the incorrect variable being checked. Coverity didn't realize it was the wrong variable but did find something wrong that could lead to a NULL pointer dereference.

Check me and please cite it in the ticket and git commit message.

Author: Trac Migrate 2021-04-07T20:36:39.000Z

Original author: Alex

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"e84b9f3a94c35c80785cf7a855a50f34bfe601e0/rtems-tools" e84b9f3/rtems-tools]:

```
covoar: Fix NULL check of wrong variable (CID #1399602)

CID 1399602: Dereference null return value in
Explanations::writeNotFound().

In Explanations::writeNotFound() there were two NULL checks of the
`fileName` variable where only one is needed. The second check has been
changed to a NULL check of `notFoundFile` to match the original intent.

Closes #4377
```

Author: Amar Takhar 2024-04-25T20:48:48.174Z

changed the description

3.9.1.370 4376 - covoar/ReportsBase Coverage::GenerateReports() uses raw pointer to std::list

Id	4376
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-05T18:29:36.000Z
Updated	2024-04-25T20:48:47.691Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverage, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4376
Merges	0

Original author: Alex

The `Coverage::GenerateReports()` function uses a variable of type `std::list<ReportsBase *>` to store the `ReportsBase`-derived classes used to generate the reports. The function should use an `std::vector<std::unique_ptr<ReportsBase>>` instead.

An `std::vector` is the preferred container type in this case because the constant-time insertion and removal properties of `std::list` are not needed. The smart pointer type `std::unique_ptr<ReportsBase>` is preferred over `ReportsBase *` because it eliminates the need for manual pointer deletion at the end of the function.

Author: Joel Sherrill 2021-04-05T18:35:16.000Z

Original author: Alex

- **Description** changed

```
- The `Coverage::GenerateReports()` function uses an `std::list
↪<ReportsBase *>` to store the `ReportsBase`-derived classes used to␣
↪generate the reports. The function should use an `std::vector
↪<std::unique_ptr<ReportsBase>>` instead.
?                                                ^

+ The `Coverage::GenerateReports()` function uses a variable of type␣
↪`std::list<ReportsBase *>` to store the `ReportsBase`-derived classes␣
↪used to generate the reports. The function should use an `std::vector
↪<std::unique_ptr<ReportsBase>>` instead.
?                                                ^^^^^^^^^^^^^^^^^


An `std::vector` is the preferred container type in this case because␣
↪the constant-time insertion and removal properties of `std::list` are␣
↪not needed. The smart pointer type `std::unique_ptr<ReportsBase>` is␣
↪preferred over `ReportsBase *` because it eliminates the need for␣
↪manual pointer deletion at the end of the function.
```

- **Summary** changed from *covoar/ReportsBase Coverage::GenerateReports() uses raw pointer std::list* to *covoar/ReportsBase Coverage::GenerateReports() uses raw pointer to std::list*

Author: Trac Migrate 2021-12-22T14:35:57.000Z

Original author: Alex

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"8167ad233947c3253e65da2e230594acbf461606/rtems-tools" 8167ad2/rtems-tools]:

```
ReportsBase: Change raw pointer to unique_ptr

Replaced raw pointer used with ReportsBase-derived classes to make code
cleaner and make it to where pointers do not have to be manually
deleted.

Closes #4376
```

Author: Amar Takhar 2024-04-25T20:48:47.734Z

changed the description

3.9.1.371 4374 - Handle symbol sets in covoar

Id	4374
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-05T17:59:13.000Z
Updated	2024-04-25T20:48:47.230Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, scan::coverage, tickettype::task, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4374
Merges	0

Original author: Alex

The covoar tool should be changed to handle all symbol sets for a coverage run rather than being called by coverage.py for each symbol set.

Currently, coverage.py calls covoar once for each symbol set found in the symbol-sets.ini configuration file. This leads to a lot of redundancy. For each symbol set, covoar has to process the objdumps and the coverage information of all the executables even though they do not change.

Changing covoar to process all symbol sets and generate reports in one invocation will result in a large speedup.

This will also require a minor modification to coverage.py to generate the correct .ini file and only call covoar once.

Author: Trac Migrate 2021-04-05T18:00:17.000Z

Original author: Alex

- **Owner** set to Alex
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-04-06T19:22:58.000Z

Original author: Alex

In [changeset:"b02600a6bbc4d0524b731e504c91bc293d70a354/rtems-tools" b02600a/rtems-tools]:

```
covoar: Split symbols by symbol set

This changes the way covoar organizes the symbols. Instead of treating
all symbols as one set, covoar is now aware of multiple symbol sets and
tracks statistics for each set. It now also generates reports for each
symbol set.
```

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```
7
8  This change relieves the caller of covoar of the reponsibility of
9  managing the symbol sets. As a result, covoar can minimize the work
10 done for each symbol set, yielding a significant speedup.
11
12 Updates #4374
```

Author: Trac Migrate 2021-04-06T19:23:00.000Z

Original author: Alex

In [changeset:"b3fcd106855c941633113431782f155a9209ca87/rtems-tools" b3fcd10/rtems-tools]:

```
1 coverage.py: Call covoar once
2
3 Updates #4374
```

Author: Trac Migrate 2021-04-07T15:35:06.000Z

Original author: Alex

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"de185fe1a97d9640810d9e882cae511f512bc992/rtems-tools" de185fe/rtems-tools]:

```
1 covoar: Use range-based for loops in ReportsBase
2
3 Some of the loops in the ReportsBase::Write* methods contained both
4 regular and range-based for loops. This changes them to use only range-
5 based for loops.
6
7 Closes #4374
```

Author: Amar Takhar 2024-04-25T20:48:47.270Z

changed the description

3.9.1.372 4358 - Priority discipline is broken for semaphores and message queues in SMP configurations

Id	4358
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-25T08:08:58.000Z
Updated	2024-04-25T20:48:46.772Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4358
Merges	0

Original author: sebastian.huber

The priority queues in clustered scheduling configurations use a per scheduler priority queue rotation to ensure FIFO fairness across schedulers. This mechanism is implemented in the thread queue surrender operation. Unfortunately some semaphore and message queue directives use wrongly the thread queue extract operation.

Author: Trac Migrate 2021-09-02T05:48:04.000Z

Original author: sebastian.huber

In [changeset:"9c0591f12d450401746bc0bf7cd7a0e0b14a5f3b/rtems" 9c0591f1/rtems]:

```
score: Fix priority discipline handling

The priority queues in clustered scheduling configurations use a per
scheduler priority queue rotation to ensure FIFO fairness across
schedulers.  This mechanism is implemented in the thread queue surrender
operation.  Unfortunately some semaphore and message queue directives
used wrongly the thread queue extract operation.  Fix this through the
use of _Thread_queue_Surrender().

Update #4358.
```

Author: Trac Migrate 2021-09-02T05:53:41.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Message queues were fixed by #4509.

Author: Amar Takhar 2024-04-25T20:48:46.810Z

changed the description

3.9.1.373 4356 - rtems_semaphore_set_priority() uses an invalid SMP lock

Id	4356
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-23T17:14:03.000Z
Updated	2024-04-25T20:48:46.343Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4356
Merges	0

Original author: sebastian.huber

If the priority of a locked priority ceiling mutex is set, the used SMP lock sequence is invalid.

Author: Trac Migrate 2021-11-15T11:39:10.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"ee57a7f1a16dbbedbf07bc629de19667dae131eb/rtems" ee57a7f1/rtems]:

```
score: Fix _CORE_ceiling_mutex_Set_priority()

We have to use a second thread queue context to acquire and release the
thread wait lock.

Close #4356.
```

Author: Amar Takhar 2024-04-25T20:48:46.381Z

changed the description

3.9.1.374 4346 - Require RTEMS_PRIORITY for MrsP semaphores

Id	4346
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-16T13:25:03.000Z
Updated	2024-04-25T20:48:44.143Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4346
Merges	1

Original author: sebastian.huber

The MrsP semaphores are a generalization the priority ceiling semaphores for SMP configurations. Priority ceiling semaphores are required to use the priority task wait queue discipline. Require this discipline also for MrsP semaphores.

Author: Trac Migrate 2021-03-17T09:48:57.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"3a66586c9e8432eee26b0e74c49c91362e22d24d/rtems" 3a66586/rtems]:

```
rtems: Allow RTEMS_PRIORITY for MrsP semaphores

In order to improve the compatibility of RTEMS 5.2 with future version
of RTEMS which fixed #4346 allow MrsP semaphores to be created with
RTEMS_PRIORITY.

Close #4347.
```

Author: Trac Migrate 2021-03-17T09:51:43.000Z

Original author: sebastian.huber

Issue was fixed by 0965b7c8b7956846167f43b813d68f8b5f2a60a1.

Author: Trac Migrate 2021-03-17T13:01:43.000Z

Original author: sebastian.huber

In [changeset:"f2bbea69afb880c9b6a58fe847f96baa5c3a5b36/rtems-docs" f2bbea6/rtems-docs]:

```
c-user: Update semaphore example

Update #4346.
```

Author: Amar Takhar 2024-04-25T20:48:44.182Z

changed the description

Author: Amar Takhar 2024-04-25T20:48:44.692Z

mentioned in issue #4347

3.9.1.375 4270 - A failing task extension produces zombi objects and resource leaks

Id	4270
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-25T17:40:21.000Z
Updated	2024-04-25T20:48:38.319Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4270
Merges	0

Original author: sebastian.huber

In _Thread_Initialize() we have this code:

```
_Objects_Open_u32( &information->Objects, &the_thread->Object, config->name );

/*
*  We assume the Allocator Mutex is locked and dispatching is
*  enabled when we get here.  We want to be able to run the
*  user extensions with dispatching enabled.  The Allocator
*  Mutex provides sufficient protection to let the user extensions
*  run safely.
*/
extension_status = _User_extensions_Thread_create( the_thread );
if ( extension_status )
return true;
```

If an extension fails, then the thread object is not closed. Also the delete extensions are not called. If a later create extension fails, the earlier create extensions may have allocated resources

which could be freed by a corresponding delete extension.

Author: Trac Migrate 2021-02-26T07:51:50.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
In _Thread_Initialize() we have this code:
{{{
_Objects_Open_u32( &information->Objects, &the_thread->Object, config->
↪name );

/*
*  We assume the Allocator Mutex is locked and dispatching is
*  enabled when we get here.  We want to be able to run the
*  user extensions with dispatching enabled.  The Allocator
*  Mutex provides sufficient protection to let the user extensions
*  run safely.
*/
extension_status = _User_extensions_Thread_create( the_thread );
if ( extension_status )
return true;
}}}
- If an extension fails, then the thread object is not closed. Also the␣
↪terminate and delete extensions are not called.
+ If an extension fails, then the thread object is not closed. Also the␣
↪delete extensions are not called. If a later create extension fails,␣
↪the earlier create extensions may have allocated resources which␣
↪could be freed by a corresponding delete extension.
```

Author: Trac Migrate 2021-02-26T08:26:30.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"1ac4a85ebf0cd0e788c2d5374c635087c33de0bf/rtems" 1ac4a85/rtems]:

```
score: Fix thread initialization

Close the thread object if a thread create extension fails.  Also call
the delete extension to avoid resource leaks in early extensions if a
late extension fails.

Close #4270.
```

Author: Amar Takhar 2024-04-25T20:48:38.360Z

changed the description

3.9.1.376 4269 - Add rtems_get_build_label()

Id	4269
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-25T15:16:01.000Z
Updated	2024-04-25T20:48:37.879Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4269
Merges	0

Original author: sebastian.huber

Add the following directive:

```
/* Generated from spec:/rtems/config/if/get-build-label */

/**
* @ingroup RTEMSAPIConfig
*
* @brief Gets the RTEMS build label.
*
* The build label is a user-provided string defined by the build
* configuration.
*
* @return Returns the pointer to the RTEMS build label.
*
* @par Notes
* The build label can be used to distinguish test suite results obtained from
* different build configurations.  A use case is to record test results with
* performance data to track performance regressions.  For this a database of
* performance limits is required.  The build label and the target hash
* obtained from rtems_get_target_hash() can be used as a key to obtain
* performance limits.
*
* @par Constraints
* @parblock
* The following constraints apply to this directive:
*
* * The directive may be called from within any runtime context.
*
```

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```
* * The directive will not cause the calling task to be preempted.
* @endparblock
*/
const char *rtems_get_build_label( void );
```

Author: Trac Migrate 2021-02-26T08:25:58.000Z

Original author: sebastian.huber

In [changeset:"d8bfa5a9bc3f691c0bfda89de8d6f17eca5bd327/rtems" d8bfa5a/rtems]:

```
rtems: Add rtems_get_build_label()

Update #4269.
```

Author: Trac Migrate 2021-02-26T08:26:02.000Z

Original author: sebastian.huber

In [changeset:"da8ad67e88e11851fb50d31cec5992621e0f53a3/rtems" da8ad67e/rtems]:

```
libtest: Report build label

Update #4269.
```

Author: Trac Migrate 2022-10-04T08:19:19.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"0fc5c0336d0cd07b3f6c298381fc97dbee9705b0/rtems-docs" 0fc5c03/rtems-docs]:

```
c-user: Add application config info directives

Close #4267.
Close #4269.
```

Author: Amar Takhar 2024-04-25T20:48:37.920Z

changed the description

3.9.1.377 4267 - Add rtems_get_target_hash()

Id	4267
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-24T07:20:40.000Z
Updated	2024-04-25T20:48:37.436Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4267
Merges	0

Original author: sebastian.huber

Add a function to report a hash value characterizing the target system in the test suite results.

```
/* Generated from spec:/rtems/config/if/get-target-hash */

/**
* @ingroup RTEMSAPIConfig
*
* @brief Gets the RTEMS target hash.
*
* The target hash is calculated from BSP-specific values which characterize a
* target system.
*
* @return Returns the pointer to the RTEMS target hash.
*
* @par Notes
* @parblock
* For example, the device tree, settings of the memory controller, a serial
* number of a chip may be used to calculate the target hash.
*
* The target hash can be used to distinguish test suite results obtained from
* different target systems.
* @endparblock
*
* @par Constraints
* @parblock
* The following constraints apply to this directive:
*
* * The directive may be called from within any runtime context.
*
* * The directive will not cause the calling task to be preempted.
* @endparblock
*/
const char *rtems_get_target_hash( void );
```

Author: Trac Migrate 2021-02-26T08:26:06.000Z

Original author: sebastian.huber

In [changeset:"5f8bc839e89ea6efa7f48ebcec8939861024649f/rtems" 5f8bc83/rtems]:

```
score: Add _IO_Base64url()

Update #4267.
```

Author: Trac Migrate 2021-02-26T08:26:09.000Z

Original author: sebastian.huber

In [changeset:"dea125d02c663d4c66eacc076c3f705a46257faf/rtems" dea125d0/rtems]:

```
score: Add Hash Handler

Update #4267.
```

Author: Trac Migrate 2021-02-26T08:26:13.000Z

Original author: sebastian.huber

In [changeset:"fb17af2756360ff2f9fdccd736d4c63b665e0cde/rtems" fb17af2/rtems]:

```
rtems: Add rtems_get_target_hash()

Update #4267.
```

Author: Trac Migrate 2021-02-26T08:26:16.000Z

Original author: sebastian.huber

In [changeset:"bc6ffc3be8c6001c1e0a289ec2b03a4b55cf596f/rtems" bc6ffc3/rtems]:

```
Add system initialization step for target hash

Update #4267.
```

Author: Trac Migrate 2021-02-26T08:26:20.000Z

Original author: sebastian.huber

In [changeset:"7480c346985e8f22c4eae602d17995dee34adad4/rtems" 7480c34/rtems]:

```
bsps: Add default rtems_get_target_hash()

Update #4267.
```

Author: Trac Migrate 2021-02-26T08:26:24.000Z

Original author: sebastian.huber

In [changeset:"74eff26c1dd57579ec7fec95aff4627dfa0daf42/rtems" 74eff26c/rtems]:

```
libtest: Report target hash

Update #4267.
```

Author: Trac Migrate 2021-02-26T08:57:31.000Z

Original author: sebastian.huber

In [changeset:"2428a8caf27575e70254ba0e099739c9947c023f/rtems" 2428a8ca/rtems]:

```
build: Install <rtems/score/hash.h>

Update #4267.
```

Author: Trac Migrate 2021-04-22T05:46:34.000Z

Original author: sebastian.huber

In [changeset:"29ce2900b0b1781489b7b60378a417862c96639c/rtems-docs" 29ce290/rtems-docs]:

```
bsp-howto: Add target hash chapter

Update #4267.
```

Author: Trac Migrate 2022-10-04T08:19:19.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"0fc5c0336d0cd07b3f6c298381fc97dbee9705b0/rtems-docs" 0fc5c03/rtems-docs]:

```
c-user: Add application config info directives

Close #4267.
Close #4269.
```

Author: Amar Takhar	2024-04-25T20:48:37.479Z

changed the description

3.9.1.378 4265 - Add rtems_get_build_hash()

Id	4265
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-23T09:38:48.000Z
Updated	2024-04-25T20:48:36.992Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::wontfix, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4265
Merges	0

Original author: sebastian.huber

Add a function to report a hash value of the build environment in the test suite results.

```
/* Generated from spec:/rtems/config/if/get-build-hash */

/**
* @ingroup RTEMSAPIConfig
*
* @brief Gets the RTEMS build hash.
*
* The build hash is calculated from all key-value pairs of the build
* environment.  Local file system paths in the values do not contribute to the
* hash value.
*
* @return Returns the pointer to the RTEMS build hash.
*
* @par Notes
* The build hash can be used to distinguish test suite results obtained from
* different build environments.
*
* @par Constraints
* @parblock
* The following constraints apply to this directive:
```

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```
 *
 * The directive may be called from within any runtime context.
 *
 * The directive will not cause the calling task to be preempted.
 * @endparblock
 */
const char *rtems_get_build_hash( void );
```

Author: Chris Johns 2021-02-24T04:01:12.000Z

Original author: sebastian.huber

Is there a list that defines `all` key-value pairs in the build environment?

Author: Trac Migrate 2021-02-24T07:04:45.000Z

Original author: sebastian.huber

Yes, you can iterate over conf.env:

```
diff --git a/wscript b/wscript
index 6626fafb74..84b845dce4 100755
--- a/wscript
+++ b/wscript
@@ -1359,6 +1359,27 @@ def get_compiler(conf, cp, variant):
return value


+def _generate_build_hash(conf):
+    import hashlib
+    import base64
+
+    build_hash = ""
+    for key in sorted(conf.env):
+        build_hash = build_hash + key + str(conf.env[key])
+    for discard in [
+        conf.env.PREFIX,
+        conf.bldnode.make_node(conf.env.VARIANT).abspath(),
+        conf.path.abspath(),
+    ]:
+        build_hash = build_hash.replace(discard, "")
+    state = hashlib.sha256()
+    state.update(build_hash.encode("utf-8"))
+    conf.define("RTEMS_BUILD_HASH", base64.urlsafe_b64encode(state.
↪digest()))
+    conf.write_config_header(
+        conf.env.VARIANT + "/cpukit/include/rtems/build-hash.h"
+    )
```

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```
+
+
def configure_variant(conf, cp, bsp_map, path_list, top_group, variant):
conf.msg("Configure board support package (BSP)", variant, color="YELLOW
↪")

@@ -1391,9 +1412,10 @@ def configure_variant(conf, cp, bsp_map, path_
↪list, top_group, variant):
conf.fatal("No such base BSP: '{}'".format(variant))
bsp_item.configure(conf, cic)

-    options = set([o[0].upper() for o in cp.items(variant)])
+    options = set(o[0].upper() for o in cp.items(variant))
for o in options.difference(cic.options):
conf.msg("Unknown configuration option", o.upper(), color="RED")
+    _generate_build_hash(conf)


def check_forbidden_options(ctx, opts):
```

An alternative would be to explicitly add (or remove) build options.

Author: Chris Johns 2021-02-25T00:32:31.000Z

Original author: sebastian.huber

This captures a user's environment variables?

Author: Trac Migrate 2021-02-25T07:22:20.000Z

Original author: sebastian.huber

There are always means to sabotage something. We don't recommend the use of environment variables and a waf configure warns about them. I will add a note that environment variables are not recommended and not used for the build hash.

Author: Trac Migrate 2021-02-25T15:13:58.000Z

Original author: sebastian.huber

As discussed on the mailing list I tried the following approach. Iterate over all start files and libraries generated by the build and then create a hash of all executable sections. Then we recompile one object with a command line define with the build hash and replace this object in librtemscpu.a. Unfortunately, this exceeds my waf skills at the moment. I think it is feasible, but you really have to know how to adjust the waf tasks through meta programming.

Author: Trac Migrate 2021-11-23T13:52:54.000Z

Original author: sebastian.huber

- **Resolution** set to ~"wontfix"
- **Status** changed from *assigned* to *closed*

The `rtems_get_build_hash()` was dropped in favour of #4269.

Author: Amar Takhar 2024-04-25T20:48:37.037Z

changed the description

3.9.1.379 4245 - Add PCI regions support to RTEMS nexus bus support

Id	4245
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2021-02-15T21:28:56.000Z
Updated	2024-04-25T20:48:36.160Z
Milestone	6.1
Labels	arch:powerpc, bsp, library::libbsd, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4245
Merges	0

The RTEMS Nexus bus support in LibBSD assumes a linear address map with a `!:1` address mapping between the PCI bus master and CPU. Some target hardware has a different PCI bus master address space to the CPU memory address space.

- Provide a BSP means to enable PCI support in `machine/bus.h` in LibBSD
- Update `powerpc/motorola_powerpc` to support cache coherent memory
- Change any PowerPC internal calls that clash with the Linux IO interface used in LibBSD. The PowerPC shared BSP calls have a different call signature

Author: Trac Migrate 2021-02-16T20:31:57.000Z

In [changeset:"6e3c6e044e17286b500bcbba42abe2d0777327a7/rtems" 6e3c6e04/rtems]:

```
powerpc/io: Make [out/in] le and be calls conditional

- These calls clash with the Linux IO header in LibBSD. Making these
conditional here means BSPs build and the imported Linux header is
untouched.

Updates #4245
```

Author: Trac Migrate 2021-02-16T20:32:01.000Z

In [changeset:"23aad642be7a3b6ea905897728133bddf5d550c4/rtems" 23aad64/rtems]:

```
powerpc/motorola_powerpc: Enable bus PCI support in LibBSD

Updates #4245
```

Author: Trac Migrate 2021-02-16T20:32:05.000Z

In [changeset:"026eb3db7e61ed29ff3b676c126168bf08dfe0a8/rtems" 026eb3db/rtems]:

```
powerpc/motorola_powerpc: Add cache coherent memory to the allocator

Updates #4245
Updates #4243
```

Author: Trac Migrate 2021-09-02T02:43:07.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"3f1e128488edffa25338d1cba83f1037e8ea2eb3/rtems-libbsd" 3f1e128/rtems-libbsd]:

```
rtemsbsd/bus: Add PCI support to the nexus bus

- Add PCI IO region support

- Add support map buffers to PCI address space

- Add BSP conditional IO space support. Some PC implementations
have PCI IO space mapped differently to memory space and this needs
to be reflected in the busspace.

- Include bsp.h to pick per BSP configuration.

Closes #4245
```

Author: Trac Migrate 2021-09-22T01:05:13.000Z

In [changeset:"cfef84a007bac32b6f3852ab3d9367f7cdcf2c6b/rtems" cfef84a0/rtems]:

```
powerpc/io: Make [out/in] le and be calls conditional

- These calls clash with the Linux IO header in LibBSD. Making these
conditional here means BSPs build and the imported Linux header is
untouched.

Updates #4245
```

Author: Amar Takhar 2024-04-25T20:48:36.203Z

changed the description

3.9.1.380 4244 - Possible infinite recursion in Classic API Signal handling

Id	4244
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-15T06:46:56.000Z
Updated	2024-04-25T20:48:35.706Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4244
Merges	0

Original author: sebastian.huber

Due to implementation flaws, there may be an infinite recursion in the signal processing even if ASR mode is disabled during signal processing. The problem is that rtems_task_mode() is used to set up and tear down the ASR-specific task mode. This needs to be changed to set the modes under protection of the right locks and using a loop instead of recursion to schedule the next ASR processing step if needed.

Author: Trac Migrate 2021-02-20T14:25:27.000Z

Original author: sebastian.huber

In [changeset:"f38c0de407379c1073fc972e9a6d01f63c4b0f77/rtems" f38c0de4/rtems]:

```
validation: Add Validation1 test suite

Update #4244.
```

Author: Trac Migrate 2021-02-20T14:25:31.000Z

Original author: sebastian.huber

In [changeset:"3e7d658033f684e6c406abdd1ee0a24894584f77/rtems" 3e7d658/rtems]:

```
validation: Add signal manager tests

Update #4244.
```

Author: Trac Migrate 2021-02-20T14:25:34.000Z

Original author: sebastian.huber

In [changeset:"fea848bbbc8b63204677765cdcf8f5957e0ccf86/rtems" fea848b/rtems]:

```
score: Change thread action locking

Require that the corresponding lock is acquired before the action
handler returns.  This helps to avoid recursion in the signal
processing.

Update #4244.
```

Author: Trac Migrate 2021-02-20T14:25:37.000Z

Original author: sebastian.huber

In [changeset:"f9a59164e854c3151555493231f92e570bd75a2a/rtems" f9a59164/rtems]:

```
score: Add _Thread_Append_post_switch_action()

Update #4244.
```

Author: Trac Migrate 2021-02-20T14:25:41.000Z

Original author: sebastian.huber

In [changeset:"600360dadf5bc8c62fc91d4bea55d6e5e8900595/rtems" 600360d/rtems]:

```
rtems: Remove unused _Modes_Mask_changed()

Update #4244.
```

Author: Trac Migrate 2021-02-20T14:25:44.000Z

Original author: sebastian.huber

In [changeset:"9d5d73be630b37857e1f47451d0992d2322249ba/rtems" 9d5d73b/rtems]:

```
rtems: Remove unused _Modes_Change()

Update #4244.
```

Author: Trac Migrate 2021-02-20T14:25:47.000Z

Original author: sebastian.huber

In [changeset:"a52e5d9c7e54c1d3a6d8204502a617f63170a060/rtems" a52e5d9/rtems]:

```
rtems: Remove unused ASR_Information::nest_level

Update #4244.
```

Author: Trac Migrate 2021-02-20T14:25:51.000Z

Original author: sebastian.huber

In [changeset:"74ca8b7517ac463b73daf7d6b4773a1987a6760b/rtems" 74ca8b7/rtems]:

```
rtems: Move _Signal_Action_handler()

Move _Signal_Action_handler() and signal MP initialization to
rtems_signal_send().  The goal is to make _Signal_Action_handler() a
static function in a follow up patch.

Update #4244.
```

Author: Trac Migrate 2021-02-20T14:25:54.000Z

Original author: sebastian.huber

In [changeset:"f6a97f59925e0f6f880fdc5ce9e94a84e5db2998/rtems" f6a97f5/rtems]:

```
rtems: Simplify signal handling

Remove superfluous ASR_Information::signals_posted.  Move code out of
trivial inline functions.

Update #4244.
```

Author: Trac Migrate 2021-02-20T14:25:57.000Z

Original author: sebastian.huber

In [changeset:"b207b378989e6d2b11956351d79b67ad9818f8cf/rtems" b207b37/rtems]:

```
posix: Remove superfluous check

The api pointer is never NULL.

Update #4244.
```

Author: Trac Migrate 2021-02-20T14:26:00.000Z

Original author: sebastian.huber

In [changeset:"1739bd2439238b9a5150f65a3452c9eb7958a998/rtems" 1739bd2/rtems]:

```
rtems: Remove _Modes_Set_interrupt_level()

This call just obfuscated the call to _ISR_Set_level().

Update #4244.
```

Author: Trac Migrate 2021-02-20T14:26:04.000Z

Original author: sebastian.huber

In [changeset:"8778a0e1188ee00932ce47d410de54c4e053f3bf/rtems" 8778a0e/rtems]:

```
rtems: New errors for rtems_signal_catch()

Ensure that no invalid modes are set during ASR processing.

Update #4244.
```

Author: Trac Migrate 2021-02-20T14:26:07.000Z

Original author: sebastian.huber

In [changeset:"08adc0dc7f78ca24d8bbb16ebefe32c98154ac2b/rtems" 08adc0d/rtems]:

```
rtems: Add _Modes_Apply_timeslice_to_thread()

Update #4244.
```

Author: Trac Migrate 2021-02-20T14:26:10.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"a7e180b95dcc3c2f0bab82ec8eaa211cb0a4956a/rtems" a7e180b/rtems]:

```
rtems: Avoid potential recursion in ASR handling

Do the mode changes necessary for the ASR processing directly under
protection of the thread state lock to avoid the recursive calls to
thread dispatching done in rtems_task_mode().

Close #4244.
```

Author: Trac Migrate 2021-03-19T16:08:37.000Z

Original author: sebastian.huber

In [changeset:"53bd5e3246a02eff102c21d7b7a10629c5c23ff6/rtems" 53bd5e32/rtems]:

```
rtems: Relax mode checks in rtems_signal_catch()

Check only for invalid modes if a valid handler is presented to
rtems_signal_catch().  When NULL is used for the handler, ASR processing
is disabled and the mode is not used.

Update #4244.
```

Author: Amar Takhar 2024-04-25T20:48:35.747Z

changed the description

3.9.1.381 4230 - Timeout for automatic barriers is broken

Id	4230
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-05T12:57:52.000Z
Updated	2024-04-25T20:48:35.265Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4230
Merges	0

Original author: sebastian.huber

A barrier wait timeout at an automatic barrier doesn't decrement the count of waiting threads.

Author: Trac Migrate 2021-02-06T19:56:40.000Z

Original author: sebastian.huber

In [changeset:"2b5ce23b9988a66445b7c9d3cbcc692488cf718a/rtems" 2b5ce23b/rtems]:

```
score: Constify Thread_queue_First_operation

Update #4230.
```

Author: Trac Migrate 2021-02-06T19:56:43.000Z

Original author: sebastian.huber

In [changeset:"9477d9aedb63dbad44ec89756ab4ed89e3c83c93/rtems" 9477d9ae/rtems]:

```
score: Make FIFO thread queue ops public

Update #4230.
```

Author: Trac Migrate 2021-02-06T19:56:47.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"96ea09ac4c781955c22ee810e3a05669b9a6a00a/rtems" 96ea09ac/rtems]:

```
score: Add barrier thread queue operations

This fixes a missing decrement of the number of waiting threads during a
barrier wait timeout.

Close #4230.
```

Author: Amar Takhar 2024-04-25T20:48:35.304Z

changed the description

3.9.1.382 4228 - rtems_build_name() depends on the signedness of char type

Id	4228
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-02T14:35:42.000Z
Updated	2024-04-25T20:48:34.833Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4228
Merges	0

Original author: sebastian.huber

The rtems_build_name() is implemented by: {{{!c

define _Objects_Build_name(_C1, _C2, _C3, _C4) \

((uint32_t)(_C1) << 24 | (uint32_t)(_C2) << 16 | (uint32_t)(_C3) << 8 | (uint32_t)(_C4)) }}} If the name is build from four “char” components, then the result depends on the signedness of the char type. The macro should first cast the chars to uint8_t.

Author: Trac Migrate 2021-02-03T05:17:44.000Z

Original author: sebastian.huber

- **Resolution** set to ~”fixed”
- **Status** changed from *assigned* to *closed*

In [changeset:”98549e452476d5e05a06f2861467b4cd7bef8181/rtems” 98549e45/rtems]:

```
score: _Objects_Build_name() signed/unsigned char

Change _Objects_Build_name() so that the result is independent of the
signedness of char.

Close #4228.
```

Author: Amar Takhar 2024-04-25T20:48:34.873Z

changed the description

3.9.1.383 4223 - Missing “extern” in RTEMS_LINKER_ROSET_ITEM_ORDERED_DECLARE()

Id	4223
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-01-25T05:43:09.000Z
Updated	2024-04-25T20:48:34.358Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4223
Merges	0

Original author: sebastian.huber

The fix for #3865 contains a typo. In RTEMS_LINKER_ROSET_ITEM_ORDERED_DECLARE() there is a missing “extern”.

Author: Trac Migrate 2021-01-25T05:47:20.000Z

Original author: sebastian.huber

Fixed by c709017efba6de38225afc697a5ed2381cc12071.

Author: Trac Migrate 2021-01-25T05:47:30.000Z

Original author: sebastian.huber

- **Resolution** set to ~”fixed”
- **Status** changed from *assigned* to *closed*

Author: Amar Takhar 2024-04-25T20:48:34.405Z

changed the description

3.9.1.384 4217 - Change status code for nested obtain of MrsP semaphores

Id	4217
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-01-20T09:36:07.000Z
Updated	2024-04-25T20:48:33.924Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4217
Merges	0

Original author: sebastian.huber

Return RTEMS_INCORRECT_STATE to indicate a nested obtain since this is a kind of deadlock. This status code is also used for other deadlocks.

Author: Trac Migrate 2021-01-21T09:11:11.000Z

Original author: sebastian.huber

In [changeset:"8ee22b29751f7bd984f06695a6db0667757bcd07/rtems" 8ee22b2/rtems]:

```
mrsp: Change error status for a nested seize

Return STATUS_DEADLOCK (RTEMS_INCORRECT_STATE) to indicate a nested
seize since this is a kind of deadlock.  This status code is also used
for other deadlocks.

Update #4217.
```

Author: Trac Migrate 2021-09-29T14:12:22.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Documentation was also adjusted.

Author: Amar Takhar 2024-04-25T20:48:33.961Z

changed the description

3.9.1.385 4196 - Improve gcov support provided by GCC for RTEMS

Id	4196
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-12-02T09:38:15.000Z
Updated	2024-04-25T20:48:30.998Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, tool::gcc, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4196
Merges	0

Original author: sebastian.huber

If we want to use gcov in RTEMS to get code coverage in all system states, then we need some tweaks in GCC:

https://gcc.gnu.org/pipermail/gcc/2020-November/234164.html

The linker set based gcov information registration is already included in GCC:

https://gcc.gnu.org/onlinedocs/gcc/Instrumentation-Options.html#index-fprofile-info-section

There is a discussion about how the gcov information can be transferred from the embedded system to the host:

https://gcc.gnu.org/pipermail/gcc-patches/2020-November/559342.html

The following patch set was integrated in GCC 13:

https://gcc.gnu.org/pipermail/gcc-patches/2022-April/593536.html

https://gcc.gnu.org/onlinedocs/gcc/Freestanding-Environments.html#Freestanding-Environments

- 0001-Back-port-__gcov_info_to_gcda-to-GCC-10.patch
- 0001-Back-port-v1-of-gcov-tool-merge-stream-to-GCC-12.patch
- 0001-Back-port-v2-of-__gcov_info_to_gcda-to-GCC-10.patch
- 0001-Back-port-v3-of-__gcov_info_to_gcda-to-GCC-10.patch
- 0001-Back-port-v4-of-__gcov_info_to_gcda-to-GCC-10.patch
- 0001-Back-port-v5-of-__gcov_info_to_gcda-to-GCC-10.patch
- 0001-Back-port-v6-of-gcov-improvements-to-GCC-10.patch
- 0001-Back-port-v7-of-gcov-improvements-to-GCC-10.patch
- 0001-Back-port-v8-of-gcov-improvements-to-GCC-10.patch
- 0001-Remove-wrong-bail-out-in-prune_topn_counter.patch
- 0001-gcov-Add-fprofile-info-section-support.patch
- 0001-gcov-Fix-use-of-profile-info-section.patch

- 0002-gcov-Add-__gcov_info_to_gdca.patch

Author: Trac Migrate 2020-12-02T09:54:29.000Z

Original author: sebastian.huber

- **Attachment** 0001-gcov-Add-fprofile-info-section-support.patch added

Author: Trac Migrate 2020-12-02T10:24:27.000Z

Original author: sebastian.huber

In [changeset:"1d9f5d01c360bfb12182dfcfa251f604df84f104/rtems-source-builder" 1d9f5d0/rtems-source-builder]:

```
6: Add support for gcov info section

Update #4196.
```

Author: Trac Migrate 2021-07-21T09:44:53.000Z

Original author: sebastian.huber

- **Attachment** 0001-gcov-Fix-use-of-profile-info-section.patch added

Author: Trac Migrate 2021-07-21T09:45:10.000Z

Original author: sebastian.huber

- **Attachment** 0002-gcov-Add-__gcov_info_to_gdca.patch added

Author: Trac Migrate 2021-07-21T13:33:53.000Z

Original author: sebastian.huber

- **Attachment** 0001-Remove-wrong-bail-out-in-prune_topn_counter.patch added

Author: Trac Migrate 2021-08-06T05:33:18.000Z

Original author: sebastian.huber

The `__gcov_info_to_gcda()` function is now integrated in GCC:

https://gcc.gnu.org/git/?p=gcc.git;a=commit;h=9124bbe1857f0d3a3015d6461d5f8d04f07cab85

Author: Trac Migrate 2021-08-06T15:24:11.000Z

Original author: sebastian.huber

- **Attachment** 0001-Back-port-__gcov_info_to_gcda-to-GCC-10.patch added

Author: Trac Migrate 2021-08-06T16:39:49.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"6c0d7b62a9934a150c71858b9711095170ebbdbd/rtems-source-builder" 6c0d7b6/rtems-source-builder]:

```
6: Back port __gcov_info_to_gcda() to GCC 10

Close #4196.
```

Author: Trac Migrate 2021-08-09T15:21:01.000Z

Original author: sebastian.huber

There are issues with multi-threaded programs:

https://gcc.gnu.org/pipermail/gcc/2021-August/237058.html

Author: Trac Migrate 2021-08-09T15:29:56.000Z

Original author: sebastian.huber

- **Attachment** 0001-Back-port-v2-of-__gcov_info_to_gcda-to-GCC-10.patch added

Author: Trac Migrate 2021-08-09T15:59:04.000Z

Original author: sebastian.huber

In [changeset:"ca5c27d12f2bf5cad02feaa3997f95dda7cd3788/rtems-source-builder" ca5c27d/rtems-source-builder]:

```
6: Back port v2 of __gcov_info_to_gcda() to GCC 10

Update #4196.
```

Author: Trac Migrate 2021-08-09T18:44:12.000Z

Original author: sebastian.huber

- **Attachment** 0001-Back-port-v3-of-__gcov_info_to_gcda-to-GCC-10.patch added

Author: Trac Migrate 2021-08-09T19:05:23.000Z

Original author: sebastian.huber

In [changeset:"ec495e091743061d4e140e2d0bd8aab1a8d69ae7/rtems-source-builder" ec495e0/rtems-source-builder]:

```
6: Back port v3 of __gcov_info_to_gcda() to GCC 10

Update #4196.
```

Author: Trac Migrate 2021-08-30T08:48:43.000Z

Original author: sebastian.huber

- **Attachment** 0001-Back-port-v4-of-__gcov_info_to_gcda-to-GCC-10.patch added

Author: Trac Migrate 2021-08-30T12:02:33.000Z

Original author: sebastian.huber

- **Attachment** 0001-Back-port-v5-of-__gcov_info_to_gcda-to-GCC-10.patch added

Author: Trac Migrate 2021-09-01T15:50:46.000Z

Original author: sebastian.huber

In [changeset:"a1f7b3b60e5c532a46e728c8606d2fe5bcb3a562/rtems-source-builder" a1f7b3b/rtems-source-builder]:

```
6: Back port v5 of __gcov_info_to_gcda() to GCC 10

Update #4196.
```

Author: Trac Migrate 2022-05-03T06:01:44.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
If we want to use gcov in RTEMS to get code coverage in all system␣
↪states, then we need some tweaks in GCC:

https://gcc.gnu.org/pipermail/gcc/2020-November/234164.html
```

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```
4
5  The linker set based gcov information registration is already included␣
   ↪in GCC:
6
7  https://gcc.gnu.org/onlinedocs/gcc/Instrumentation-Options.html#index-
   ↪fprofile-info-section
8
9  There is a discussion about how the gcov information can be transferred␣
   ↪from the embedded system to the host:
10
11 https://gcc.gnu.org/pipermail/gcc-patches/2020-November/559342.html
12
13 - The GCC integration needs to wait for the GCC 12 development start.
14 + The following patch set was integrated in GCC 13:
15 +
16 + https://gcc.gnu.org/pipermail/gcc-patches/2022-April/593536.html
17 +
18 + https://gcc.gnu.org/onlinedocs/gcc/Freestanding-Environments.html
   ↪#Freestanding-Environments
```

Author: Trac Migrate 2022-05-03T06:13:16.000Z

Original author: sebastian.huber

- **Attachment** 0001-Back-port-v1-of-gcov-tool-merge-stream-to-GCC-12.patch added

Author: Trac Migrate 2022-05-04T05:47:29.000Z

Original author: sebastian.huber

In [changeset:"22e32ecc272353a9047d429358aee2d61687ccc7/rtems-source-builder" 22e32ec/rtems-source-builder]:

```
1 7: Back port gcov-tool merge-stream to GCC 12
2
3 Update #4196.
```

Author: Trac Migrate 2022-06-21T07:15:58.000Z

Original author: sebastian.huber

- **Attachment** 0001-Back-port-v6-of-gcov-improvements-to-GCC-10.patch added

Author: Trac Migrate 2022-06-21T14:16:49.000Z

Original author: sebastian.huber

In [changeset:"cf0914f151e6554c875faa42c212ff7bb55dc502/rtems-source-builder" cf0914f/rtems-source-builder]:

```
6: Back port v6 of gcov improvements to GCC 10

Update #4196.
```

Author: Trac Migrate 2022-06-29T07:19:49.000Z

Original author: sebastian.huber

- **Attachment** 0001-Back-port-v7-of-gcov-improvements-to-GCC-10.patch added

Author: Trac Migrate 2022-06-29T08:31:28.000Z

Original author: sebastian.huber

- **Attachment** 0001-Back-port-v8-of-gcov-improvements-to-GCC-10.patch added

Author: Trac Migrate 2022-06-29T09:29:52.000Z

Original author: sebastian.huber

In [changeset:"9474bb8ee29833d27da1a3f3ec5b2826ac9cf338/rtems-source-builder" 9474bb8/rtems-source-builder]:

```
6: Back port v8 of gcov improvements to GCC 10

Update #4196.
```

Author: Amar Takhar 2024-04-25T20:48:31.088Z

changed the description

3.9.1.386 4195 - Add gr740 support available in SIS 2.25 to the RTEMS Tester

Id	4195
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-12-02T09:16:21.000Z
Updated	2024-04-25T20:48:30.537Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4195
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2020-12-02T09:39:10.000Z

Original author: sebastian.huber

In [changeset:"97fe5bf8a3868e0632e0e783042385d27c4958ba/rtems-tools" 97fe5bf/rtems-tools]:

```
tester: Add support for sparc/gr740 BSP

Update #4195.
```

Author: Trac Migrate 2020-12-02T09:42:28.000Z

Original author: sebastian.huber

In [changeset:"675e73f0eaf78838b874269a2d3d5d0a0baf2afc/rtems-source-builder" 675e73f/rtems-source-builder]:

```
devel/sis: Update to 2.25

Update #4195.
```

Author: Trac Migrate 2020-12-02T09:42:30.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"d79b04468f08e61db34b93308620f75b44555699/rtems-source-builder" d79b044/rtems-source-builder]:

```
6/7: Update to the latest rtems-tools

Close #4195.
```

Author: Amar Takhar 2024-04-25T20:48:30.574Z

changed the description

3.9.1.387 4181 - Add CONFIGURE_INIT_TASK_STORAGE_SIZE

Id	4181
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-11-20T07:31:23.000Z
Updated	2024-04-25T20:48:27.963Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4181
Merges	0

Original author: sebastian.huber

Currently, the Classic API initialization task is created with rtems_task_create(). In order to better support applications which use the new rtems_task_construct() directive add a configuration options which constructs the Classic API initialization task with rtems_task_construct():

```
/* Generated from spec:/acfg/if/init-task-storage-size */

/**
* @brief This configuration option is an integer define.
*
* The value of this configuration option defines the task storage size of the
* Classic API initialization task.  If this configuration option is specified,
* then the Classic API initialization task is constructed by
* rtems_task_construct() instead of using rtems_task_create().
*
* @par Default Value
* The default value is 0.
*
* @par Value Constraints
* @parblock
* The value of this configuration option shall satisfy all of the following
* constraints:
*
* * It shall be greater than or equal to #CONFIGURE_MINIMUM_TASK_STACK_SIZE.
```

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```
*
* * It shall be defined using RTEMS_TASK_STORAGE_SIZE().
* @endparblock
*
* @par Notes
* @parblock
* A task storage area of the specified size is defined by the configuration
* for the Classic API initialization task.  The
*
* * #CONFIGURE_INIT_TASK_STACK_SIZE and
*
* * ``CONFIGURE_INIT_TASK_STORAGE_SIZE``
*
* configuration options are mutually exclusive.
* @endparblock
*/
#define CONFIGURE_INIT_TASK_STORAGE_SIZE
```

Author: Trac Migrate 2020-11-27T07:47:03.000Z

Original author: sebastian.huber

In [changeset:"bc175a1cabdccfc28deee3ae67ff5e9a0b5aef49/rtems" bc175a1/rtems]:

```
Avoid INTERNAL_ERROR_RTEMS_INIT_TASK_ENTRY_IS_NULL

Replace a runtime check with a compile time assertion.  This makes the
INTERNAL_ERROR_RTEMS_INIT_TASK_ENTRY_IS_NULL obsolete.

Update #4181.
```

Author: Trac Migrate 2020-11-27T07:47:07.000Z

Original author: sebastian.huber

In [changeset:"657e30c135f22c4448cfd13f8113b23e72776dad/rtems" 657e30c1/rtems]:

```
config: CONFIGURE_INIT_TASK_CONSTRUCT_STORAGE_SIZE

In order to better support applications which use the new
rtems_task_construct() directive add the
CONFIGURE_INIT_TASK_CONSTURCT_STORAGE_SIZE configuration option.  If
this option is specified, then the Classic API initialization task is
constructed with rtems_task_construct().

Update #4181.
```

Author: Trac Migrate 2020-11-27T07:47:13.000Z

Original author: sebastian.huber

In [changeset:"06386fc76fe773aab15a51f4801ff391f142f264/rtems" 06386fc7/rtems]:

```
Use CONFIGURE_INIT_TASK_CONSTRUCT_STORAGE_SIZE

Update #4181.
```

Author: Trac Migrate 2020-11-27T08:16:58.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"00b3444afdbbb29aeef5b4448419b10a76f90378/rtems-docs" 00b3444/rtems-docs]:

```
c-user: CONFIGURE_INIT_TASK_CONSTRUCT_STORAGE_SIZE

Document new configuration option
CONFIGURE_INIT_TASK_CONSTRUCT_STORAGE_SIZE.

Close #4181.
```

Author: Trac Migrate 2020-11-27T08:52:57.000Z

Original author: sebastian.huber

In [changeset:"6e566badc770a78cf89e34be6b29aa66cb7cf1b7/rtems" 6e566bad/rtems]:

```
config: CONFIGURE_INIT_TASK_CONSTRUCT_STORAGE_SIZE

Fix the documentation.

Update #4181.
```

Author: Trac Migrate 2020-12-12T12:53:44.000Z

Original author: sebastian.huber

In [changeset:"fcd9618ac84e04d363741419e67b5d618ebe6a81/rtems" fcd9618a/rtems]:

```
config: Fix invalid static assertions in C

Expressions in static assertions must be integral constant expressions. In
integral constant expressions the use of address constant expressions is not
allowed.

In static initializers the address constant expressions are allowed. Introduce
a new macro _CONFIGURE_ASSERT_NOT_NULL() which leads to a compile time error if
the second parameter is NULL.  It generates error messages like this if for
example

#define CONFIGURE_INIT_TASK_ENTRY_POINT NULL

is provided by the application:

cpukit/include/rtems/confdefs/inittask.h:51:26: error: size of unnamed array is negative
51 |     ( _type ) sizeof( int[ ( _value ) != NULL ? 1 : -1 ] ) )
|                          ^
cpukit/include/rtems/confdefs/inittask.h:170:3: note: in expansion of macro '_CONFIGURE_ASSERT_NOT_NULL'
170 |   _CONFIGURE_ASSERT_NOT_NULL(
|   ^~~~~~~~~~~~~~~~~~~~~~~~~~

This fix relates to CID 1470570 (PARSE_ERROR).

Update #4181.
```

Author: Amar Takhar 2024-04-25T20:48:28.007Z

changed the description

3.9.1.388 4157 - pthread_spin_unlock() may corrupt the thread stack if RTEMS_PROFILING and RTEMS_SMP is enabled

Id	4157
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-10-19T15:33:11.000Z
Updated	2024-04-25T20:48:24.106Z
Milestone	6.1
Labels	api::posix, priority::normal, qualification, resolution::fixed, ticket-type::defect, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4157
Merges	0

Original author: sebastian.huber

The call to _SMP_lock_Stats_register_or_max_section_time() registers a dummy statistics block which resides on the thread stack.

Author: Trac Migrate 2020-10-19T15:33:52.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"2b9fb3141cb10b8bbfa1a18a6aab42474988a636/rtems" 2b9fb314/rtems]:

```
posix: Fix pthread_spin_unlock()

Prevent a call to _SMP_lock_Stats_register_or_max_section_time(). This
↪fixes a
thread stack corruption in case RTEMS_PROFILING and RTEMS_SMP is
↪enabled.

Close #4157.
```

Author: Amar Takhar 2024-04-25T20:48:24.143Z

changed the description

3.9.1.389 4155 - Add a workaround for the LEON3FT RETT Restart errata: TN-0018

Id	4155
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-10-16T05:47:11.000Z
Updated	2024-04-25T20:48:23.665Z
Milestone	6.1
Labels	arch:sparc, priority::normal, qualification, resolution::fixed, ticket-type::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4155
Merges	0

Original author: sebastian.huber

See also:

https://www.gaisler.com/doc/antn/GRLIB-TN-0018.pdf

Author: Trac Migrate 2020-10-16T14:58:41.000Z

Original author: sebastian.huber

This is the proposed GCC10 patch for master, it shuold be applied for RSB/sparc too.

https://lists.rtems.org/pipermail/devel/2020-October/062837.html

Author: Trac Migrate 2020-10-16T15:12:09.000Z

Original author: sebastian.huber

The patch looks fine.

Author: Trac Migrate 2021-03-07T15:29:16.000Z

Original author: sebastian.huber

The GCC patch has been accepted upstreams into master and GCC-10 branch: https://gcc.gnu.org/git/?p=gcc.git;a=commit;h=4b690f161b82e428dbe648075da215daa52be0ea https://gcc.gnu.org/git/?p=gcc.git;a=commit;h=1aed3f059ebd08fffe1346ac7ecf8e8606359875

Author: Trac Migrate 2021-03-11T16:52:57.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"b2da982c87e9e86561d1b6db18c01ea98c628467/rtems" b2da982/rtems]:

```
leon,tn-0018: work around GRLIB-TN-0018 errata

Overview
========

The errata is worked around in the kernel without requiring toolchain
modifications. It is triggered the JMPL/RETT return from trap␣
↪instruction
sequence never generated by the compiler and. There are also other
conditions that must must be true to trigger the errata, for example the
instruction that the trap returns to has to be a JMPL instruction. The
errata can only be triggered if certain data is corrected by ECC
(inflicted by radiation), thus it can not be triggered under normal
operation. For more information see:
www.gaisler.com/notes

Affected RTEMS target BSPs:
* GR712RC
* UT699
* UT700/699E

The work around is enabled by defining __FIX_LEON3_TN0018 at build time.
After applying the following GCC patch, GCC will set the define when
compiling for an affected multilib:
* GR712RC (-mcpu=leon3 -mfix-gr712rc)
* UT700/UT699E (-mpcu=leon3 -mfix-ut700)
* UT699 (-mcpu=leon -mfix-ut699)
When building for another multilib and TN0018 is still required, it
is possible to enable it on the RTEMS kernel configure line using the
TARGET_CFLAGS (-D__FIX_LEON3FT_TN0018) or other by other means.

The following GCC patch sets __FIX_LEON3FT_TN0018 for the affected RTEMS
multilibs:
---------
diff --git a/gcc/config/sparc/rtemself.h b/gcc/config/sparc/rtemself.h
index 6570590..ddec98c 100644
--- a/gcc/config/sparc/rtemself.h
+++ b/gcc/config/sparc/rtemself.h
@@ -33,6 +33,8 @@
builtin_assert ("system=rtems");        \\
if (sparc_fix_b2bst)                    \\
builtin_define ("__FIX_LEON3FT_B2BST"); \\
+       if (sparc_fix_gr712rc || sparc_fix_ut700 || sparc_fix_ut699) \\
+         builtin_define ("__FIX_LEON3FT_TN0018"); \\
}                                         \\
while (0)
---------

```

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```
Workaround Implementation
=========================

In general there are two approaches that the workaround uses:
A) avoid ECC restarting the RETT instruction
B) avoid returning from trap to a JMPL instruction

Where A) comes at a higher performance cost than B), so B) is used
where posssible. B) can be achived for certain returns from trap
handlers if trap entry is controlled by assembly, such as system calls.

A)
A special JMPL/RETT sequence where instruction cache is disabled
temporarily to avoid RETT containing ECC errors, and reading of RETT
source registers to "clean" them from incorrect ECC just before RETT
is executed.

B)
The work around prevents JMPL after system calls (TA instruction) and
modifies assembly code on return from traps jumping back to application
code. Note that for some traps the trapped instruction is always
re-executed and can therefore not trigger the errata, for example the
SAVE instruction causing window overflow or an float instruction causing
FPU disabled trap.

RTEMS SPARC traps workaround implementation:
NAME                  NOTE   TRAP   COMMENT
* window overflow         1 - 0x05   always returns to a SAVE
* window underflow        1 - 0x06   always returns to a RESTORE
* interrupt traps         2 - 0x10..1f special rett sequence workaround
* syscall                 3 - 0x80   shutdown system - never returns
* ABI flush windows       2 - 0x83   special rett sequence workaround
* syscall_irqdis          4 - 0x89
* syscall_irqen           4 - 0x8A
* syscall_irqdis_fp       1 - 0x8B   always jumps back to FP instruction
* syscall_lazy_fp_switch  5 - 0x04   A) jumps back to FP instruction,␣
↪or to
B) _Internal_error() starting with SAVE

Notes:
1) no workaround needed because trap always returns to non-JMPL␣
↪instruction
2) workaround implemented by special rett sequence
3) no workaround needed because system call never returns
4) workaround implemented by inserting NOP in system call generation.␣
↪Thus
fall into 1) when workaround is enabled and no trap handler fix needed.
5) trap handler branches into both 1) and returning to _Internal_error()
which starts with a SAVE and besides since it shuts down the system that
```

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```
RETT should never be in cache (only executed once) so fix not necessary
in this case.

Any custom trap handlers may also have to be updated. To simplify that,
helper work around assembly code in macros are available in a separate
include file <libcpu/grlib-tn-0018.h>.

Close #4155.
```

Author: Amar Takhar 2024-04-25T20:48:23.707Z

changed the description

3.9.1.390 4122 - Change RTEMS_NO_RETURN to use C11 and C++11 standard means

Id	4122
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-10-06T06:04:45.000Z
Updated	2024-04-25T20:48:20.879Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4122
Merges	0

Original author: sebastian.huber

C11 has a _Noreturn keyword and C++11 has a [[noreturn]] attribute. The standards are a bit less flexible than the GNU attribute with respect to the position of the attribute.

Author: Trac Migrate 2020-10-10T12:01:39.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"d7a48e1b259316533a5c775e27934760e1fcd313/rtems" d7a48e1/rtems]:

```
rtems: Improve RTEMS_NO_RETURN attribute

Provide RTEMS_NO_RETURN also in case RTEMS_DEBUG is defined to prevent␣
↪errors
```

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```
like this:

error: no return statement in function returning non-void [-
↪Werror=return-type]

Use C11 and C++11 standard means to declare a no-return function.

Close #4122.
```

Author: Amar Takhar 2024-04-25T20:48:20.918Z

changed the description

3.9.1.391 4105 - Add RTEMS_PARTITION_ALIGNMENT

Id	4105
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-09-30T11:55:29.000Z
Updated	2024-04-25T20:48:20.402Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4105
Merges	0

Original author: sebastian.huber

The storage area for partitions is usually statically allocated. Add RTEMS_PARTITION_ALIGNMENT so that these areas can meet the minimum alignment required by rtems_partition_create().

This is related to #4013.

Author: Trac Migrate 2020-10-07T06:11:41.000Z

Original author: sebastian.huber

In [changeset:"97e9728306a692ce7870db29c6b5d86dd9560692/rtems" 97e9728/rtems]:

```
rtems: Add RTEMS_PARTITION_ALIGNMENT

Update #4105.
```

Author: Trac Migrate 2021-09-02T06:03:19.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Author: Amar Takhar	2024-04-25T20:48:20.448Z

changed the description

3.9.1.392 4080 - build: Add start.o dependency to the executable link step

Id	4080
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-09-16T06:00:52.000Z
Updated	2024-04-25T20:48:19.952Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::build, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4080
Merges	0

Original author: sebastian.huber

RTEMS is a real-time operating system and the applications using RTEMS end up in a single executable which contains also the full system initialization. The linker uses a start file to determine what should be linked into the executable. The start file is also built by the build system, however, it is only indirectly referenced via a linker script, for example:

https://git.rtems.org/rtems/tree/bsps/arm/shared/start/linkcmds.base#n28

So, every executable depends on the start file (start.o usually). If start.o changes, then the executable needs to be re-linked. Also the start file needs the name expected by the linker script, for example not start.S.17.o.

The start files are build with this commands:

https://git.rtems.org/rtems/tree/wscript#n535

https://git.rtems.org/rtems/tree/wscript#n244

Somehow we have to add a dependency on start.o to every executable.

To experiment with the build system use the following commands to set it up:

```
cd $HOME
mkdir rtems-sdk
mkdir rtems-sdk/src
cd rtems-sdk/src
git clone git://git.rtems.org/rtems.git
git clone git://git.rtems.org/rtems-source-builder.git rsb
```

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```
cd rsb/rtems
../source-builder/sb-set-builder --prefix=$HOME/rtems-sdk/6 6/rtems-sparc
cd ../../rtems
echo "[sparc/leon3]" > config.ini
./waf configure --prefix=$HOME/rtems-sdk/6
./waf
```

The host must be capable to build GCC and needs the Python development support (header files) installed.

Author: Trac Migrate 2020-09-16T07:04:51.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
RTEMS is a real-time operating system and the applications using RTEMS␣
↪end up in a single executable which contains also the full system␣
↪initialization.  The linker uses a start file to determine what␣
↪should be linked into the executable. The start file is also built by␣
↪the build system, however, it is only indirectly referenced via a␣
↪linker script, for example:

https://git.rtems.org/rtems/tree/bsps/arm/shared/start/linkcmds.base#n28

So, every executable depends on the start file (start.o usually). If␣
↪start.o changes, then the executable needs to be re-linked. Also the␣
↪start file needs the name expected by the linker script, for example␣
↪not start.S.17.o.

The start files are build with this commands:

https://git.rtems.org/rtems/tree/wscript#n535

https://git.rtems.org/rtems/tree/wscript#n244

Somehow we have to add a dependency on start.o to every executable.
+
+ To experiment with the build system use the following commands to set␣
↪it up:
+ {{{
+ cd $HOME
+ mkdir rtems-sdk
+ mkdir rtems-sdk/src
+ cd rtems-sdk/src
+ git clone git://git.rtems.org/rtems.git
+ git clone git://git.rtems.org/rtems-source-builder.git rsb
+ cd rsb/rtems
```

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```
+ ../source-builder/sb-set-builder --prefix=$HOME/rtems-sdk/6 6/rtems-
↪sparc
+ cd ../../rtems
+ echo "[sparc/leon3]" > config.ini
+ ./waf configure --prefix=$HOME/rtems-sdk/6
+ ./waf
+ }}}
+ The host must be capable to build GCC and needs the Python␣
↪development support (header files) installed.
```

Author: Trac Migrate 2020-09-17T06:58:03.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"4eea8d4bc44116b3465d7fdeb053d66bf95428f4/rtems" 4eea8d4/rtems]:

```
build: Fix dependencies for start and asm files

Add a feature to enforce an explicit target file for assembler sources.
Add a build start file node list and use it as a test program
dependency.

The fix for #3846 and #4080 needs to be combined, because the fix
for #3846 requires the removal of 'before=["cstlib"]'. This patch fixes
two issues:

1. The tracking of start file dependencies.

2. Reflect that executables depend on the start files.

We need a start.o file in the right path so that the linker can find is
as specified by the linker script, and not for example a start.S.17.o
file in some path. This part is addressed by the "explicit_asm_target"
feature.

This build process extension

@after("apply_link")
@feature("cprogram", "cxxprogram")
def process_start_files(self):
if getattr(self, "start_files", False):
self.link_task.dep_nodes.extend(self.bld.start_files)

addresses 2.

```

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```
Close #3846.
Close #4080.
```

Author: Amar Takhar 2024-04-25T20:48:20.009Z

changed the description

3.9.1.393 4074 - Add CONFIGURE_MAXIMUM_THREAD_LOCAL_STORAGE_SIZE

Id	4074
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-09-10T13:17:40.000Z
Updated	2024-04-25T20:48:19.516Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::config, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4074
Merges	0

Original author: sebastian.huber

This configuration option can be used to reserve space for the dynamic linking of modules with thread-local storage objects. See also:

https://lists.rtems.org/pipermail/devel/2020-September/061867.html

Author: Trac Migrate 2020-09-10T13:20:30.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
- This configuration option can be used to reserve space for the␣
↪dynamic linking of modules with thread-local storage objects.
+ This configuration option can be used to reserve space for the␣
↪dynamic linking of modules with thread-local storage objects.  See␣
↪also:
?                                                                ␣
↪                                                 ++++++++++++

+
+ https://lists.rtems.org/pipermail/devel/2020-September/061867.html
```

Author: Trac Migrate 2020-09-11T07:09:20.000Z

Original author: sebastian.huber

In [changeset:"f86a0cec854286d9e26465fc9c364bb96c12a969/rtems-tools" f86a0ce/rtems-tools]:

```
linkers/exeinfo: Output TLS data

Updates #4074
```

Author: Trac Migrate 2020-09-17T16:09:22.000Z

Original author: sebastian.huber

In [changeset:"641b31a48d48c59ef73c47a225f1012b11e0eea7/rtems" 641b31a4/rtems]:

```
rtems: Add RTEMS_ALIGN_DOWN()

Update #3959.
Update #4074.
```

Author: Trac Migrate 2020-09-17T16:09:25.000Z

Original author: sebastian.huber

In [changeset:"dce1cdf19e6d8d7c5f72163401171648093d27bb/rtems" dce1cdf1/rtems]:

```
rtems: Add RTEMS_ALIGN_UP()

Update #3959.
Update #4074.
```

Author: Trac Migrate 2020-09-17T16:09:29.000Z

Original author: sebastian.huber

In [changeset:"c312f3110ebd6b38c3971910fe034b6c97ebb28c/rtems" c312f31/rtems]:

```
CONFIGURE_MAXIMUM_THREAD_LOCAL_STORAGE_SIZE

Add this application configuration option.  This configuration option␣
↪can be
used to reserve space for the dynamic linking of modules with thread-
↪local
```

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```
storage objects.

Add RTEMS_TASK_STORAGE_ALIGNMENT to define the minium alignment of a
thread-local storage size.

Update #4074.
```

Author: Trac Migrate 2020-09-17T16:14:43.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"a5fe9aad19fe003748e0100243c14da5fb9a7d66/rtems-docs" a5fe9aa/rtems-docs]:

```
c-user: CONFIGURE_MAXIMUM_THREAD_LOCAL_STORAGE_SIZE

Document this application configuration option.

Close #4074.
```

Author: Amar Takhar 2024-04-25T20:48:19.556Z

changed the description

3.9.1.394 4054 - RTEMS_BARRIER_AUTOMATIC_RELEASE and RTEMS_BINARY_SEMAPHORE options have the same value

Id	4054
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-08-17T10:27:55.000Z
Updated	2024-04-25T20:48:18.162Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4054
Merges	0

Original author: sebastian.huber

The RTEMS_BARRIER_AUTOMATIC_RELEASE and RTEMS_BINARY_SEMAPHORE options have the same value. In order to better detect a misuse of option values (for example us-

ing RTEMS_BINARY_SEMAPHORE for rtems_barrier_create()), the options should have unique values.

Author: Trac Migrate 2020-08-19T04:48:49.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"593a67f6c891f48b8cebc8bf0db1b47faafbfc2a/rtems" 593a67f6/rtems]:

```
rtems: Use unique option values

The RTEMS_BARRIER_AUTOMATIC_RELEASE and RTEMS_BINARY_SEMAPHORE options
had the same value.  In order to better detect a misuse of option values
(for example using RTEMS_BINARY_SEMAPHORE for rtems_barrier_create()),
the options should have unique values.

Close #4054.
```

Author: Amar Takhar 2024-04-25T20:48:18.199Z

changed the description

3.9.1.395 4032 - Make deferred free in malloc() support optional

Id	4032
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-07-23T11:54:48.000Z
Updated	2024-04-25T20:48:17.136Z
Milestone	6.1
Labels	library, priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4032
Merges	0

Original author: sebastian.huber

The free() implementation in RTEMS supports that allocated memory is freed in interrupt context. Since the heap is protected by a mutex, the frees issued in interrupt context cannot immediately be freed to the heap, instead they are placed on a deferred free list. This list is emptied by the core allocation function rtems_heap_allocate_aligned_with_boundary(). This adds a dependency to free() in rtems_heap_allocate_aligned_with_boundary(). In order to better support applications which only allocate memory an never free it, this dependency should be avoided.

This can be done with a weak default implementation of _Malloc_Process_deferred_frees(). In the free() module a strong implementation can be provided.

Author: Trac Migrate 2020-07-24T05:14:22.000Z

Original author: sebastian.huber

In [changeset:"6f94a830bd750bc744b3e605be52978d1cd006e3/rtems" 6f94a83/rtems]:

```
score: Add RTEMS_WEAK

Update #4032.
```

Author: Trac Migrate 2020-07-24T05:14:26.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"7746b0def9787e9806f80a28efbe4c64d2b9e561/rtems" 7746b0de/rtems]:

```
malloc: Make deferred free support optional

Only include the deferred free support if free() is actually used by the
application.

The free() implementation in RTEMS supports that allocated memory is
freed in interrupt context.  Since the heap is protected by a mutex, the
frees issued in interrupt context cannot immediately be freed to the
heap, instead they are placed on a deferred free list.  This list is
emptied by the core allocation function
rtems_heap_allocate_aligned_with_boundary().  This adds a dependency to
free() in rtems_heap_allocate_aligned_with_boundary(). In order to
better support applications which only allocate memory and never free
it, this dependency should be avoided.  Provide a weak default
implementation of _Malloc_Process_deferred_frees() for
rtems_heap_allocate_aligned_with_boundary().  In the free() module
provide the strong implementation.

Close #4032.
```

Author: Trac Migrate 2020-07-24T05:32:01.000Z

Original author: sebastian.huber

In [changeset:"4444094d0281488f28d9a58d6f3fad1eb6ef49f8/rtems" 4444094d/rtems]:

```
spmisc01: Include missing header file

Update #4032.
```

Author: Amar Takhar 2024-04-25T20:48:17.175Z

changed the description

3.9.1.396 4007 - Add rtems_message_queue_construct()

Id	4007
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-06-17T08:08:44.000Z
Updated	2024-04-25T20:48:16.642Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4007
Merges	0

Original author: sebastian.huber

In RTEMS 5 a lot of development was done to allow a static allocation of resources provided by RTEMS and avoid the use of a heap. Similar to #3959 a new directive to build Classic API message queues without using the workspace is proposed:

```
/**
* @brief The message queue configuration to construct a message queue.
*/
typedef struct {
/**
* @brief The name of the message queue.
*/
rtems_name name;

/**
* @brief The count of the provided buffers.
*
* This value defines the maximum number of pending messages.
*/
size_t buffer_count;

/**
* @brief The size of the provided buffers in bytes.
*/
```

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```
size_t buffer_size;

/**
* @brief The array of count message buffers.
*
* Each buffer shall have the size of the buffer_size member.  The maximum
* message size is buffer_size minus sizeof( rtems_message_queue_buffer ).
*/
rtems_message_queue_buffer *buffers;

/**
* @brief The attribute set of the message queue.
*/
rtems_attribute attributes;
} rtems_message_queue_config;

/**
* @brief Constructs a message queue according to the specified configuration.
*
* @param config The message queue configuration.
* @param[out] id The message queue identifier of the new message queue.
*
* @retval RTEMS_SUCCESSFUL Successful operation.
* @retval RTEMS_INVALID_ADDRESS The id parameter is @c NULL.
* @retval RTEMS_INVALID_NAME The message queue name is invalid.
* @retval RTEMS_TOO_MANY No message queue is available.
*/
rtems_status_code rtems_message_queue_construct(
const rtems_message_queue_config *config,
rtems_id                         *id
);
```

Author: Trac Migrate 2020-09-17T16:18:59.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
In RTEMS 5 a lot of development was done to allow a static allocation␣
↪of resources provided by RTEMS and avoid the use of a heap. Similar␣
↪to #3959 a new directive to build Classic API message queues without␣
↪using the workspace is proposed:
{{{
/**
-  * @brief The message queue configuration to build a message queue.
?                                              ^ ^^^

```

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```
+  * @brief The message queue configuration to construct a message queue.
?                                                 ^^^^^^ ^^

*/
typedef struct {
/**
* @brief The name of the message queue.
*/
rtems_name name;

/**
* @brief The count of the provided buffers.
*
* This value defines the maximum number of pending messages.
*/
size_t buffer_count;

/**
* @brief The size of the provided buffers in bytes.
*/
size_t buffer_size;

/**
* @brief The array of count message buffers.
*
* Each buffer shall have the size of the buffer_size member.  The maximum
* message size is buffer_size minus sizeof( rtems_message_queue_buffer ).
*/
rtems_message_queue_buffer *buffers;

/**
* @brief The attribute set of the message queue.
*/
rtems_attribute attribute_set;
} rtems_message_queue_config;

/**
-  * @brief Builds a message queue according to the specified configuration.
?           ^ ^^^

+  * @brief Constructs a message queue according to the specified configuration.
?           ^^^^^^ ^^

*
```

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```
* @param config The message queue configuration.
* @param[out] id The message queue identifier of the new message queue.
*
* @retval RTEMS_SUCCESSFUL Successful operation.
* @retval RTEMS_INVALID_ADDRESS The id parameter is @c NULL.
* @retval RTEMS_INVALID_NAME The message queue name is invalid.
* @retval RTEMS_TOO_MANY No message queue is available.
*/
- rtems_status_code rtems_message_queue_build(
?                                    ^ ^^^

+ rtems_status_code rtems_message_queue_construct(
?                                    ^^^^^^ ^^

const rtems_message_queue_config *config,
rtems_id                         *id
);
}}}
```

- **Status** changed from *assigned* to *accepted*
- **Summary** changed from *Add rtems_message_queue_build()* to *Add rtems_message_queue_construct()*

Author: Trac Migrate 2020-09-17T16:19:28.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
In RTEMS 5 a lot of development was done to allow a static allocation␣
↪of resources provided by RTEMS and avoid the use of a heap. Similar␣
↪to #3959 a new directive to build Classic API message queues without␣
↪using the workspace is proposed:
{{{
/**
* @brief The message queue configuration to construct a message queue.
*/
typedef struct {
/**
* @brief The name of the message queue.
*/
rtems_name name;

/**
* @brief The count of the provided buffers.
*
* This value defines the maximum number of pending messages.
```

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```
*/
size_t buffer_count;

/**
* @brief The size of the provided buffers in bytes.
*/
size_t buffer_size;

/**
* @brief The array of count message buffers.
*
* Each buffer shall have the size of the buffer_size member.  The maximum
* message size is buffer_size minus sizeof( rtems_message_queue_buffer ).
*/
rtems_message_queue_buffer *buffers;

/**
* @brief The attribute set of the message queue.
*/
-   rtems_attribute attribute_set;
?                             - --

+   rtems_attribute attributes;
} rtems_message_queue_config;

/**
* @brief Constructs a message queue according to the specified configuration.
*
* @param config The message queue configuration.
* @param[out] id The message queue identifier of the new message queue.
*
* @retval RTEMS_SUCCESSFUL Successful operation.
* @retval RTEMS_INVALID_ADDRESS The id parameter is @c NULL.
* @retval RTEMS_INVALID_NAME The message queue name is invalid.
* @retval RTEMS_TOO_MANY No message queue is available.
*/
rtems_status_code rtems_message_queue_construct(
const rtems_message_queue_config *config,
rtems_id                         *id
);
}}}
```

Author: Trac Migrate 2020-09-28T05:17:56.000Z

Original author: sebastian.huber

In [changeset:"3c0255766d591e2ae5718003416456af91debd55/rtems" 3c025576/rtems]:

```
score: Use RTEMS_ALIGN_UP()

Update #4007.
```

Author: Trac Migrate 2020-09-28T05:17:59.000Z

Original author: sebastian.huber

In [changeset:"fe2cb7c47c9960cd6efbefa2347274c300959e45/rtems" fe2cb7c4/rtems]:

```
score: Fix allocation size calculation

The previous multiplication error check is broken on 64-bit machines. Use the
recommended check from SEI CERT C Coding Standard, "INT30-C. Ensure that
unsigned integer operations do not wrap".

Make sure the message size computation does not overflow.

Update #4007.
```

Author: Trac Migrate 2020-09-28T05:18:03.000Z

Original author: sebastian.huber

In [changeset:"34dd90a560454842595845b95b7aed8b871d5da9/rtems" 34dd90a5/rtems]:

```
score: Gather message queue control initialization

Initialize the structure in a single code block after the error checks and
calculations.

Update #4007.
```

Author: Trac Migrate 2020-09-28T05:18:06.000Z

Original author: sebastian.huber

In [changeset:"5bc7c3724fbb06d934401400ac5922bcae2c6e95/rtems" 5bc7c37/rtems]:

```
score: Improve _CORE_message_queue_Initialize()

```

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```
Return a status code and differentiate between error conditions.

Update #4007.
```

Author: Trac Migrate 2020-09-28T05:18:09.000Z

Original author: sebastian.huber

In [changeset:"69b4fe592fb26f3421add3c564677d78022bcf5a/rtems" 69b4fe59/rtems]:

```
score: Simplify CORE_message_queue_Buffer

Merge CORE_message_queue_Buffer structure into
CORE_message_queue_Buffer_control.

Use a zero-length array for the actual message buffer.  This reduces the
structure size on all targets.

Update #4007.
```

Author: Trac Migrate 2020-09-28T05:18:13.000Z

Original author: sebastian.huber

In [changeset:"2c09f54fc41b86265af137716013bce2e2e92b27/rtems" 2c09f54f/rtems]:

```
score: Add <rtems/score/coremsgbuffer.h>

Move the CORE_message_queue_Buffer definition to a separate header file␣
↪to be
able to use it independent of the remaining Message Queue Handler API.

Change license to BSD-2-Clause according to file history.

Update #3053.
Update #4007.
```

Author: Trac Migrate 2020-09-28T05:18:16.000Z

Original author: sebastian.huber

In [changeset:"24ea1cebeb5e64ba2371c8e740ebe3c81d565ca2/rtems" 24ea1ce/rtems]:

```
rtems: Remove Message_queue_Control::attribute_set

Add Message_queue_Control::is_global if RTEMS_MULTIPROCESSING is␣
↪defined.  This
reduces the Message_queue_Control size in standard RTEMS configurations.

Update #4007.
```

Author: Trac Migrate 2020-09-28T05:18:20.000Z

Original author: sebastian.huber

In [changeset:"4a4f41ed642cd5d9f4056b12d86bbf80e8da983a/rtems" 4a4f41e/rtems]:

```
rtems: Add rtems_message_queue_construct()

In contrast to message queues created by rtems_message_queue_create(),␣
↪the
message queues constructed by this directive use a user-provided␣
↪message buffer
storage area.

Add RTEMS_MESSAGE_QUEUE_BUFFER() to define a message buffer type for␣
↪message
buffer storage areas.

Update #4007.
```

Author: Trac Migrate 2020-09-28T05:18:23.000Z

Original author: sebastian.huber

In [changeset:"febc66048aaeb74ae1ccd2375003d033107e28f8/rtems" febc6604/rtems]:

```
validation: Test rtems_message_queue_construct()

Update #4007.
```

Author: Trac Migrate 2021-04-23T06:25:29.000Z

Original author: sebastian.huber

In [changeset:"03747b508779ccddef3b7e39da825a7037fa8453/rtems" 03747b50/rtems]:

```
rtems: Check for NULL config in msgq construct

Since there are already excessive NULL pointer checks in the Classic
API, do this also in rtems_message_queue_construct().

Update #4007.
```

Author: Trac Migrate 2021-05-11T05:49:48.000Z

Original author: sebastian.huber

In [changeset:"ab5aeb1be1e7f501388cf4c8915f98efaaef754a/rtems" ab5aeb1/rtems]:

```
score: Rename _Stack_Free_nothing()

Rename _Stack_Free_nothing() in _Objects_Free_nothing() to make it
reusable for the message queue buffers.

Update #4007.
```

Author: Trac Migrate 2021-05-11T05:49:51.000Z

Original author: sebastian.huber

In [changeset:"c2687666b199c44dacfa8d5e9b9939fa2dc8521e/rtems" c268766/rtems]:

```
rtems: Use _Objects_Free_nothing() for msg queues

Use _Objects_Free_nothing() for rtems_message_queue_construct() to avoid
unreachable code in _CORE_message_queue_Close() in case only
user-provided message buffers are used.

Update #4007.
```

Author: Trac Migrate 2021-09-02T06:00:40.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

The new directive was documented, implemented, and tested:

https://docs.rtems.org/branches/master/c-user/message/directives.html#rtems-message-queue-construct

Author: Amar Takhar 2024-04-25T20:48:16.695Z

changed the description

3.9.1.397 3994 - Generate Doxygen markup for the application configuration options

Id	3994
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-06-01T11:26:30.000Z
Updated	2024-04-25T20:48:14.142Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3994
Merges	0

Original author: sebastian.huber

The application configuration options are now available as specification items. From these items, the documentation in the RTEMS Classic API Guide is generated. The same approach can be used to generate Doxygen markup.

Author: Trac Migrate 2020-08-07T05:15:35.000Z

Original author: sebastian.huber

In [changeset:"db22500e842ed26b56865cd7c06fc28d4551ff35/rtems-docs" db22500/rtems-docs]:

```
c-user: Improve refs and formatting in appl config

The formatting is generated through references within the specification.

Update #3994.
```

Author: Trac Migrate 2020-08-07T05:15:37.000Z

Original author: sebastian.huber

In [changeset:"63764a6d27e225867ef7753b803e7b90583a07b3/rtems-docs" 63764a6/rtems-docs]:

```
c-user: Add automatically generated warning

Update #3994.
```

Author: Trac Migrate 2020-08-07T05:24:30.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"e812f81c89dba6c73474c4bf60c03bc9df04f993/rtems" e812f81/rtems]:

```
Document application configuration options

Add a new directory for Doxygen-specific documentation content.  Add a
Doxygen only header file containing documentation of the application
configuration options.  The header file is generated from specification
items.

Close #3994.
```

Author: Trac Migrate 2020-10-08T05:40:41.000Z

Original author: sebastian.huber

In [changeset:"e697baf8d7d203f7b03f9910c9c136dbe7502ab6/rtems" e697baf/rtems]:

```
doxygen: Add "Generated from ..." comments

Improve file header comment.

Update #3994.
```

Author: Amar Takhar 2024-04-25T20:48:14.181Z

changed the description

3.9.1.398 3993 - Specify the RTEMS Classic API

Id	3993
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-05-29T13:49:44.000Z
Updated	2024-04-25T20:48:13.532Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3993
Merges	0

Original author: sebastian.huber

For the RTEMS Qualification project we need a specification of the RTEMS Classic API. This specification can be used to generate an Interface Control Document (ICD), header files with Doxygen markup and content for the RTEMS Classic API Guide. The RTEMS Classic API is mainly defined in the following header files:

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- <rtems/rtems/clock.h>
- <rtems/rtems/config.h>
- <rtems/rtems/dpmem.h>
- <rtems/rtems/event.h>
- <rtems/rtems/intr.h>
- <rtems/rtems/message.h>
- <rtems/rtems/modes.h>
- <rtems/rtems/mp.h>
- <rtems/rtems/object.h>
- <rtems/rtems/options.h>
- <rtems/rtems/part.h>
- <rtems/rtems/ratemon.h>
- <rtems/rtems/region.h>
- <rtems/rtems/sem.h>
- <rtems/rtems/signal.h>
- <rtems/rtems/status.h>
- <rtems/rtems/support.h>
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- <rtems/rtems/timer.h>
- <rtems/rtems/types.h>
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The header files are generated by this script:

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As preliminary work, remove all RTEMS APIs deprecated in RTEMS 5.1.

Use and improve the Interface Specification How-To during the work on this ticket.

Carry out the following tasks for each header file:

1. Add a interface specification item for each variable, typedef, enum, enumerator, define, macro, function, struct, and union.
2. For each item analyse the change history using `git log -p --follow` to determine the copyright holders of the Doxygen markup. Use only Doxygen markup for the specification items from contributors which agreed on a dual-licensing (CC-BY-SA-4.0 OR BSD-2-Clause) in #3899. Use this information to provide copyright statements for the items. The API parts alone (e.g. function names, parameter names, type names, etc.) are not considered to be copyrightable information.
3. Use the RTEMS documentation sources to document the API. Use only content from contributors which agreed on a dual-licensing (CC-BY-SA-4.0 OR BSD-2-Clause) in #3899.
4. Add unspecified interface items for interfaces to the implementation, C language, compiler, user provided defines, build system provided defines, etc.
5. Run the RTEMS test suite with all tests enabled and check for regressions (in particular new warnings).
6. Create a commit for each header file and send it to the RTEMS mailing list for review.

Author: Trac Migrate 2020-06-01T11:16:17.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
For the RTEMS Qualification project we need a specification of the␣
↪RTEMS Classic API. This specification can be used to generate an␣
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```

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```
* <rtems/io.h>
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* <rtems/rtems/cache.h>
* <rtems/rtems/clock.h>
* <rtems/rtems/config.h>
* <rtems/rtems/dpmem.h>
* <rtems/rtems/event.h>
* <rtems/rtems/intr.h>
* <rtems/rtems/message.h>
* <rtems/rtems/mp.h>
* <rtems/rtems/object.h>
* <rtems/rtems/options.h>
* <rtems/rtems/part.h>
* <rtems/rtems/ratemon.h>
* <rtems/rtems/region.h>
* <rtems/rtems/sem.h>
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Examples for interface specification items are available here:

https://git.rtems.org/sebh/rtems-qual.git/tree/spec/if/rtems/status

You find an example for a generated header file here:

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↪status.h?h=qual

The header files are generated by this script:

https://git.rtems.org/sebh/rtems-qual.git/tree/specif.py

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↪Use this information to provide copyright statements for the items.␣
```

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```
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↪ etc.) are not considered to be copyrightable information.

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↪regressions (in particular new warnings).

6. Create a commit for each header file and send it to the RTEMS␣
↪mailing list for review.
```

Author: Trac Migrate 2020-06-01T11:46:42.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
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```

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```
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* <rtems/rtems/signal.h>
* <rtems/rtems/status.h>
* <rtems/rtems/support.h>
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```

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```
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```

Author: Trac Migrate 2020-06-04T12:32:13.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
For the RTEMS Qualification project we need a specification of the␣
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* <rtems/rtems/timer.h>
* <rtems/rtems/types.h>
```

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```
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?                                                    ^^

+ https://git.rtems.org/sebh/rtems-qual.git/tree/spec2rtems.py
?                                                    ^^^^^^


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```

- **Owner** set to sebastian.huber
- **Status** changed from *assigned* to *accepted*

Author: Trac Migrate 2020-06-04T17:38:29.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
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+ * <rtems/rtems/modes.h>
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```

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↪during the work on this ticket.

Carry out the following tasks for each header file:

1. Add a interface specification item for each variable, typedef, enum,␣
↪enumerator, define, macro, function, struct, and union.

2. For each item analyse the change history using `git log -p --follow`␣
↪to determine the copyright holders of the Doxygen markup. Use only␣
↪Doxygen markup for the specification items from contributors which␣
↪agreed on a dual-licensing (CC-BY-SA-4.0 OR BSD-2-Clause) in #3899.␣
↪Use this information to provide copyright statements for the items.␣
↪The API parts alone (e.g. function names, parameter names, type names,
↪ etc.) are not considered to be copyrightable information.

3. Use the RTEMS documentation sources to document the API. Use only␣
↪content from contributors which agreed on a dual-licensing (CC-BY-SA-
↪4.0 OR BSD-2-Clause) in #3899.

4. Add unspecified interface items for interfaces to the implementation,
↪ C language, compiler, user provided defines, build system provided␣
↪defines, etc.

5. Run the RTEMS test suite with all tests enabled and check for␣
↪regressions (in particular new warnings).

6. Create a commit for each header file and send it to the RTEMS␣
↪mailing list for review.
```

Author: Trac Migrate 2020-09-03T05:00:43.000Z

Original author: sebastian.huber

In [changeset:"16ee8cf45bfd2c02ec2bd5d2fcabc6876cb2de65/rtems-docs" 16ee8cf/rtems-docs]:

```
c-user: Split up semaphore manager

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:00:46.000Z

Original author: sebastian.huber

In [changeset:"ba6825ca6359da5ded33f8b9bedcd53eadec579b/rtems-docs" ba6825c/rtems-docs]:

```
c-user: Split up event manager

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:00:48.000Z

Original author: sebastian.huber

In [changeset:"91f0f97698dd628842b35dc2fe76ecf537f593ba/rtems-docs" 91f0f97/rtems-docs]:

```
c-user: Split up barrier manager

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:00:50.000Z

Original author: sebastian.huber

In [changeset:"86c39ef2c4c24dde4fdef57d5f3b3eff27cc5000/rtems-docs" 86c39ef/rtems-docs]:

```
c-user: Split up clock manager

```

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```
This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:00:52.000Z

Original author: sebastian.huber

In [changeset:"623a9a11e8b4daf2ccfba0a3cff23e5063453e75/rtems-docs" 623a9a1/rtems-docs]:

```
c-user: Split up dual-ported memory manager

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:00:54.000Z

Original author: sebastian.huber

In [changeset:"72295d47f6907e9c3eca59554e356601e5172c87/rtems-docs" 72295d4/rtems-docs]:

```
c-user: Split up interrupt manager

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:00:57.000Z

Original author: sebastian.huber

In [changeset:"980734f1cdd4630eabe8bd82fe2ac21128b9a336/rtems-docs" 980734f/rtems-docs]:

```
c-user: Split up IO manager

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:00:59.000Z

Original author: sebastian.huber

In [changeset:"c75ded25eae1c64c1b4dba796acdda741710519e/rtems-docs" c75ded2/rtems-docs]:

```
c-user: Split up message manager

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:01:01.000Z

Original author: sebastian.huber

In [changeset:"a4119a9f1ce98f753ac6b9cfa0a5555f7c6a7c5e/rtems-docs" a4119a9/rtems-docs]:

```
c-user: Split up partition manager

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:01:03.000Z

Original author: sebastian.huber

In [changeset:"082054b63d6365333df356a7a26381e836705354/rtems-docs" 082054b/rtems-docs]:

```
c-user: Split up rate-monotonic manager

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:01:05.000Z

Original author: sebastian.huber

In [changeset:"aebb6fd7c7abd598d803ca0b8013e2761633f03a/rtems-docs" aebb6fd/rtems-docs]:

```
c-user: Split up region manager

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:01:08.000Z

Original author: sebastian.huber

In [changeset:"e3523ed062f50def78cc159f9ac7a24946116943/rtems-docs" e3523ed/rtems-docs]:

```
c-user: Split up signal manager

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:01:10.000Z

Original author: sebastian.huber

In [changeset:"ccb384b6233c3a31ade96b419026dc9049ad9c5b/rtems-docs" ccb384b/rtems-docs]:

```
c-user: Split up task manager

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:01:12.000Z

Original author: sebastian.huber

In [changeset:"a99bbaec5f4c412ddc55030872aa2113e79ea37e/rtems-docs" a99bbae/rtems-docs]:

```
c-user: Split up timer manager

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:01:14.000Z

Original author: sebastian.huber

In [changeset:"80df4d6a473093362092ea2dccad7f34e78664d5/rtems-docs" 80df4d6/rtems-docs]:

```
c-user: Split up user extensions manager

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-03T05:01:16.000Z

Original author: sebastian.huber

In [changeset:"ba9dfcf92c8aeb832c6f2c7ea7c4150064960d63/rtems-docs" ba9dfcf/rtems-docs]:

```
c-user: Split up scheduling concepts

Introduce a background section.

This makes it easier to automatically generate parts of the scheduling
concepts documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-09-18T16:57:09.000Z

Original author: sebastian.huber

In [changeset:"0b410b8ac75b829dca7651163da904c1a099351b/rtems" 0b410b8a/rtems]:

```
rtems: Generate <rtems.h>

Change license to BSD-2-Clause according to file history and
documentation re-licensing agreement.

Update #3053.
Update #3899.
Update #3993.
```

Author: Trac Migrate 2020-10-08T05:40:38.000Z

Original author: sebastian.huber

In [changeset:"f815d044ee14cc9e945a95d52b687a447abe550e/rtems" f815d04/rtems]:

```
rtems: Add "Generated from ..." comments

Improve file header comment.

Update #3993.
```

Author: Trac Migrate 2020-10-11T13:27:04.000Z

Original author: sebastian.huber

In [changeset:"4aae24d5b5cd9aa33ecf857d0f51210437d9b098/rtems-docs" 4aae24d/rtems-docs]:

```
c-user: Generate I/O Manager documentation

The manager documentation is a consolidation of the comments in Doxygen
markup and the documentation sources in Sphinx markup.  The
documentation was transfered to interface specification items.  This
header file was generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2020-10-11T14:07:39.000Z

Original author: sebastian.huber

In [changeset:"8111a6ba883e98d1f94d48dcafc07ac03c854449/rtems" 8111a6ba/rtems]:

```
rtems: Generate <rtems/io.h>

The manager documentation is a consolidation of the comments in Doxygen
markup and the documentation sources in Sphinx markup.  The
documentation was transfered to interface specification items.  This
header file was generated from the items by a script.

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2020-11-12T06:47:02.000Z

Original author: sebastian.huber

In [changeset:"ec4dcc0098b139fe70e12c2d576540a0e130e747/rtems-docs" ec4dcc0/rtems-docs]:

```
c-user: Generate Event Manager documentation

The manager documentation is a consolidation of the comments in Doxygen
markup and the documentation sources in Sphinx markup.  The
documentation was transfered to interface specification items.  This
header file was generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2020-11-12T06:47:04.000Z

Original author: sebastian.huber

In [changeset:"530bc2b0e34cb0ba2624e59b5f08e951153282ae/rtems-docs" 530bc2b/rtems-docs]:

```
c-user: Generate Partition Manager documentation

The manager documentation is a consolidation of the comments in Doxygen
markup and the documentation sources in Sphinx markup.  The
documentation was transfered to interface specification items.  This
header file was generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2020-11-12T07:55:26.000Z

Original author: sebastian.huber

In [changeset:"1af946088dae234233868a01860b9810b729b32c/rtems" 1af94608/rtems]:

```
rtems: Generate <rtems/config.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2020-11-12T07:55:30.000Z

Original author: sebastian.huber

In [changeset:"da44df31b151daf2bbeb0fcc587af82ec7eaa188/rtems" da44df3/rtems]:

```
rtems: Generate <rtems/rtems/config.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2020-11-12T07:55:33.000Z

Original author: sebastian.huber

In [changeset:"c0327d8617f632c673d5e1b61522497c98210481/rtems" c0327d8/rtems]:

```
rtems: Generate <rtems/rtems/status.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2020-11-12T07:55:37.000Z

Original author: sebastian.huber

In [changeset:"e05b100b3cb11fdf0497fc4b84995f500a2c81fb/rtems" e05b100/rtems]:

```
rtems: Generate <rtems/rtems/modes.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2020-11-12T07:55:40.000Z

Original author: sebastian.huber

In [changeset:"8de874b7666062e811ab825cce1dc1aad5f42251/rtems" 8de874b/rtems]:

```
rtems: Generate <rtems/rtems/options.h>

Change license to BSD-2-Clause according to file histories and
```

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```
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2020-11-12T07:55:44.000Z

Original author: sebastian.huber

In [changeset:"9b4458e78e5a6190f5f9857e6220aa915cfef07b/rtems" 9b4458e7/rtems]:

```
rtems: Generate <rtems/rtems/types.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2020-11-12T07:55:47.000Z

Original author: sebastian.huber

In [changeset:"f75e240f8cd206d92d9eeffee1ad394e5e8c059d/rtems" f75e240/rtems]:

```
rtems: Generate <rtems/rtems/attr.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2020-11-12T07:55:50.000Z

Original author: sebastian.huber

In [changeset:"007ee134a40753dac41275f49f6c2e55e9a3e546/rtems" 007ee13/rtems]:

```
rtems: Generate <rtems/rtems/event.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

```

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```
Update #3899.
Update #3993.
```

Author: Trac Migrate 2020-11-12T07:55:54.000Z

Original author: sebastian.huber

In [changeset:"ecc6b2f56c0c8e569d1f4e8972223e1d2ad388c9/rtems" ecc6b2f/rtems]:

```
rtems: Generate <rtems/rtems/part.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2020-11-12T07:55:57.000Z

Original author: sebastian.huber

In [changeset:"21af87199297460470578479293ec6bc8c4e04b2/rtems" 21af871/rtems]:

```
rtems: Generate <rtems/score/basedefs.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2020-11-20T13:27:03.000Z

Original author: sebastian.huber

In [changeset:"05f06aa7e70bc6d8bf303b56b5744b464bae5011/rtems-docs" 05f06aa/rtems-docs]:

```
c-user: Split up object services

This makes it easier to automatically generate parts of the module
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2020-12-01T13:42:47.000Z

Original author: sebastian.huber

In [changeset:"7995329f5cdc3900d0f71746341408a7d0974ddd/rtems" 7995329/rtems]:

```
rtems: Fix documentation in <rtems/rtems/part.h>

Update #3993.
```

Author: Trac Migrate 2020-12-01T13:46:11.000Z

Original author: sebastian.huber

In [changeset:"284e8d042175796330030d64c253f39318af0adf/rtems-docs" 284e8d0/rtems-docs]:

```
c-user: Fix format in Partition Manager

Update #3993.
```

Author: Trac Migrate 2020-12-02T07:20:08.000Z

Original author: sebastian.huber

In [changeset:"29e6caa311e766aaa4cb43f710f54d6f2040a623/rtems-docs" 29e6caa/rtems-docs]:

```
c-user: Clarify rtems_partition_create()

The rtems_partition_create() returns an object identifier and not just a
partition identifier.

Update #3993.
```

Author: Trac Migrate 2020-12-02T07:20:10.000Z

Original author: sebastian.huber

In [changeset:"346bbe698dbded0b66feb66574f5f2e9a0e758fa/rtems-docs" 346bbe6/rtems-docs]:

```
c-user: Clarify rtems_partition_delete()

Move the PTCB sentence to the notes to be in line with
rtems_partition_create().

Update #3993.
```

Author: Trac Migrate 2020-12-02T07:20:44.000Z

Original author: sebastian.huber

In [changeset:"8756d5ce06d8d5f8f9f205601cd051211681d470/rtems" 8756d5c/rtems]:

```
rtems: Clarify rtems_partition_create()

The rtems_partition_create() returns an object identifier and not just a
partition identifier.

Update #3993.
```

Author: Trac Migrate 2020-12-02T07:20:47.000Z

Original author: sebastian.huber

In [changeset:"5a285e3844462117293c0055944a6d8189e01f46/rtems" 5a285e3/rtems]:

```
rtems: Clarify rtems_partition_delete()

Move the PTCB sentence to the notes to be in line with
rtems_partition_create().

Update #3993.
```

Author: Trac Migrate 2020-12-02T07:31:31.000Z

Original author: sebastian.huber

In [changeset:"66bcecfd286542fc13afe8e5afb275906f6c941c/rtems-docs" 66bcecf/rtems-docs]:

```
c-user: Clarify invalid identifier descriptions

Update #3993.
```

Author: Trac Migrate 2020-12-02T07:34:30.000Z

Original author: sebastian.huber

In [changeset:"1af4493bdb20cda2879af65e92bc97bf9c60c3b5/rtems" 1af4493/rtems]:

```
rtems: Clarify invalid identifier descriptions

Update #3993.
```

Author: Trac Migrate 2020-12-03T06:25:06.000Z

Original author: sebastian.huber

In [changeset:"65969c1b730db50c98f85c83c5c7d244a38814c1/rtems" 65969c1/rtems]:

```
rtems: Generate <rtems/rtems/object.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2020-12-03T06:25:18.000Z

Original author: sebastian.huber

In [changeset:"768327d06de3fbcf372ae2fe04199a036bc3234a/rtems" 768327d0/rtems]:

```
rtems: Generate <rtems/rtems/timer.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2020-12-09T08:20:55.000Z

Original author: sebastian.huber

In [changeset:"dad89ce7a9bb17eaaa5712547bf1661dd1dd5a19/rtems-docs" dad89ce/rtems-docs]:

```
c-user: Generate Object Services documentation

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2020-12-09T08:20:57.000Z

Original author: sebastian.huber

In [changeset:"d716c79070901195912526c6e49d43defad00bdd/rtems-docs" d716c79/rtems-docs]:

```
c-user: Generate Timer Manager documentation

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-01-27T05:02:10.000Z

Original author: sebastian.huber

In [changeset:"b35ac9901caac823c5aa4aeeb81c4bb2c6bc58fd/rtems" b35ac99/rtems]:

```
rtems: Add "Notes" paragraph header

Place the paragraphs in the same order as the directive documentation in
the RTEMS Classic API Guide.

Update #3993.
```

Author: Trac Migrate 2021-02-03T05:17:38.000Z

Original author: sebastian.huber

In [changeset:"8a95e6f820f066451e1325592c9c0f18fa205c17/rtems" 8a95e6f8/rtems]:

```
rtems: Rework object services API

Add a "Constraints" paragraph to the documentation.

Provide prototypes for programming language bindings.  Use the macro
implementation to implement the corresponding functions.

Update #3993.
```

Author: Trac Migrate 2021-02-03T05:17:47.000Z

Original author: sebastian.huber

In [changeset:"aa0060f4c15e37b76d0a22be3ba21c9dca70eb87/rtems" aa0060f4/rtems]:

```
rtems: Clarify partition manager documentation

Unify the wording across similar directives of other managers.  Add
"Constraints" paragraph.

Update #3993.
```

Author: Trac Migrate 2021-02-03T05:20:14.000Z

Original author: sebastian.huber

In [changeset:"95e2f933cb59f8ff5da34a006daae28c82af40c2/rtems-docs" 95e2f93/rtems-docs]:

```
c-user: Clarify object services

Add a "Constraints" paragraph to the documentation.  Use function
prototypes for the directives.

Update #3993.
```

Author: Trac Migrate 2021-02-03T05:20:16.000Z

Original author: sebastian.huber

In [changeset:"66c9808db09c4a3f8f82f03389d8699e3fded6cd/rtems-docs" 66c9808/rtems-docs]:

```
c-user: Clarify partition manager documentation

Unify the wording across similar directives of other managers.  Add
"CONSTRAINTS" section.

Update #3993.
```

Author: Trac Migrate 2021-02-17T17:46:39.000Z

Original author: sebastian.huber

In [changeset:"4d9b0b4a10b582ba73753861540709ab905f02db/rtems-docs" 4d9b0b4/rtems-docs]:

```
c-user: Clarify timer manager documentation

Unify the wording across similar directives of other managers.  Add
"CONSTRAINTS" section.

Update #3993.
```

Author: Trac Migrate 2021-02-17T17:46:42.000Z

Original author: sebastian.huber

In [changeset:"775380c5576a0827957d6cfbb796d39d67f66452/rtems-docs" 775380c/rtems-docs]:

```
c-user: Clarify event manager documentation

Unify the wording across similar directives of other managers.  Add
"CONSTRAINTS" section.

Update #3993.
```

Author: Trac Migrate 2021-02-17T17:46:46.000Z

Original author: sebastian.huber

In [changeset:"e357ccf65bd35cb48555502bc7c5dee0d77170e4/rtems-docs" e357ccf/rtems-docs]:

```
c-user: Clarify IO manager documentation

Unify the wording across similar directives of other managers.

Update #3993.
```

Author: Trac Migrate 2021-02-17T17:46:48.000Z

Original author: sebastian.huber

In [changeset:"261491f4ad8b6981f60efc59b7bff45c2247c7c4/rtems-docs" 261491f/rtems-docs]:

```
c-user: Clarify object services documentation

Unify the wording across similar directives of other managers.

Update #3993.
```

Author: Trac Migrate 2021-02-17T17:46:50.000Z

Original author: sebastian.huber

In [changeset:"4e09c0958cb414036a2fac6ddde412513e4411cb/rtems-docs" 4e09c09/rtems-docs]:

```
c-user: Add labels to the manager chapters

Update #3993.
```

Author: Trac Migrate 2021-02-17T17:46:52.000Z

Original author: sebastian.huber

In [changeset:"a1c5d680b982c486d6aa8956ae4880e4e5aca5af/rtems-docs" a1c5d68/rtems-docs]:

```
c-user: Add control block acronyms

Update #3993.
```

Author: Trac Migrate 2021-02-17T17:46:55.000Z

Original author: sebastian.huber

In [changeset:"698580033b5e8d367d9d8146f567ad14b763f064/rtems-docs" 6985800/rtems-docs]:

```
c-user: Move deprecated/removed directives

This makes it easier to automatically generate parts of the manager
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2021-02-17T17:46:57.000Z

Original author: sebastian.huber

In [changeset:"fd56f7e469991b0c27826577e75a69668ff6411f/rtems-docs" fd56f7e/rtems-docs]:

```
c-user: Generate semaphore manager documentation

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-02-17T17:46:59.000Z

Original author: sebastian.huber

In [changeset:"62718adaa877c7b7ffb93270e7ddc48eebd7e368/rtems-docs" 62718ad/rtems-docs]:

```
c-user: Generate barrier manager documentation

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-02-17T17:47:02.000Z

Original author: sebastian.huber

In [changeset:"4aead847d249956d34b9c128e71afc187c86bdd6/rtems-docs" 4aead84/rtems-docs]:

```
c-user: Generate user extensions manager docs

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-02-17T17:47:04.000Z

Original author: sebastian.huber

In [changeset:"a60c5b4b3ed683b1ca13149309bc84de84615a71/rtems-docs" a60c5b4/rtems-docs]:

```
c-user: Generate clock manager documentation

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-02-17T19:26:45.000Z

Original author: sebastian.huber

In [changeset:"2730599ca147f2ac58536a9a7e7f2188e98233a3/rtems" 2730599c/rtems]:

```
rtems: Clarify event manager documentation

Unify the wording across similar directives of other managers.  Add
"CONSTRAINTS" section.

Update #3993.
```

Author: Trac Migrate 2021-02-17T19:26:49.000Z

Original author: sebastian.huber

In [changeset:"f9dc44afc75a629adf6d4d50da0a5ca152316802/rtems" f9dc44a/rtems]:

```
rtems: Clarify timer manager documentation

Unify the wording across similar directives of other managers.  Add
"CONSTRAINTS" section.

Update #3993.
```

Author: Trac Migrate 2021-02-17T19:26:52.000Z

Original author: sebastian.huber

In [changeset:"bf3b9f45365f64762a4ac9362782fd5640a57854/rtems" bf3b9f45/rtems]:

```
rtems: Clarify partition manager documentation

Unify the wording across similar directives of other managers.

Update #3993.
```

Author: Trac Migrate 2021-02-17T19:26:55.000Z

Original author: sebastian.huber

In [changeset:"7a1828ac611331f475e47c82f2ccbf25bd8a8449/rtems" 7a1828ac/rtems]:

```
rtems: Clarify IO manager documentation

Unify the wording across similar directives of other managers.

Update #3993.
```

Author: Trac Migrate 2021-02-17T19:26:59.000Z

Original author: sebastian.huber

In [changeset:"97825daf9c4f80f3f228f92f63d29d02c6ccf3f4/rtems" 97825da/rtems]:

```
rtems: Clarify object services documentation

Unify the wording across similar directives of other managers.

Update #3993.
```

Author: Trac Migrate 2021-02-17T19:27:02.000Z

Original author: sebastian.huber

In [changeset:"0c4c03532c625f5f34232c2e4eabc2ecc4fa036c/rtems" 0c4c035/rtems]:

```
rtems: Generate <rtems/rtems/barrier.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2021-02-17T19:27:06.000Z

Original author: sebastian.huber

In [changeset:"276828053ef00406b6d24bafc5b0b9da12068bf0/rtems" 2768280/rtems]:

```
rtems: Generate <rtems/rtems/clock.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2021-02-17T19:27:10.000Z

Original author: sebastian.huber

In [changeset:"407e351e11d3c4d0db8eb2d23ae2554f35f31697/rtems" 407e351/rtems]:

```
rtems: Generate <rtems/rtems/sem.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2021-02-19T06:06:15.000Z

Original author: sebastian.huber

In [changeset:"c87d8c2af341d4b9193690e6c948612d62b00e3b/rtems-docs" c87d8c2/rtems-docs]:

```
c-user: Generate signal manager documentation

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-02-19T06:09:24.000Z

Original author: sebastian.huber

In [changeset:"8b1b9872015b689172990556e8d958a732d88196/rtems" 8b1b9872/rtems]:

```
rtems: Generate <rtems/rtems/signal.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2021-04-19T05:18:08.000Z

Original author: sebastian.huber

In [changeset:"9bf0184a3e0773dc8f466479da548ff6243eff50/rtems-docs" 9bf0184/rtems-docs]:

```
c-user: Document rtems_semaphore_obtain() errors

Update #3993.
```

Author: Trac Migrate 2021-04-22T05:13:44.000Z

Original author: sebastian.huber

In [changeset:"f3262d40745c4109f529e0456e011c85bf134917/rtems-docs" f3262d4/rtems-docs]:

```
c-user: Split up initialization manager

This makes it easier to automatically generate parts of the module
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2021-04-22T05:13:46.000Z

Original author: sebastian.huber

In [changeset:"62ca9c1bc3e09119aaed095dc709f7712d8b3997/rtems-docs" 62ca9c1/rtems-docs]:

```
c-user: Split up fatal error manager

This makes it easier to automatically generate parts of the module
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2021-04-22T05:13:48.000Z

Original author: sebastian.huber

In [changeset:"86b48fb09e78d756cce2329213c0a5b48662cc52/rtems-docs" 86b48fb/rtems-docs]:

```
c-user: Split up multiprocessing manager

This makes it easier to automatically generate parts of the module
documentation in the future.

Update #3993.
```

Author: Trac Migrate 2021-04-22T05:13:52.000Z

Original author: sebastian.huber

In [changeset:"5a3cb76d38fa15ac8482be1d55be357594a8c54e/rtems-docs" 5a3cb76/rtems-docs]:

```
c-user: Generate initialization manager docs

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-04-22T05:13:54.000Z

Original author: sebastian.huber

In [changeset:"d946f307e9f194e00839851681479d61383e76a1/rtems-docs" d946f30/rtems-docs]:

```
c-user: Generate fatal error manager docs

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-04-22T05:13:57.000Z

Original author: sebastian.huber

In [changeset:"a99562097a255351e10498041d9e99a0b3c3faa5/rtems-docs" a995620/rtems-docs]:

```
c-user: Generate multiprocessing manager docs

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-04-22T05:13:59.000Z

Original author: sebastian.huber

In [changeset:"03fc1d6514ca76e3e694545e5ba16e59abb1541b/rtems-docs" 03fc1d6/rtems-docs]:

```
c-user: Generate dual-ported memory manager docs

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-04-22T05:14:39.000Z

Original author: sebastian.huber

In [changeset:"97ba94b929cb273efe3227c248c56ae0812b8dc1/rtems" 97ba94b/rtems]:

```
rtems: Generate <rtems/fatal.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2021-04-22T05:14:43.000Z

Original author: sebastian.huber

In [changeset:"71a2e7eec7ea25eb1af7dd2114149e23d1efc15f/rtems" 71a2e7e/rtems]:

```
rtems: Generate <rtems/init.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2021-04-22T05:14:47.000Z

Original author: sebastian.huber

In [changeset:"0be4b8821f5cf71319a4511a77f70f7b421a9dc6/rtems" 0be4b882/rtems]:

```
rtems: Generate <rtems/rtems/dpmem.h>

```

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```
Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2021-04-22T05:14:50.000Z

Original author: sebastian.huber

In [changeset:"e8be00473df52eb71eeaaf12d2ca7334060558f2/rtems" e8be0047/rtems]:

```
rtems: Generate <rtems/rtems/mp.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2021-04-22T05:14:54.000Z

Original author: sebastian.huber

In [changeset:"b229b4c2d63198c47c1eb0ab0aade0eef9cfceaf/rtems" b229b4c/rtems]:

```
rtems: Generate <rtems/rtems/support.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2021-04-23T06:32:43.000Z

Original author: sebastian.huber

In [changeset:"61cbbd2e2392271eb8c602244b9e79c1f78ba7d7/rtems-docs" 61cbbd2/rtems-docs]:

```
c-user: Generate rate-monotonic manager docs

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
```

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```
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-04-23T06:32:45.000Z

Original author: sebastian.huber

In [changeset:"63a9e0c55c48baa496fbfbc906c79debf8692812/rtems-docs" 63a9e0c/rtems-docs]:

```
c-user: Generate message manager documentation

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-04-23T06:44:36.000Z

Original author: sebastian.huber

In [changeset:"73a0175406f734852e7ef083a9a15726e38ce678/rtems" 73a0175/rtems]:

```
rtems: Generate <rtems/rtems/message.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3899.
Update #3993.
```

Author: Trac Migrate 2021-04-23T06:44:40.000Z

Original author: sebastian.huber

In [changeset:"de6e5153c51e6e6c990c58f474471c236f6926b7/rtems" de6e515/rtems]:

```
rtems: Generate <rtems/rtems/ratemon.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.
```

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```
5
6 Update #3899.
7 Update #3993.
```

Author: Trac Migrate 2021-04-28T07:02:58.000Z

Original author: sebastian.huber

In [changeset:"0b9e307f24a28c68acc90b874198a125b1207ab6/rtems" 0b9e307/rtems]:

```
1 rtems: Generate <rtems/rtems/intr.h>
2
3 Change license to BSD-2-Clause according to file histories and
4 documentation re-licensing agreement.
5
6 Update #3899.
7 Update #3993.
```

Author: Trac Migrate 2021-04-28T07:03:03.000Z

Original author: sebastian.huber

In [changeset:"b3d3186dc7c1315b48b71328cd174cd81f832420/rtems" b3d3186d/rtems]:

```
1 rtems: Generate <rtems/rtems/region.h>
2
3 Change license to BSD-2-Clause according to file histories and
4 documentation re-licensing agreement.
5
6 Update #3899.
7 Update #3993.
```

Author: Trac Migrate 2021-04-28T07:03:07.000Z

Original author: sebastian.huber

In [changeset:"a1679af38053ec37f3e8c4d71f4f175fd58ce754/rtems" a1679af3/rtems]:

```
1 rtems: Generate <rtems/rtems/tasks.h>
2
3 Change license to BSD-2-Clause according to file histories and
4 documentation re-licensing agreement.
5
6 Update #3899.
7 Update #3993.
```

Author: Trac Migrate 2021-04-28T07:04:10.000Z

Original author: sebastian.huber

In [changeset:"f6b433727c82958db118a0c004573e7dda46a3c2/rtems-docs" f6b4337/rtems-docs]:

```
c-user: Generate interrupt manager documentation

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-04-28T07:04:13.000Z

Original author: sebastian.huber

In [changeset:"4a3259f1616fb6244f0ad72912487c5a38b5c300/rtems-docs" 4a3259f/rtems-docs]:

```
c-user: Generate scheduling concepts documentation

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-04-28T07:04:19.000Z

Original author: sebastian.huber

In [changeset:"2ae3364b107942b0b5b41aa57f41c8c6b76a601c/rtems-docs" 2ae3364/rtems-docs]:

```
c-user: Generate task manager documentation

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-04-28T07:04:21.000Z

Original author: sebastian.huber

In [changeset:"35cbb42a42f7c9f7d1a08dc165584b24782aad60/rtems-docs" 35cbb42/rtems-docs]:

```
c-user: Generate region manager documentation

The documentation is a consolidation of the comments in Doxygen markup
and the documentation sources in Sphinx markup.  The documentation was
transfered to interface specification items.  The documentation source
files were generated from the items by a script.

Update #3993.
```

Author: Trac Migrate 2021-06-15T05:47:59.000Z

Original author: sebastian.huber

In [changeset:"c70715baea93828a0e7b27f4ae583dc254e1a6a9/rtems-docs" c70715b/rtems-docs]:

```
c-user: Use a common phrase for pointer parameters

Mention the type of the pointer in the parameter description.  Use the
more general term "object" instead of "variable".

Update #3993.
```

Author: Trac Migrate 2021-06-15T08:40:28.000Z

Original author: sebastian.huber

In [changeset:"6abdd89f191a5e6d64055093f68a4fce10554f82/rtems" 6abdd89/rtems]:

```
Use a common phrase for pointer parameters

Mention the type of the pointer in the parameter description.  Use the
more general term "object" instead of "variable".

Update #3993.
```

Author: Trac Migrate 2021-07-27T05:43:11.000Z

Original author: sebastian.huber

In [changeset:"c4eafae27958ac0b2f356c953876a3b0aa6fa966/rtems" c4eafae2/rtems]:

```
rtems: Generate <rtems/irq-extension.h>

Use <rtems/score/chain.h> which just provides the data types and avoid a
dependency on <rtems/chain.h> which contains the full chain
implementation.

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3269.
Update #3899.
Update #3993.
```

Author: Trac Migrate 2021-08-02T05:15:51.000Z

Original author: sebastian.huber

In [changeset:"d999f865eaef44b887b5c40799572e849ac4ca78/rtems" d999f865/rtems]:

```
rtems: Generate <rtems/bspIo.h>

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Place the group into the I/O Manager group.  Add all source files to the
group.

Update #3899.
Update #3993.
Update #4482.
```

Author: Trac Migrate 2022-01-26T13:27:56.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

Work is done.

Author: Trac Migrate 2022-10-04T08:39:36.000Z

Original author: sebastian.huber

In [changeset:"cc43dc3e22b21ddf902b7748fb27f16c9aee3719/rtems" cc43dc3e/rtems]:

```
rtems: Clarify application config info API

Update #3993.
```

Author: Amar Takhar 2024-04-25T20:48:13.624Z

changed the description

3.9.1.399 3991 - Remove deprecated Thread typedef

Id	3991
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-05-28T13:48:02.000Z
Updated	2024-04-25T20:48:13.049Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3991
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2020-07-14T05:27:17.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"a3ed42193994f969e799581aa979448519caa13e/rtems" a3ed4219/rtems]:

```
score: Remove deprecated Thread

This type was deprecated in RTEMS 5.1.

Close #3991.
```

Author: Amar Takhar 2024-04-25T20:48:13.087Z

changed the description

3.9.1.400 3990 - Remove deprecated rtems_get_processor_count()

Id	3990
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-05-28T13:29:14.000Z
Updated	2024-04-25T20:48:12.621Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3990
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2020-07-14T05:26:46.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"13a4b880771a18e705e889bf6bd653d109606371/rtems" 13a4b880/rtems]:

```
rtems: Remove rtems_get_processor_count()

This function was deprecated in RTEMS 5.1.

Close #3990.
```

Author: Amar Takhar 2024-04-25T20:48:12.658Z

changed the description

3.9.1.401 3989 - Remove deprecated rtems_get_current_processor()

Id	3989
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-05-28T13:28:09.000Z
Updated	2024-04-25T20:48:12.194Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3989
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2020-07-14T05:26:42.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"e4215e433bc016bd46b69566c0b3a7561869e375/rtems" e4215e43/rtems]:

```
rtems: Remove rtems_get_current_processor()

This function was deprecated in RTEMS 5.1.

Close #3989.
```

Author: Amar Takhar 2024-04-25T20:48:12.231Z

changed the description

3.9.1.402 3988 - Remove deprecated rtems_extension

Id	3988
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-05-28T12:17:13.000Z
Updated	2024-04-25T20:48:11.768Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3988
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2020-07-14T05:26:49.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"6a3fcd4974320d7d05b8d601a41ef19bb5d5bb18/rtems" 6a3fcd4/rtems]:

```
rtems: Remove deprecated rtems_extension

This type was deprecated in RTEMS 5.1.

Close #3988.
```

Author: Amar Takhar 2024-04-25T20:48:11.804Z

changed the description

3.9.1.403 3981 - Remove _Copyright_Notice from API header file

Id	3981
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-05-11T06:25:06.000Z
Updated	2024-04-25T20:48:10.914Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3981
Merges	0

Original author: sebastian.huber

Remove _Copyright_Notice from API header file. Applications should use rtems_get_copyright_notice() which is available since RTEMS 5.

Author: Trac Migrate 2020-07-14T05:26:32.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"479b2bfe87b91962c2f537925fb085741b05fdd2/rtems" 479b2bf/rtems]:

```
rtems: Remove _Copyright_Notice from API header

Close #3981.
```

Author: Amar Takhar 2024-04-25T20:48:10.952Z

changed the description

3.9.1.404 3980 - Remove deprecated <rtems/system.h>

Id	3980
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-05-11T05:50:27.000Z
Updated	2024-04-25T20:48:10.487Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3980
Merges	0

Original author: sebastian.huber

This header file is included by <rtems.h> and contains only deprecated or internal content. Remove this deprecated header file.

Author: Trac Migrate 2020-05-11T06:15:27.000Z

Original author: sebastian.huber

- **Milestone** changed from %"5.1" to %"6.1"
- **Version** changed from ~"5" to ~"6"

Author: Trac Migrate 2020-07-14T05:26:35.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"39c2e28410bae130c29b9981be589f47de9f70b9/rtems" 39c2e28/rtems]:

```
rtems: Remove deprecated <rtems/system.h>

Close #3980.
```

Author: Amar Takhar 2024-04-25T20:48:10.526Z

changed the description

3.9.1.405 3979 - Remove RTEMS_MAXIMUM_NAME_LENGTH

Id	3979
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-05-11T05:49:22.000Z
Updated	2024-04-25T20:48:10.059Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3979
Merges	0

Original author: sebastian.huber

Remove this deprecated define.

Author: Trac Migrate 2020-07-14T05:26:28.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"b3686d7eb54843f18060c60ad48c386f43dbe1c9/rtems" b3686d7/rtems]:

```
rtems: Remove RTEMS_MAXIMUM_NAME_LENGTH

Close #3979.
```

Author: Amar Takhar 2024-04-25T20:48:10.097Z

changed the description

3.9.1.406 3978 - Move _RTEMS_version to implementation header file

Id	3978
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-05-11T05:48:32.000Z
Updated	2024-04-25T20:48:09.631Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3978
Merges	0

Original author: sebastian.huber

The global variable _RTEMS_version was declared via <rtems.h> and may be used directly by application code. Applications should use rtems_get_version_string() instead. Move it to an implementation header file in RTEMS 6.

Author: Trac Migrate 2020-07-14T05:26:24.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"90390118c0eaa76da6f98ee81f775391b7bfb695/rtems" 9039011/rtems]:

```
rtems: Move declartion of _RTEMS_version

Close #3978.
```

Author: Amar Takhar 2024-04-25T20:48:09.670Z

changed the description

3.9.1.407 3959 - Add rtems_task_construct()

Id	3959
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-04-17T06:55:13.000Z
Updated	2024-04-25T20:48:06.575Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3959
Merges	0

Original author: sebastian.huber

In RTEMS 5 a lot of development was done to allow a static allocation of resources provided by RTEMS and avoid the use of a heap. One missing piece is the support for statically allocated RTEMS tasks. The rtems_task_create() function allocates the task stack from a heap. We need an alternative function which allocates an RTEMS tasks with a user provided stack (similar to the POSIX threads).

There does need to be documentation on the allocation strategies, when to use, limitations, and particularly the use of rtems-exeinfo to get the TLS size. This is one case for sure where an RTEMS Tool needs explicit mention in both the API and configure option sections.

Proposed API:

```
/**
* @brief This structure defines the configuration of a task constructed by
*   rtems_task_construct().
*/
typedef struct {
/**
* @brief This member defines the name of the task.
*/
rtems_name name;

/**
* @brief This member defines the initial priority of the task.
*/
rtems_task_priority initial_priority;

/**
* @brief This member shall point to the task storage area begin.
*
* The task storage area will contain the task stack, the thread-local storage,
* and the floating-point context on architectures with a separate
* floating-point context.
*
```

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```
* The task storage area begin address and size should be aligned by
* #RTEMS_TASK_STORAGE_ALIGNMENT.  To avoid memory waste, use RTEMS_ALIGNED()
* and #RTEMS_TASK_STORAGE_ALIGNMENT to enforce the recommended alignment of a
* statically allocated task storage area.
*/
void *storage_area;

/**
* @brief This member defines size of the task storage area in bytes.
*
* Use the RTEMS_TASK_STORAGE_SIZE() macro to determine the recommended task
* storage area size.
*/
size_t storage_size;

/**
* @brief This member defines the maximum thread-local storage size supported
*   by the task storage area.
*
* Use RTEMS_ALIGN_UP() and #RTEMS_TASK_STORAGE_ALIGNMENT to adjust the size to
* meet the minimum alignment requirement of a thread-local storage area used
* to construct a task.
*
* If the value is less than the actual thread-local storage size, then the
* task construction by rtems_task_construct() fails.
*
* If the is less than the task storage area size, then the task construction
* by rtems_task_construct() fails.
*
* The actual thread-local storage size is determined when the application
* executable is linked.  The ``rtems-exeinfo`` command line tool included in
* the RTEMS Tools can be used to obtain the thread-local storage size and
* alignment of an application executable.
*
* The application may configure the maximum thread-local storage size for all
* threads explicitly through the #CONFIGURE_MAXIMUM_THREAD_LOCAL_STORAGE_SIZE
* configuration option.
*/
size_t maximum_thread_local_storage_size;

/**
* @brief This member defines the optional handler to free the task storage
*   area.
*
* It is called on exactly two mutually exclusive occasions.  Firstly, when the
* task construction aborts due to a failed task create extension, or secondly,
* when the task is deleted.  It is called from task context under protection
* of the object allocator lock.  It is allowed to call free() in this handler.
* If handler is NULL, then no action will be performed.
```

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```
*/
void ( *storage_free )( void * );

/**
* @brief This member defines the initial modes of the task.
*/
rtems_mode initial_modes;

/**
* @brief This member defines the attributes of the task.
*/
rtems_attribute attributes;
} rtems_task_config;

/**
* @brief Constructs a task from the specified the task configuration.
*
* In contrast to tasks created by rtems_task_create(), the tasks constructed
* by this directive use a user-provided task storage area.  The task storage
* area contains the task stack, the thread-local storage, and the
* floating-point context on architectures with a separate floating-point
* context.
*
* This directive is intended for applications which do not want to use the
* RTEMS Workspace and instead statically allocate all operating system
* resources.  It is not recommended to use rtems_task_create() and
* rtems_task_construct() together in an application.  It is also not
* recommended to use rtems_task_construct() for drivers or general purpose
* libraries.  The reason for these recommendations is that the task
* configuration needs settings which can be only given with a through
* knowledge of the application resources.
*
* An application based solely on static allocation can avoid any runtime
* memory allocators.  This can simplfiy the application architecture as well
* as any analysis that may be required.
*
* The stack space estimate done by <rtems/confdefs.h> assumes that all tasks
* are created by rtems_task_create().  The estimate can be adjusted to take
* user-provided task storage areas into account through the
* #CONFIGURE_MINIMUM_TASKS_WITH_USER_PROVIDED_STORAGE application
* configuration option.
*
* The #CONFIGURE_MAXIMUM_TASKS should include tasks constructed by
* rtems_task_construct().
*
* @param config is the task configuration.
*
* @param[out] id is the pointer to an object identifier variable.  The
*   identifier of the constructed task object will be stored in this variable,
```

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```
*   in case of a successful operation.
*
* @retval ::RTEMS_SUCCESSFUL The requested operation was successful.
*
* @retval ::RTEMS_INVALID_ADDRESS The id parameter was NULL.
*
* @retval ::RTEMS_INVALID_NAME The task name was invalid.
*
* @retval ::RTEMS_INVALID_PRIORITY The initial task priority was invalid.
*
* @retval ::RTEMS_INVALID_SIZE The thread-local storage size is greater than
*   the maximum thread-local storage size specified in the task configuration.
*   The thread-local storage size is determined by the thread-local variables
*   used by the application and #CONFIGURE_MAXIMUM_THREAD_LOCAL_STORAGE_SIZE.
*
* @retval ::RTEMS_INVALID_SIZE The task storage area was too small to provide
*   a task stack of the configured minimum size, see
*   #CONFIGURE_MINIMUM_TASK_STACK_SIZE. The task storage area contains the
*   task stack, the thread-local storage, and the floating-point context on
*   architectures with a separate floating-point context.
*
* @retval ::RTEMS_TOO_MANY There was no inactive task object available to
*   construct a task.
*
* @retval ::RTEMS_TOO_MANY In multiprocessing configurations, there was no
*   inactive global object available to construct a global task.
*
* @retval ::RTEMS_UNSATISFIED One of the task create extensions failed during
*   the task construction.
*
* @retval ::RTEMS_UNSATISFIED In SMP configurations, the non-preemption mode
*   was not supported.
*
* @retval ::RTEMS_UNSATISFIED In SMP configurations, the interrupt level mode
*   was not supported.
*/
rtems_status_code rtems_task_construct(
const rtems_task_config *config,
rtems_id                *id
);
```

- 0001-rtems-Add-rtems_task_build.patch

Author: Trac Migrate 2020-04-17T07:32:59.000Z

Original author: sebastian.huber

- **Attachment** 0001-rtems-Add-rtems_task_build.patch added

Author: Trac Migrate 2020-09-02T16:03:13.000Z

Original author: sebastian.huber

In [changeset:"91c811a132696e10efca58f138e7af08a360ad71/rtems" 91c811a1/rtems]:

```
score: Add _Freechain_Push()

Update #3959.
```

Author: Trac Migrate 2020-09-02T16:03:17.000Z

Original author: sebastian.huber

In [changeset:"354c2b50a3d707bbdf8d5b553869062cdedaf4fb/rtems" 354c2b5/rtems]:

```
score: Add <rtems/score/freechainimpl.h>

Hide implementation details.

Update #3959.
```

Author: Trac Migrate 2020-09-02T16:03:20.000Z

Original author: sebastian.huber

In [changeset:"159db411662deb72f9d312e4cb38caf9beb9fd4f/rtems" 159db411/rtems]:

```
score: Use _Freechain_Push()

The nodes are never NULL.

Update #3959.
```

Author: Trac Migrate 2020-09-02T16:03:24.000Z

Original author: sebastian.huber

In [changeset:"d8172209b3f1288761ba410f52b89adeb56394fe/rtems" d817220/rtems]:

```
score: Add _Stack_Allocator_do_initialize()

Do the stack allocator initialization and sanity check only if a
user-provided stack allocator was configured.  This avoids a dependency
```

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```
of _Thread_Handler_initialization() on the stack allocator.

Update #3959.
```

Author: Trac Migrate 2020-09-02T16:03:27.000Z

Original author: sebastian.huber

In [changeset:"2d5510307af3222572238f139bd355952614f482/rtems" 2d551030/rtems]:

```
score: Move _Stack_Allocator_free to separate file

This decouples the task stack allocation from the deallocation.

Update #3959.
```

Author: Trac Migrate 2020-09-02T16:03:30.000Z

Original author: sebastian.huber

In [changeset:"aedd92d1477df0025821b77c06b2f2b2dc7aaf67/rtems" aedd92d/rtems]:

```
score: Add stack free handler to TCB

This avoids a dependency to the stack free function in the thread
destruction.

Update #3959.
```

Author: Trac Migrate 2020-09-03T04:33:56.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
In RTEMS 5 a lot of development was done to allow a static allocation␣
↪of resources provided by RTEMS and avoid the use of a heap. One␣
↪missing piece is the support for statically allocated RTEMS tasks.␣
↪The rtems_task_create() function allocates the task stack from a heap.
↪ We need an alternative function which allocates an RTEMS tasks with␣
↪a user provided stack (similar to the POSIX threads). Proposed API:
{{{
/**
* @brief The task configuration to build a task.
```

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```
*/
typedef struct {
/**
* @brief The name of the task.
*/
rtems_name name;

/**
* @brief The initial priority of the task.
*/
rtems_task_priority initial_priority;

/**
* @brief The task stack area begin address for the task.
*/
void *stack_area;

/**
* @brief The task stack area size in bytes for the task.
*/
size_t stack_size;

/**
* @brief The function to free the task stack area if the task gets␣
↪deleted.
*/
void ( *stack_free )( void * );

/**
* @brief The initial modes of the task.
*/
rtems_mode initial_modes;

/**
* @brief The attribute set of the task.
*/
rtems_attribute attribute_set;
} rtems_task_config;

/**
* @brief Builds a task according to the specified configuration.
*
* @param config The task configuration.
* @param[out] id The task identifier of the new task.
*
* @retval RTEMS_SUCCESSFUL Successful operation.
* @retval RTEMS_INVALID_ADDRESS The id parameter is @c NULL.
* @retval RTEMS_INVALID_NAME The task name is invalid.
* @retval RTEMS_INVALID_PRIORITY The initial priority of the task is␣
```

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```
↪invalid.
* @retval RTEMS_TOO_MANY No task is available.
* @retval RTEMS_UNSATISFIED A task create extension failed.
*/
- rtems_status_code rtems_task_build(
+ rtems_status_code rtems_task_create_from_config(
const rtems_task_config *config,
rtems_id                *id
);
}}}
```

- **Summary** changed from *Add rtems_task_build()* to *Add rtems_task_create_from_config()*

Author: Trac Migrate 2020-09-11T13:47:33.000Z

Original author: sebastian.huber

In [changeset:"dd734d467d6e0961a88bdabbafccede6cccb2156/rtems" dd734d46/rtems]:

```
score: Fix _Thread_Initialize()

Fix an error cleanup path in SMP configurations to avoid a NULL pointer␣
↪access.

Update #3959.
```

Author: Trac Migrate 2020-09-13T08:25:35.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
- In RTEMS 5 a lot of development was done to allow a static allocation␣
↪of resources provided by RTEMS and avoid the use of a heap. One␣
↪missing piece is the support for statically allocated RTEMS tasks.␣
↪The rtems_task_create() function allocates the task stack from a heap.
↪ We need an alternative function which allocates an RTEMS tasks with␣
↪a user provided stack (similar to the POSIX threads). Proposed API:
?                                                                    ␣
↪                                                                    ␣
↪                                                                    ␣
↪                                                                    ␣
↪                                                                    ␣
↪                                          --------------
```

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```
+ In RTEMS 5 a lot of development was done to allow a static allocation of resources provided by RTEMS and avoid the use of a heap. One missing piece is the support for statically allocated RTEMS tasks. The rtems_task_create() function allocates the task stack from a heap. We need an alternative function which allocates an RTEMS tasks with a user provided stack (similar to the POSIX threads).
- {{{
+
+ There does need to be documentation on the allocation
+ strategies, when to use, limitations, and particularly the
+ use of rtems-exeinfo to get the TLS size. This is one case
+ for sure where an RTEMS Tool needs explicit mention in
+ both the API and configure option sections.
+
+ Proposed API:
+ {{{#!c
/**
+  * @brief This variable attribute defines the recommended alignment of a task
+  *   storage area.
+  */
+ #define RTEMS_TASK_STORAGE_ALIGNMENT RTEMS_ALIGNED( CPU_STACK_ALIGNMENT )
+
+ /**
+  * @brief Returns the recommended task storage area size for the specified size
+  *   and task attributes.
+  *
+  * @param _size is the size dedicated to the task stack and thread-local
+  *   storage in bytes.
+  *
+  * @param _attributes is the attribute set of the task using the storage area.
+  *
+  * @return The recommended task storage area size calculated from the input
+  *   parameters is returned.
+  */
+ #if CPU_ALL_TASKS_ARE_FP == TRUE
+   #define RTEMS_TASK_STORAGE_SIZE( _size, _attributes ) \\
+     ( ( _size ) + CONTEXT_FP_SIZE )
+ #else
+   #define RTEMS_TASK_STORAGE_SIZE( _size, _attributes ) \\
+     ( ( _size ) + \\
+       ( ( ( _attributes ) & RTEMS_FLOATING_POINT ) != 0 ? \\
+         CONTEXT_FP_SIZE : 0 ) )
+ #endif
```

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```
+
+ /**
-  * @brief The task configuration to build a task.
+  * @brief This structure defines a task configuration used to build a␣
↪task.
?             ++++++++++++ ++++++++++                    +++++

+  *   This structure defines the configuration of a task created by
+  *   rtems_task_create_from_config().
*/
typedef struct {
/**
-    * @brief The name of the task.
+    * @brief This member defines the name of the task.
?               ++++ ++++++++++++++++

*/
rtems_name name;

/**
-    * @brief The initial priority of the task.
+    * @brief This member defines the initial priority of the task.
?               ++++ ++++++++++++++++

*/
rtems_task_priority initial_priority;

/**
-    * @brief The task stack area begin address for the task.
+    * @brief This member shall point to the task storage area begin.
+    *
+    * The task storage area will contain the task stack, the thread-
↪local storage,
+    * and the floating-point context on architectures with a separate
+    * floating-point context.
+    *
+    * There are no alignment requirements for the task storage area. ␣
↪To avoid
+    * memory waste, use the #RTEMS_TASK_STORAGE_ALIGNMENT variable␣
↪attribute to
+    * enforce the recommended alignment of the task storage area.
*/
-   void *stack_area;
?            ^^

+   void *storage_area;
?           ++ ^^


```

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```
/**
-    * @brief The task stack area size in bytes for the task.
+    * @brief This member defines size of the task storage area in bytes.
+    *
+    * Use the RTEMS_TASK_STORAGE_SIZE() macro to determine the recommended task
+    * storage area size.
*/
-   size_t stack_size;
?            ^^

+   size_t storage_size;
?           ++ ^^


/**
-    * @brief The function to free the task stack area if the task gets deleted.
+    * @brief This member defines the maximum thread-local storage size supported
+    *   by the task storage area.
+    *
+    * If the value is less than the actual thread-local storage size, then the
+    * task creation by rtems_task_create_from_config() fails.
+    *
+    * If the is less than the task storage area size, then the task creation by
+    * rtems_task_create_from_config() fails.
*/
-   void ( *stack_free )( void * );
+   size_t maximum_thread_local_storage_size;

/**
+    * @brief This member defines the optional handler to free the task storage
+    *   area.
+    *
+    * It is called when the task creation aborts due to a failed task create
+    * extension or the task is deleted.  It is called from task context under
+    * protection of the object allocator lock.  It is allowed to call free() in
+    * this handler.  The handler may be NULL.
+    */
+   void ( *storage_free )( void * );
+
```

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```
+   /**
-    * @brief The initial modes of the task.
+    * @brief This member defines the initial modes of the task.
?               ++++ ++++++++++++++++

*/
rtems_mode initial_modes;

/**
-    * @brief The attribute set of the task.
?                          - --

+    * @brief This member defines the attributes of the task.
?               ++++ ++++++++++++++++

*/
-   rtems_attribute attribute_set;
?                            - --

+   rtems_attribute attributes;
} rtems_task_config;

/**
-  * @brief Builds a task according to the specified configuration.
+  * @brief Creates a task from the specified the task configuration.
*
-  * @param config The task configuration.
-  * @param[out] id The task identifier of the new task.
+  * In contrast to tasks created by rtems_task_create(), the tasks␣
↪created by
+  * this directive use a user-provided task storage area.  The task␣
↪storage area
+  * contains the task stack, the thread-local storage, and the␣
↪floating-point
+  * context on architectures with a separate floating-point context.
*
-  * @retval RTEMS_SUCCESSFUL Successful operation.
+  * It is not recommended to mix rtems_task_create() and
+  * rtems_task_create_from_config() in an application. This directive␣
↪is
+  * intended for applications which do not want to use the RTEMS␣
↪Workspace and
+  * instead statically allocate all operating system resources.  The␣
↪stack space
+  * estimate done by <rtems/confdefs.h> assumes that all tasks are␣
↪created by
+  * rtems_task_create().  The estimate can be adjusted to take user-
↪provided
+  * task storage areas into account through the
```

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```
+  * #CONFIGURE_TASKS_CREATED_FROM_CONFIG application configuration␣
↪option or a
+  * custom task stack allocator, see #CONFIGURE_TASK_STACK_ALLOCATOR.
+  *
+  * @param config is the task configuration.
+  *
+  * @param[out] id is the pointer to an object identifier variable. ␣
↪The
+  *   identifier of the created task object will be stored in this␣
↪variable, in
+  *   case of a successful operation.
+  *
+  * @retval ::RTEMS_SUCCESSFUL The requested operation was successful.
+  *
-  * @retval RTEMS_INVALID_ADDRESS The id parameter is @c NULL.
?                                              ^ ---

+  * @retval ::RTEMS_INVALID_ADDRESS The id parameter was NULL.
?           ++                                   ^^

+  *
-  * @retval RTEMS_INVALID_NAME The task name is invalid.
?                                          ^

+  * @retval ::RTEMS_INVALID_NAME The task name was invalid.
?           ++                                 ^^

+  *
-  * @retval RTEMS_INVALID_PRIORITY The initial priority of the task is␣
↪invalid.
?                                                  ^^^^^^^^  ----

+  * @retval ::RTEMS_INVALID_PRIORITY The initial task priority was␣
↪invalid.
?           ++                                 +++++          ^

-  * @retval RTEMS_TOO_MANY No task is available.
+  *
+  * @retval ::RTEMS_TOO_MANY There was no inactive task object␣
↪available to
+  *   create a task.
+  *
+  * @retval ::RTEMS_TOO_MANY In multiprocessing configurations, there␣
↪was no
+  *   inactive global object available to create a global task.
+  *
+  * @retval ::RTEMS_INVALID_SIZE The thread-local storage size is␣
↪greater than
+  *   the maximum thread-local storage size specified in the task␣
```

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```
 ↪configuration.
208 +  *   The thread-local storage size is determined by the thread-local␣
 ↪variables
209 +  *   used by the application and #CONFIGURE_MAXIMUM_THREAD_LOCAL_
 ↪STORAGE_SIZE.
210 +  *
211 +  * @retval ::RTEMS_INVALID_SIZE The task storage area was too small␣
 ↪to provide
212 +  *   a task stack of the configured minimum size, see
213 +  *   #CONFIGURE_MINIMUM_TASK_STACK_SIZE.  The task storage area␣
 ↪contains the
214 +  *   task stack, the thread-local storage, and the floating-point␣
 ↪context on
215 +  *   architectures with a separate floating-point context.
216 +  *
217 -  * @retval RTEMS_UNSATISFIED A task create extension failed.
218 ?                             ^                              ^
219
220 +  * @retval ::RTEMS_UNSATISFIED One of the task create extensions␣
 ↪failed during
221 ?            ++                  ^^^^^^^^^^                     +      ␣
 ↪ ^^^^^^^
222
223 +  *   the task creation.
224 +  *
225 +  * @retval ::RTEMS_UNSATISFIED In SMP configurations, the non-
 ↪preemption mode
226 +  *   was not supported.
227 +  *
228 +  * @retval ::RTEMS_UNSATISFIED In SMP configurations, the interrupt␣
 ↪level mode
229 +  *   was not supported.
230 */
231 rtems_status_code rtems_task_create_from_config(
232 const rtems_task_config *config,
233 rtems_id                *id
234 );
235 }}}
```

Author: Chris Johns 2020-09-13T23:03:33.000Z

Original author: sebastian.huber

The following are some suggested updates. It is hard to comment on stuff in the ticket header in a way that does not change it so I hope doing this is OK?

Updated ....

```
1 /**
```

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```
 * @brief This structure defines a task configuration used to create
 *        a task with user provided storage.
 *   This structure defines the configuration of a task created by
 *   rtems_task_create_from_config().
 */
```

With this ...

```
 * There are no alignment requirements for the task storage area.  To␣
↪avoid
 * memory waste, use the #RTEMS_TASK_STORAGE_ALIGNMENT variable␣
↪attribute to
 * enforce the recommended alignment of the task storage area.
```

... I understand the alignment for a user is anything but internally the memory may be aligned and that will potentially create some waste. For example I could provide `0x1` as an address but the stack base or the start of the TLS may need to be aligned depending on the arch, `_TLS_Alignment`, or something. Does this need to be explained?

Updated ...

```
 * It is called when the task creation aborts due to a failed task create
 * extension or the task is deleted.  It is called from task context␣
↪under
 * protection of the object allocator lock.  It is allowed to call␣
↪free() in
 * this handler.  The handler may be NULL to disable.
```

Updated ...

```
 * @brief Creates a task from the specified the task configuration.
 *
 * In contrast to tasks created by rtems_task_create(), the tasks␣
↪created by
 * this directive use a user-provided task storage area.  The task␣
↪storage area
 * contains the task stack, the thread-local storage, and the floating-
↪point
 * context on architectures with a separate floating-point context.
 *
 * It is recommended rtems_task_create() and rtems_task_create_from_
↪config()
 * are not used together in an application. This means
 * rtems_task_create_from_config() is not recommended for drivers or␣
↪libraries
 * an application may use. This directive is intended for applications␣
↪which
 * do not want to use the RTEMS Workspace and instead statically␣
↪allocate all
 * operating system resources.
```

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```
 *
 * An application based solely on static allocation can avoid any runtime
 * memory allocators. This can simplfiy the application architecture as well
 * as any analysis that may be required.
 *
 * The stack space estimate done by <rtems/confdefs.h> assumes that all tasks
 * are created by rtems_task_create().  The estimate can be adjusted to take
 * user-provided task storage areas into account through the
 * #CONFIGURE_TASKS_CREATED_FROM_CONFIG application configuration option or a
 * custom task stack allocator, see #CONFIGURE_TASK_STACK_ALLOCATOR.
 *
 * The #CONFIGURE_MAXIMUM_TASKS should includes tasks created with
 * rtems_task_create_from_config().
```

Author: Trac Migrate 2020-09-14T17:48:12.000Z

Original author: sebastian.huber

Yes, the storage internal alignment is something which needs to be better explained.

I think we should change RTEMS_TASK_STORAGE_ALIGNMENT to be just the alignment value and say that the maximum thread-local storage size shall have at least this alignment.

CONTEXT_FP_SIZE should be aligned by RTEMS_TASK_STORAGE_ALIGNMENT. For RTEMS_TASK_STORAGE_ALIGNMENT we should use CPU_HEAP_ALIGNMENT.

Author: Chris Johns 2020-09-15T02:50:02.000Z

Original author: sebastian.huber

Sure. What about adding "`RTEMS_TASK_STORAGE_ALIGNMENT` will optimally use the provided storage"? We do not need to hand hold into the detail but we should hint at the best approach.

Author: Trac Migrate 2020-09-17T16:09:22.000Z

Original author: sebastian.huber

In [changeset:"641b31a48d48c59ef73c47a225f1012b11e0eea7/rtems" 641b31a4/rtems]:

```
rtems: Add RTEMS_ALIGN_DOWN()

```

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```
Update #3959.
Update #4074.
```

Author: Trac Migrate 2020-09-17T16:09:25.000Z

Original author: sebastian.huber

In [changeset:"dce1cdf19e6d8d7c5f72163401171648093d27bb/rtems" dce1cdf1/rtems]:

```
rtems: Add RTEMS_ALIGN_UP()

Update #3959.
Update #4074.
```

Author: Trac Migrate 2020-09-17T16:09:32.000Z

Original author: sebastian.huber

In [changeset:"6942e5f99171d1cb38c2c573aba8cb9212d7efd8/rtems" 6942e5f/rtems]:

```
rtems: Add rtems_task_construct()

In contrast to rtems_task_create() this function constructs a task with
a user-provided task storage area.  The new directive uses a
configuration structure instead of individual parameters.

Add RTEMS_TASK_STORAGE_SIZE() to calculate the recommended size of a
task storage area based on the task attributes and the size dedicated to
the task stack and thread-local storage.  This macro may allow future
extensions without breaking the API.

Add application configuration option
CONFIGURE_MINIMUM_TASKS_WITH_USER_PROVIDED_STORAGE to adjust RTEMS
Workspace size estimate.

Update #3959.
```

Author: Trac Migrate 2020-09-17T16:09:36.000Z

Original author: sebastian.huber

In [changeset:"ad22c6552a5cbfea0da1262db1c07ca05cd10086/rtems" ad22c65/rtems]:

```
doxygen: Move top-level group definitions

Update #3959.
```

Author: Trac Migrate 2020-09-17T16:09:39.000Z

Original author: sebastian.huber

In [changeset:"139ffa25d92ad7dd702278fde672a38f1138af7b/rtems" 139ffa2/rtems]:

```
validation: Add general purpose test suite

Add a general purpose test suite for validation tests.

This is the first test suite generated from a specification item in the
rtems-central repository.

Update #3959.
```

Author: Trac Migrate 2020-09-17T16:09:42.000Z

Original author: sebastian.huber

In [changeset:"3dd4cbb50d13e39146dcfb68b0cf0e98bff707fb/rtems" 3dd4cbb/rtems]:

```
validation: rtems_task_construct() errors

This is the first test case generated from a specification item in the
rtems-central repository.

Update #3959.
```

Author: Trac Migrate 2020-09-17T16:14:45.000Z

Original author: sebastian.huber

In [changeset:"28db97275b29b3b9bd624fe9f053dd46656bad61/rtems-docs" 28db972/rtems-docs]:

```
c-user: CONFIGURE_MINIMUM_TASKS_WITH_USER_PROVIDED_STORAGE

Document this application configuration option.

Update #3959.
```

Author: Trac Migrate 2020-09-17T16:17:25.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
In RTEMS 5 a lot of development was done to allow a static allocation of resources provided by RTEMS and avoid the use of a heap. One missing piece is the support for statically allocated RTEMS tasks. The rtems_task_create() function allocates the task stack from a heap. We need an alternative function which allocates an RTEMS tasks with a user provided stack (similar to the POSIX threads).

There does need to be documentation on the allocation
strategies, when to use, limitations, and particularly the
use of rtems-exeinfo to get the TLS size. This is one case
for sure where an RTEMS Tool needs explicit mention in
both the API and configure option sections.

Proposed API:
- {{{#!c
+ {{{
+ #!c
/**
-  * @brief This variable attribute defines the recommended alignment of a task
-  *   storage area.
-  */
- #define RTEMS_TASK_STORAGE_ALIGNMENT RTEMS_ALIGNED( CPU_STACK_ALIGNMENT )
-
- /**
-  * @brief Returns the recommended task storage area size for the specified size
-  *   and task attributes.
-  *
-  * @param _size is the size dedicated to the task stack and thread-local
-  *   storage in bytes.
-  *
-  * @param _attributes is the attribute set of the task using the storage area.
-  *
-  * @return The recommended task storage area size calculated from the input
-  *   parameters is returned.
-  */
- #if CPU_ALL_TASKS_ARE_FP == TRUE
-   #define RTEMS_TASK_STORAGE_SIZE( _size, _attributes ) \\
-     ( ( _size ) + CONTEXT_FP_SIZE )
- #else
-   #define RTEMS_TASK_STORAGE_SIZE( _size, _attributes ) \\
```

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```
-     ( ( _size ) + \\
-       ( ( ( _attributes ) & RTEMS_FLOATING_POINT ) != 0 ? \\
-         CONTEXT_FP_SIZE : 0 ) )
- #endif
-
- /**
-  * @brief This structure defines a task configuration used to build a task.
-  *   This structure defines the configuration of a task created by
?    ^                                                          ^^

+  * @brief This structure defines the configuration of a task constructed by
?    ^^^^^^                                                       ++++ ^^

-  *   rtems_task_create_from_config().
+  *   rtems_task_construct().
*/
typedef struct {
/**
* @brief This member defines the name of the task.
*/
rtems_name name;

/**
* @brief This member defines the initial priority of the task.
*/
rtems_task_priority initial_priority;

/**
* @brief This member shall point to the task storage area begin.
*
* The task storage area will contain the task stack, the thread-local storage,
* and the floating-point context on architectures with a separate
* floating-point context.
*
-    * There are no alignment requirements for the task storage area.  To avoid
-    * memory waste, use the #RTEMS_TASK_STORAGE_ALIGNMENT variable attribute to
-    * enforce the recommended alignment of the task storage area.
+    * The task storage area begin address and size should be aligned by
+    * #RTEMS_TASK_STORAGE_ALIGNMENT.  To avoid memory waste, use RTEMS_ALIGNED()
+    * and #RTEMS_TASK_STORAGE_ALIGNMENT to enforce the recommended alignment of a
+    * statically allocated task storage area.
*/
```

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```
78 void *storage_area;
79
80 /**
81 * @brief This member defines size of the task storage area in bytes.
82 *
83 * Use the RTEMS_TASK_STORAGE_SIZE() macro to determine the recommended␣
   ↪task
84 * storage area size.
85 */
86 size_t storage_size;
87
88 /**
89 * @brief This member defines the maximum thread-local storage size␣
   ↪supported
90 *   by the task storage area.
91 *
92 +    * Use RTEMS_ALIGN_UP() and #RTEMS_TASK_STORAGE_ALIGNMENT to adjust␣
   ↪the size to
93 +    * meet the minimum alignment requirement of a thread-local storage␣
   ↪area used
94 +    * to construct a task.
95 +    *
96 * If the value is less than the actual thread-local storage size, then␣
   ↪the
97 -    * task creation by rtems_task_create_from_config() fails.
98 +    * task construction by rtems_task_construct() fails.
99 *
100 -    * If the is less than the task storage area size, then the task␣
   ↪creation by
101 ?                                                                    ^
   ↪^    ---
102
103 +    * If the is less than the task storage area size, then the task␣
   ↪construction
104 ?                                                                   ␣
   ↪++++ ^^
105
106 -    * rtems_task_create_from_config() fails.
107 +    * by rtems_task_construct() fails.
108 +    *
109 +    * The actual thread-local storage size is determined when the␣
   ↪application
110 +    * executable is linked.  The ``rtems-exeinfo`` command line tool␣
   ↪included in
111 +    * the RTEMS Tools can be used to obtain the thread-local storage␣
   ↪size and
112 +    * alignment of an application executable.
113 +    *
114 +    * The application may configure the maximum thread-local storage␣
```

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```
↪size for all
115 +    * threads explicitly through the #CONFIGURE_MAXIMUM_THREAD_LOCAL_
↪STORAGE_SIZE
116 +    * configuration option.
117 */
118 size_t maximum_thread_local_storage_size;
119 
120 /**
121 * @brief This member defines the optional handler to free the task␣
↪storage
122 *   area.
123 *
124 -    * It is called when the task creation aborts due to a failed task␣
↪create
125 +    * It is called on exactly two mutually exclusive occasions. ␣
↪Firstly, when the
126 +    * task construction aborts due to a failed task create extension,␣
↪or secondly,
127 -    * extension or the task is deleted.  It is called from task␣
↪context under
128 ?      ^^^  -------
129 
130 +    * when the task is deleted.  It is called from task context under␣
↪protection
131 ?      ^^                                                          ␣
↪++++++++++
132 
133 -    * protection of the object allocator lock.  It is allowed to call␣
↪free() in
134 ?     -----------
135 
136 +    * of the object allocator lock.  It is allowed to call free() in␣
↪this handler.
137 ?                                                                  ␣
↪++++++++++++++
138 
139 -    * this handler.  The handler may be NULL.
140 +    * If handler is NULL, then no action will be performed.
141 */
142 void ( *storage_free )( void * );
143 
144 /**
145 * @brief This member defines the initial modes of the task.
146 */
147 rtems_mode initial_modes;
148 
149 /**
150 * @brief This member defines the attributes of the task.
151 */
```

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```
rtems_attribute attributes;
} rtems_task_config;

/**
-  * @brief Creates a task from the specified the task configuration.
?             ^ -----

+  * @brief Constructs a task from the specified the task configuration.
?            ++++ ^^^^^

*
-  * In contrast to tasks created by rtems_task_create(), the tasks␣
↪created by
?                                                              ^^
↪   ---

+  * In contrast to tasks created by rtems_task_create(), the tasks␣
↪constructed
?                                                               ␣
↪++++ ^^

-  * this directive use a user-provided task storage area.  The task␣
↪storage area
?                                                              ␣
↪    -----

+  * by this directive use a user-provided task storage area.  The task␣
↪storage
?   +++

-  * contains the task stack, the thread-local storage, and the␣
↪floating-point
?                                                    ---------
↪------

+  * area contains the task stack, the thread-local storage, and the
?   +++++

-  * context on architectures with a separate floating-point context.
+  * floating-point context on architectures with a separate floating-
↪point
+  * context.
*
+  * This directive is intended for applications which do not want to␣
↪use the
+  * RTEMS Workspace and instead statically allocate all operating␣
↪system
-  * It is not recommended to mix rtems_task_create() and
?                              ^^^
```

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```
189
190 +  * resources.  It is not recommended to use rtems_task_create() and
191 ?   ++++++++++++                              ^^^
192
193 -  * rtems_task_create_from_config() in an application. This directive␣
    ↪is
194 -  * intended for applications which do not want to use the RTEMS␣
    ↪Workspace and
195 -  * instead statically allocate all operating system resources.  The␣
    ↪stack space
196 +  * rtems_task_construct() together in an application.  It is also not
197 +  * recommended to use rtems_task_construct() for drivers or general␣
    ↪purpose
198 +  * libraries.  The reason for these recommendations is that the task
199 +  * configuration needs settings which can be only given with a through
200 +  * knowledge of the application resources.
201 +  *
202 +  * An application based solely on static allocation can avoid any␣
    ↪runtime
203 +  * memory allocators.  This can simplfiy the application architecture␣
    ↪as well
204 +  * as any analysis that may be required.
205 +  *
206 -  * estimate done by <rtems/confdefs.h> assumes that all tasks are␣
    ↪created by
207 ?                                                          ---------
    ↪------
208
209 +  * The stack space estimate done by <rtems/confdefs.h> assumes that␣
    ↪all tasks
210 ?   +++++++++++++++++
211
212 -  * rtems_task_create().  The estimate can be adjusted to take user-
    ↪provided
213 ?                                                          ---------
    ↪-----
214
215 +  * are created by rtems_task_create().  The estimate can be adjusted␣
    ↪to take
216 ?   +++++++++++++++
217
218 -  * task storage areas into account through the
219 +  * user-provided task storage areas into account through the
220 ?   +++++++++++++++
221
222 -  * #CONFIGURE_TASKS_CREATED_FROM_CONFIG application configuration␣
    ↪option or a
223 -  * custom task stack allocator, see #CONFIGURE_TASK_STACK_ALLOCATOR.
224 +  * #CONFIGURE_MINIMUM_TASKS_WITH_USER_PROVIDED_STORAGE application
```

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```
+  * configuration option.
+  *
+  * The #CONFIGURE_MAXIMUM_TASKS should include tasks constructed by
+  * rtems_task_construct().
*
* @param config is the task configuration.
*
* @param[out] id is the pointer to an object identifier variable.  The
-  *   identifier of the created task object will be stored in this variable, in
?                            ^^                                          ---

+  *   identifier of the constructed task object will be stored in this variable,
?                          ++++ ^^

-  *   case of a successful operation.
+  *   in case of a successful operation.
?     +++

*
* @retval ::RTEMS_SUCCESSFUL The requested operation was successful.
*
* @retval ::RTEMS_INVALID_ADDRESS The id parameter was NULL.
*
* @retval ::RTEMS_INVALID_NAME The task name was invalid.
*
* @retval ::RTEMS_INVALID_PRIORITY The initial task priority was invalid.
*
-  * @retval ::RTEMS_TOO_MANY There was no inactive task object available to
-  *   create a task.
-  *
-  * @retval ::RTEMS_TOO_MANY In multiprocessing configurations, there was no
-  *   inactive global object available to create a global task.
-  *
* @retval ::RTEMS_INVALID_SIZE The thread-local storage size is greater than
*   the maximum thread-local storage size specified in the task configuration.
*   The thread-local storage size is determined by the thread-local variables
*   used by the application and #CONFIGURE_MAXIMUM_THREAD_LOCAL_STORAGE_SIZE.
*
* @retval ::RTEMS_INVALID_SIZE The task storage area was too small to
```

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```
↪provide
*   a task stack of the configured minimum size, see
-  *   #CONFIGURE_MINIMUM_TASK_STACK_SIZE.  The task storage area␣
↪contains the
?                                           -

+  *   #CONFIGURE_MINIMUM_TASK_STACK_SIZE. The task storage area␣
↪contains the
*   task stack, the thread-local storage, and the floating-point␣
↪context on
*   architectures with a separate floating-point context.
*
+  * @retval ::RTEMS_TOO_MANY There was no inactive task object␣
↪available to
+  *   construct a task.
+  *
+  * @retval ::RTEMS_TOO_MANY In multiprocessing configurations, there␣
↪was no
+  *   inactive global object available to construct a global task.
+  *
* @retval ::RTEMS_UNSATISFIED One of the task create extensions failed␣
↪during
-  *   the task creation.
?                 ^^

+  *   the task construction.
?                ++++ ^^

*
* @retval ::RTEMS_UNSATISFIED In SMP configurations, the non-preemption␣
↪mode
*   was not supported.
*
* @retval ::RTEMS_UNSATISFIED In SMP configurations, the interrupt␣
↪level mode
*   was not supported.
*/
- rtems_status_code rtems_task_create_from_config(
?                                  ------------  ^^^

+ rtems_status_code rtems_task_construct(
?                                   ^^^^^^

const rtems_task_config *config,
rtems_id                *id
);
}}}
```

- **Summary** changed from *Add rtems_task_create_from_config()* to *Add rtems_task_construct()*

Author: Trac Migrate 2020-09-17T18:08:26.000Z

Original author: sebastian.huber

In [changeset:"2f65e136e58d8db701ddd116bae8c1bdef295622/rtems" 2f65e13/rtems]:

```
rtems: Fix typo

Update #3959.
```

Author: Trac Migrate 2021-04-23T06:25:33.000Z

Original author: sebastian.huber

In [changeset:"f14cf0cd743b6ac128ce5b9007023c57e322500f/rtems" f14cf0c/rtems]:

```
rtems: Check for NULL config in task construct

Since there are already excessive NULL pointer checks in the Classic
API, do this also in rtems_task_construct().

Update #3959.
```

Author: Trac Migrate 2021-09-02T05:59:46.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

The new directive was documented, implemented, and tested:

https://docs.rtems.org/branches/master/c-user/task/directives.html#rtems-task-construct

Author: Amar Takhar 2024-04-25T20:48:06.642Z

changed the description

Author: Amar Takhar 2024-04-25T20:48:16.758Z

mentioned in issue #4007

3.9.1.408 3957 - Review wiki/Developer for deletion

Id	3957
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-04-16T23:51:14.000Z
Updated	2024-04-25T20:48:05.724Z
Milestone	6.1
Labels	gsoc::small, priority::normal, resolution::fixed, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3957
Merges	0

https://devel.rtems.org/wiki/Developer has minimal content. All should likely point to somewhere in the Users Guide now rather than the Wiki.

Also this page is a candidate for deletion. Verify the references and delete it. Check rtems.org also.

Author: Joel Sherrill 2022-12-15T16:39:38.000Z

- **Milestone** set to %"6.1"
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Done. Subtree removed and links now point to the Software Engineering Guide.

Author: Amar Takhar 2024-04-25T20:48:05.764Z

changed the description

3.9.1.409 3947 - fdt_rw.c: Unchecked return value (CID #1047324)

Id	3947
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-04-10T15:33:05.000Z
Updated	2024-04-25T20:48:02.638Z
Milestone	6.1
Labels	gsoc::small, library, priority::normal, resolution::fixed, scan::coverity, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3947
Merges	0

git blams says Sebastian.

```
*** CID 1047324:  Error handling issues  (CHECKED_RETURN)
/home/joel/rtems-work/rtems/cpukit/dtc/libfdt/fdt_rw.c: 351 in fdt_add_subnode_
↪namelen()
345             if (offset >= 0)
346                     return -FDT_ERR_EXISTS;
347             else if (offset != -FDT_ERR_NOTFOUND)
348                     return offset;
349
350             /* Try to place the new node after the parent's properties */


      CID 1047324:  Error handling issues  (CHECKED_RETURN)
      Calling "fdt_next_tag" without checking return value (as is done elsewhere␣
↪7 out of 8 times).
      351             fdt_next_tag(fdt, parentoffset, &nextoffset); /* skip the␣
↪BEGIN_NODE */
      352             do {
      353                     offset = nextoffset;
      354                     tag = fdt_next_tag(fdt, offset, &nextoffset);
      355             } while ((tag == FDT_PROP) || (tag == FDT_NOP));
      356
```

Author: Trac Migrate 2020-04-10T20:13:59.000Z

Maybe this is already fixed in the upstream. Otherwise it should be reported.

Author: Trac Migrate 2020-04-10T20:15:16.000Z

- **Milestone** changed from %”5.1” to %”Indefinite”

Author: Trac Migrate 2022-07-19T07:29:23.000Z

- **Milestone** changed from %”Indefinite” to %”6.1”
- **Resolution** set to ~”fixed”
- **Status** changed from *assigned* to *closed*

It is fixed for RTEMS 6.1 through updates from the dtc upstream. Fixing this in RTEMS 5 would require back porting several patches.

Author: Amar Takhar 2024-04-25T20:48:02.751Z

changed the description

3.9.1.410 3937 - Move content of bsp_specs to GCC

Id	3937
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-04-06T13:59:39.000Z
Updated	2024-04-25T20:48:01.188Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::project, tool::gcc, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3937
Merges	0

Original author: sebastian.huber

Move content of the bsp_specs to GCC 10. Once this is done, update the tools and delete the bsp_specs.

On powerpc this means we have to move the content of rtems_crti.S to GCC. It may not be possible to back port this to GCC 10 and we may have to maintain this as a patch until GCC 11 is released.

Add support for nostartfiles and [nodefaultlibs](https://gcc.gnu.org/onlinedocs/gcc/Link-Options.html#index-nodefaultlibs).

- 0001-RTEMS-Improve-GCC-specification.patch
- v2-0001-RTEMS-Improve-GCC-specification.patch

Author: Joel Sherrill 2020-04-06T14:01:29.000Z

Original author: sebastian.huber

Dupe of #3250

Author: Trac Migrate 2020-04-06T14:03:35.000Z

Original author: sebastian.huber

Replying to Joel Sherrill:

> Dupe of #3250 I think this is a subtask.

Author: Trac Migrate 2020-04-06T14:49:54.000Z

Original author: sebastian.huber

Since -qrtems is not used to build GCC/Newlib. The rtems_crti.S could probably stay in RTEMS.

Author: Joel Sherrill 2020-04-06T14:56:00.000Z

Original author: sebastian.huber

The only crti/crtn not provided by GCC are these for the PowerPC. They really should move. Whatever is being done is a hack left over from the days when we were unwilling to modify GCC.

```
$ find . -name rtems_crt*
./bsps/powerpc/shared/start/rtems_crti.S
./bsps/powerpc/shared/start/rtems_crtn.S
```

“Remove hacks left over from when we were unwilling to modify GCC” should be the name of this ticket. :)

Author: Trac Migrate 2020-04-06T14:58:38.000Z

Original author: sebastian.huber

I will try to get the RTEMS-only changes in GCC 10.2. This already requires release manager approval.

I am not sure if they are happy if I try to change standard powerpc files for RTEMS on a release branch.

Author: Trac Migrate 2020-04-07T07:35:34.000Z

Original author: sebastian.huber

- **Attachment** 0001-RTEMS-Improve-GCC-specification.patch added

Author: Trac Migrate 2020-04-07T08:18:30.000Z

Original author: sebastian.huber

In [changeset:”b69f54d51740810dc54a50662f5da4d4ba0ddd18/rtems-source-builder” b69f54d/rtems-source-builder]:

```
6: Update unstable RTEMS 6 tool chain

Update #3937.
```

Author: Trac Migrate 2020-04-08T11:31:55.000Z

Original author: sebastian.huber

- **Attachment** v2-0001-RTEMS-Improve-GCC-specification.patch added

Author: Trac Migrate 2020-04-08T11:34:34.000Z

Original author: sebastian.huber

In [changeset:"f6286ff1d3e8ec6e906f609f827c77cebd70b0d7/rtems-source-builder" f6286ff/rtems-source-builder]:

```
6: Update unstable RTEMS 6 tool chain

Update #3937.
```

Author: Trac Migrate 2021-01-22T09:52:53.000Z

Original author: sebastian.huber

It turned out that the GCC specs processing is a bit more complicated and the current approach doesn't work:

https://gcc.gnu.org/pipermail/gcc/2021-January/234728.html

Author: Trac Migrate 2021-01-22T11:59:20.000Z

Original author: sebastian.huber

Proposed workaround:

https://gcc.gnu.org/pipermail/gcc-patches/2021-January/564101.html

Author: Trac Migrate 2021-01-26T05:38:50.000Z

Original author: sebastian.huber

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"ade089253e70d75105a8311844f82f6d20cc30a8/rtems-source-builder" ade0892/rtems-source-builder]:

```
6: Update tool chain

Close #3937.
```

Author: Trac Migrate 2021-11-29T14:48:15.000Z

Original author: sebastian.huber

In [changeset:"dd70c81699a90ca48ae74980e8053b3c708ae6bc/rtems" dd70c81/rtems]:

```
bsp_specs: Delete last remnants of these.

Updates #3937.
```

Author: Amar Takhar 2024-04-25T20:48:01.235Z

changed the description

3.9.1.411 3935 - Remove use of RTEMS_INLINE_ROUTINE in the RTEMS sources

Id	3935
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-04-06T07:08:19.000Z
Updated	2024-04-25T20:48:00.759Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3935
Merges	0

Original author: sebastian.huber

Replace all uses of RTEMS_INLINE_ROUTINE with “static inline”. This makes it a bit easier for third-party tools to parse the RTEMS sources.

Author: Joel Sherrill 2020-04-06T13:20:41.000Z

Original author: sebastian.huber

Please cite where “static inline” became part of the C and C++ standards. Eons ago static inline meaning do not include method bodies in the generated object was a GNU extension. Other compilers had their own way of specifying this.

Author: Trac Migrate 2020-04-06T13:25:42.000Z

Original author: sebastian.huber

This is C99. The default language version is C11 since a while.

Author: Joel Sherrill 2020-04-06T13:33:01.000Z

Original author: sebastian.huber

Citation please. Section and paragraph.

Author: Trac Migrate 2020-04-06T13:40:56.000Z

Original author: sebastian.huber

I don't understand the problem, we use this for a long time:

```
/**
*  The following (in conjunction with compiler arguments) are used
*  to choose between the use of static inline functions and macro
*  functions.   The static inline implementation allows better
*  type checking with no cost in code size or execution speed.
*/
#ifdef __GNUC__
#define RTEMS_INLINE_ROUTINE static __inline__
#else
#define RTEMS_INLINE_ROUTINE static inline
#endif
```

Wikipedia has some background information: https://en.wikipedia.org/wiki/Inline_function

Author: Trac Migrate 2022-09-19T07:01:30.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"a660e9dc47c522fe1a1b7f6e4af1795dbd6c20b1/rtems" a660e9dc/rtems]:

```
Do not use RTEMS_INLINE_ROUTINE

Directly use "static inline" which is available in C99 and later.  This␣
↪brings
the RTEMS implementation closer to standard C.

Close #3935.
```

Author: Amar Takhar 2024-04-25T20:48:00.796Z

changed the description

3.9.1.412 3866 - Add support for GCC 10 noinit attribute

Id	3866
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-02-05T09:43:33.000Z
Updated	2024-04-25T20:47:44.428Z
Milestone	6.1
Labels	bsp, priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3866
Merges	0

Original author: sebastian.huber

In GCC 10 there is a new common variable attribute `noinit`:

https://gcc.gnu.org/onlinedocs/gcc/Common-Variable-Attributes.html#index-noinit-variable-attribute

https://gcc.gnu.org/git/gitweb.cgi?p=gcc.git;a=commit;h=f0033821c1c9ba386a1983499a666d5759cdd943

To support this, a change in the linker command files is necessary.

Author: Chris Johns 2020-02-05T21:47:47.000Z

Original author: sebastian.huber

Does clang have this support?

Author: Trac Migrate 2020-02-09T16:40:17.000Z

Original author: sebastian.huber

clang doesn't support this attribute. I added an enhancement request for this:

https://bugs.llvm.org/show_bug.cgi?id=44811

As a workaround for clang and GCC < 10 you can use the section attribute. The key issue is to have support for .noinit section in the linker command files.

Author: Trac Migrate 2020-02-25T07:22:23.000Z

Original author: sebastian.huber

- **Milestone** changed from %"5.1" to %"6.1"
- **Version** changed from ~"5" to ~"6"

Author: Trac Migrate 2021-05-02T18:41:04.000Z

Original author: sebastian.huber

In [changeset:"a84bf966b541cd68ada3b5044080c6f38ff882f6/rtems" a84bf96/rtems]:

```
basedefs: Add RTEMS_NOINIT

Update #3866.
```

Author: Trac Migrate 2021-05-02T18:41:08.000Z

Original author: sebastian.huber

In [changeset:"e10dec0fe72c19320d2c93b905457a5327ec1235/rtems" e10dec0/rtems]:

```
bsps: Support RTEMS_NOINIT in linkcmds

Update #3866.
```

Author: Trac Migrate 2021-05-02T18:41:12.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"2df95414a7b7b38e5146e13b11d8a903bcc84342/rtems" 2df9541/rtems]:

```
spmisc01: Test RTEMS_NOINIT

Close #3866.
```

Author: Trac Migrate 2021-05-03T12:05:34.000Z

Original author: sebastian.huber

In [changeset:"eb7c33add034577701f73b184b6227c9d33aacee/rtems" eb7c33ad/rtems]:

```
bsps/riscv: Support RTEMS_NOINIT in linkcmds

Update #3866.
```

Author: Amar Takhar 2024-04-25T20:47:44.534Z

changed the description

3.9.1.413 3853 - Add and use project-wide glossary to documentation

Id	3853
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-01-07T14:19:50.000Z
Updated	2024-04-25T20:47:37.720Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3853
Merges	0

Original author: sebastian.huber

See discussion:

https://lists.rtems.org/pipermail/devel/2020-January/056728.html

Approach A

Use c-user/glossary.rst as the project-wide glossary. Generate document-specific glossaries from this file and the use of :term: in the specific document. Add new waf target "./waf regenerate" to carry out the glossary generation.

Approach B

Move the glossary terms to the RTEMS specification (e.g. in the RTEMS sources "spec/glossary/*.yml") and generate the glossary.rst for the documents with a script. This gives us more flexibility and removes the need for the special parser code, see:

https://lists.rtems.org/pipermail/devel/2020-January/056811.html

The AV-2 mentioned of the DoD Architecture Framework (DoDAF) wants the glossary terms in categories. We could add categories to the glossary specification items. This would be difficult with a master glossary in reST.

Author: Trac Migrate 2020-01-08T06:38:00.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
See discussion:

https://lists.rtems.org/pipermail/devel/2020-January/056728.html

+ == Approach A
```

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```
+
Use c-user/glossary.rst as the project-wide glossary. Generate document-specific glossaries from this file and the use of :term: in the specific document.  Add new waf target "./waf regenerate" to carry out the glossary generation.
+
+ == Approach B
+
+ Move the glossary terms to the RTEMS specification (e.g. in the RTEMS sources "spec/glossary/*.yml") and generate the glossary.rst for the documents with a script.  This gives us more flexibility and removes the need for the special parser code, see:
+
+ https://lists.rtems.org/pipermail/devel/2020-January/056811.html
+
+ The AV-2 mentioned of the DoD Architecture Framework (DoDAF) wants the glossary terms in categories. We could add categories to the glossary specification items. This would be difficult with a master glossary in reST.
```

Author: Trac Migrate 2020-02-24T13:58:46.000Z

Original author: sebastian.huber

In [changeset:"03facdaef8ab163b1ce4d7cad6df79ceccf98344/rtems-docs" 03facda/rtems-docs]:

```
c-user: Rework glossary

Define exactly one term per definition.  Use references for alternative terms.  Add :term: text roles to acronym definitions of glossary defined terms.

Update #3853.
```

Author: Trac Migrate 2020-02-27T12:15:10.000Z

Original author: sebastian.huber

In [changeset:"732c570ad8de09180c27d69dabef471d1e84a71b/rtems-docs" 732c570/rtems-docs]:

```
c-user: Canonicalize two glossary acronyms

Add :term: text roles to acronym definitions of glossary defined terms.

Update #3853.
```

Author: Trac Migrate 2020-03-02T07:14:50.000Z

Original author: sebastian.huber

In [changeset:"43b7eeb5b0ad7bf701195366130ac68eeea15001/rtems-docs" 43b7eeb/rtems-docs]:

```
c-user: Use four spaces per indent level

Four spaces per indent level is used in most files.

Update #3853.
```

Author: Trac Migrate 2020-03-02T07:14:52.000Z

Original author: sebastian.huber

In [changeset:"834dcf57e71b3a4ae73d329066ee3af7c6cf5a4d/rtems-docs" 834dcf5/rtems-docs]:

```
c-user: Clarify return code related terms

Remove duplicate "return code" definition.  Add all related terms and
use references.

Update #3853.
```

Author: Trac Migrate 2020-03-02T07:14:54.000Z

Original author: sebastian.huber

In [changeset:"d2acbca7373a077f99d4760e046dd631a0fc6774/rtems-docs" d2acbca/rtems-docs]:

```
c-user: Sort glossary terms

Update #3853.
```

Author: Trac Migrate 2020-03-02T07:14:56.000Z

Original author: sebastian.huber

In [changeset:"996592259469e8ce9074b7967bdae02361be4495/rtems-docs" 9965922/rtems-docs]:

```
c-user: Merge parition term definitions

Update #3853.
```

Author: Trac Migrate 2020-03-02T07:14:58.000Z

Original author: sebastian.huber

In [changeset:"bba4a8ce231c0428903fb9937eb52f062bfc9386/rtems-docs" bba4a8c/rtems-docs]:

```
c-user: Add copyrights to glossary

Use the file history to derive the copyright information.

Update #3853.
```

Author: Trac Migrate 2020-03-02T07:15:00.000Z

Original author: sebastian.huber

In [changeset:"7d05a3d801e0d44de250abc174e35daae3d4e475/rtems-docs" 7d05a3d/rtems-docs]:

```
eng: Add glossary

Update #3853.
```

Author: Trac Migrate 2020-03-03T06:19:02.000Z

Original author: sebastian.huber

- **Milestone** changed from %"5.1" to %"6.1"
- **Version** changed from ~"5" to ~"6"

A prototype for the RTEMS Specification Items and Qualification Tools is available here:

https://git.rtems.org/sebh/rtems-qual.git/

https://github.com/sebhub/rtems-qual

Author: Trac Migrate 2021-06-18T09:46:18.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Glossary term handling is implemented in:

https://git.rtems.org/rtems-central/

Author: Amar Takhar 2024-04-25T20:47:37.770Z

changed the description

3.9.1.414 3846 - Build system does not track the dependencies of start.o files

Id	3846
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-12-18T09:36:04.000Z
Updated	2024-04-25T20:47:35.474Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::build, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3846
Merges	0

Original author: sebastian.huber

This defect relates to the new waf based build system.

Most start.o are generated from start.S files which use the C preprocessor. The start.o files are not re-generated if header files (e.g. cpuopts.h, bspopts.h) change. The problem is that the automatic dependency generation via the GCC -MMD flags doesn't work with the current asm rule:

```
def asm(self, bld, bic, source, target=None, deps=[], cppflags=[]):
if target is None:
target = os.path.splitext(source)[0] + ".o"
bld(
asflags=self.data["asflags"],
before=["cstlib"],
cppflags=cppflags + self.data["cppflags"],
features="asm c",
includes=bic.includes + self.data["includes"],
rule="${CC} ${ASFLAGS} ${CPPFLAGS} ${DEFINES_ST:DEFINES} ${CPPPATH_ST:INCPATHS} -
↪c ${SRC[0]} -o ${TGT}",
source=[source] + deps,
target=target,
)
return target
```

Author: Trac Migrate 2020-09-17T06:58:03.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"

- **Status** changed from *assigned* to *closed*

In [changeset:"4eea8d4bc44116b3465d7fdeb053d66bf95428f4/rtems" 4eea8d4/rtems]:

```
build: Fix dependencies for start and asm files

Add a feature to enforce an explicit target file for assembler sources.
Add a build start file node list and use it as a test program
dependency.

The fix for #3846 and #4080 needs to be combined, because the fix
for #3846 requires the removal of 'before=["cstlib"]'. This patch fixes
two issues:

1. The tracking of start file dependencies.

2. Reflect that executables depend on the start files.

We need a start.o file in the right path so that the linker can find is
as specified by the linker script, and not for example a start.S.17.o
file in some path. This part is addressed by the "explicit_asm_target"
feature.

This build process extension

@after("apply_link")
@feature("cprogram", "cxxprogram")
def process_start_files(self):
if getattr(self, "start_files", False):
self.link_task.dep_nodes.extend(self.bld.start_files)

addresses 2.

Close #3846.
Close #4080.
```

Author: Amar Takhar 2024-04-25T20:47:35.516Z

changed the description

3.9.1.415 3925 - Optimize work area initialization

Id	3925
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-04-02T08:48:23.000Z
Updated	2024-04-25T20:47:32.843Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3925
Merges	0

Original author: sebastian.huber

The new work area initialization introduced by #3838 introduces a dependency on _Heap_Extend() for all BSPs. The BSP knows how many memory areas it delivers to the system. It should provide also the RTEMS Workspace and C Program Heap initialization functions to the system so that an unnecessary pull in of _Heap_Extend() can be avoided.

Author: Trac Migrate 2022-01-26T10:10:10.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

This was fixed by d7205f0083f8fdd0408404ce99c6eab9b8d120c7 and 3d0620b607ff6459fec9d30efc1e0589bbd010f9.

Author: Amar Takhar 2024-04-25T20:47:32.823Z

mentioned in issue #3838

3.9.1.416 3818 - New build system

Id	3818
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-11-07T08:28:42.000Z
Updated	2024-04-25T20:47:29.368Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::build, ticket-type::enhancement, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3818
Merges	0

Original author: sebastian.huber

Replace the existing Autoconf and Automake based build system with something new. Goals:

- Easier configuration of BSPs (BSP options)
- Easier to maintain (nobody understands the details of the existing build system)
- Faster builds (especially on Windows)
- Reusable build specifications (e.g. generate documentation for BSP options for the user manual)
- Validation of built artefacts (e.g. ensure that the objects are built as specified using the DWARF debug information)
- Support building of BSPs external to the project
- Customization of the build (e.g. build only a subset of the RTEMS functions)
- Support alternative compilers such as clang instead of GCC

Proposed solution:

- Use waf for the build system
- Specify the build through build specification items maintained by Doorstop

Author: Trac Migrate 2019-11-07T08:30:03.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
Replace the existing Autoconf and Automake based build system with␣
↪something new. Goals:

* Easier configuration of BSPs (BSP options)

```

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```
* Easier to maintain (nobody understands the details of the existing␣
↪build system)

* Faster builds (especially on Windows)

* Reusable build specifications (e.g. generate documentation for BSP␣
↪options for the user manual)

* Validation of built artefacts (e.g. ensure that the objects are built␣
↪as specified using the DWARF debug information)

* Support building of BSPs external to the project

* Customization of the build (e.g. build only a subset of the RTEMS␣
↪functions)

+ * Support alternative compilers such as clang instead of GCC
+
Proposed solution:

* Use waf for the build system

* Specify the build through build specification items maintained by␣
↪Doorstop
```

Author: Trac Migrate 2019-11-07T08:30:40.000Z

Original author: sebastian.huber

- **Status** changed from *assigned* to *accepted*

Author: Trac Migrate 2019-11-12T09:07:11.000Z

Original author: sebastian.huber

In [changeset:”9f3c558bbc7b6a9d71c0830ff1eb93a5cad44346/rtems” 9f3c558/rtems]:

```
tests: Remove superfluous SMPTESTS define

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:07:15.000Z

Original author: sebastian.huber

In [changeset:”f32e1197160cd45b01a27c3c6331001d1bf88240/rtems” f32e119/rtems]:

```
psxtests: Avoid build system defined defines

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:07:18.000Z

Original author: sebastian.huber

In [changeset:"150fbaf9c94237072617fbcb10ee95a346c7e13d/rtems" 150fbaf9/rtems]:

```
psxtmtests: Avoid build system defined defines

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:07:22.000Z

Original author: sebastian.huber

In [changeset:"a467f5996339ed1071bae350cd04f43c6f1e6ad3/rtems" a467f59/rtems]:

```
sptests: Avoid build system defined defines

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:07:28.000Z

Original author: sebastian.huber

In [changeset:"51765553849a7236b19e4c2ca32cfca16fa4ef28/rtems" 51765553/rtems]:

```
sptests: Remove obsolete semaphore consume driver

This driver is no longer used by a test program.

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:07:31.000Z

Original author: sebastian.huber

In [changeset:"5ba4f38399c318191afcc7a2ee5cd6a19a6939ec/rtems" 5ba4f383/rtems]:

```
libtests: Avoid build system defined defines

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:07:34.000Z

Original author: sebastian.huber

In [changeset:"c89a5dc821b48644a639c57bb3cca781185899be/rtems" c89a5dc8/rtems]:

```
samples: Avoid build system defined defines

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:07:40.000Z

Original author: sebastian.huber

In [changeset:"34cbac1a0386450076023cc3bc47830e891dd889/rtems" 34cbac1/rtems]:

```
tmtests: Avoid build system defined defines

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:07:43.000Z

Original author: sebastian.huber

In [changeset:"eae263c609a3c62af8a0cd9aae240ed6394780aa/rtems" eae263c/rtems]:

```
mptests/mp14: Make MAX_LONG_TEST_DURATION constant

If there is a real need, it can be made a configuration option again.

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:07:46.000Z

Original author: sebastian.huber

In [changeset:"786ae3f7dfabb56add80bc0aeacbab5b98ca71aa/rtems" 786ae3f/rtems]:

```
ada/samples: Avoid build system defined defines

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:07:50.000Z

Original author: sebastian.huber

In [changeset:"0b520cb71804b355cf141ea5c5596aabed711824/rtems" 0b520cb/rtems]:

```
mptests: Avoid build system defined defines

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:07:53.000Z

Original author: sebastian.huber

In [changeset:"b88c7583b8f54b2612424dc46d4fb52021d0cf26/rtems" b88c7583/rtems]:

```
fstests: Use tmacros.h instead of pmacros.h

This avoids an extra include path.

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:07:56.000Z

Original author: sebastian.huber

In [changeset:"37d509b2499f75c7847dcc1a7041b5052d63b686/rtems" 37d509b/rtems]:

```
libtests: Remove superfluous include path

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:07:59.000Z

Original author: sebastian.huber

In [changeset:"6da85f49eada484f5aa32d202b9ba9f00c1c5758/rtems" 6da85f49/rtems]:

```
block08: Use local include

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:08:03.000Z

Original author: sebastian.huber

In [changeset:"1e343825f4bb6e907684e3752445d6511186f924/rtems" 1e343825/rtems]:

```
tests: Simplify fatal error test support

Move system.h to shared init.c.

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:08:06.000Z

Original author: sebastian.huber

In [changeset:"1a48cbfa16bf54a442f9394e4c4d9c2211e82865/rtems" 1a48cbf/rtems]:

```
sptests: Avoid include path magic

Update #3818.
```

Author: Trac Migrate 2019-11-12T09:08:09.000Z

Original author: sebastian.huber

In [changeset:"f51594897cd2915b856e57cc0a066f929ab22209/rtems" f515948/rtems]:

```
ada/mptests: Make them compile clean

Fix all warnings.

Update #3818.
```

Author: Trac Migrate 2019-11-14T10:49:27.000Z

Original author: sebastian.huber

In [changeset:"984d7443bff76b46a080233da7fc880e5bd33d24/rtems" 984d7443/rtems]:

```
bsp/gumstix: Remove ON_SKYEYE Automake conditional

It is fine to build the drivers always.

Update #3818.
```

Author: Trac Migrate 2019-11-14T14:10:37.000Z

Original author: sebastian.huber

In [changeset:"bc28b65ff45d447d645426acc34690bfe74d5e43/rtems" bc28b65/rtems]:

```
bsp/beagle: Rename linker command file

This BSP family uses only one linker command file.  Use the standard
name.

Update #3818.
```

Author: Trac Migrate 2019-11-14T14:10:40.000Z

Original author: sebastian.huber

In [changeset:"41ab50e4cdba53324fba5d176c27400ff1dbe269/rtems" 41ab50e4/rtems]:

```
bsp/t32mppc: Rename linker command file

This BSP family uses only one linker command file.  Use the standard
name.

Update #3818.
```

Author: Trac Migrate 2019-11-15T06:46:01.000Z

Original author: sebastian.huber

In [changeset:"9c601b00d770009240c2e8043850728c77c5c248/rtems" 9c601b00/rtems]:

```
bsp/i386: Remove unused BSP_HAS_SMP

Update #3818.
```

Author: Trac Migrate 2019-11-15T06:46:04.000Z

Original author: sebastian.huber

In [changeset:"b882b07e84018ef083d12f1b4020666174f5aae9/rtems" b882b07/rtems]:

```
Remove BSP_SMALL_MEMORY BSP option

Use the test state configuration instead.

Update #3818.
```

Author: Trac Migrate 2019-11-15T06:46:07.000Z

Original author: sebastian.huber

In [changeset:"75d9e79f56706f45f957958d68fe99489ab3723c/rtems" 75d9e79f/rtems]:

```
bsp/lpc32xx: Remove unused TESTS_USE_PRINTK

Update #3818.
```

Author: Trac Migrate 2019-11-21T07:06:00.000Z

Original author: sebastian.huber

In [changeset:"af321aaf2b5ded5bf9265ee1e518be55f0ea612a/rtems" af321aa/rtems]:

```
bsp/altcycv_devkit: Rename linker command file

This BSP family uses only one linker command file.  Use the standard
name.

Update #3818.
```

Author: Trac Migrate 2019-11-21T07:06:04.000Z

Original author: sebastian.huber

In [changeset:"a52d617469566d5b849d396bb689bad408cd94ce/rtems" a52d6174/rtems]:

```
bsp/imx7: Rename linker command file

This BSP family uses only one linker command file.  Use the standard
name.

Update #3818.
```

Author: Trac Migrate 2019-11-21T07:06:11.000Z

Original author: sebastian.huber

In [changeset:"38207a31e41b8cb3f3978c1ccbe10c6467f85c51/rtems" 38207a31/rtems]:

```
Move feature macro before "config.h" include

This allows to use header includes in "config.h" to reduce the build
configuration checks.

Update #3818.
```

Author: Trac Migrate 2019-11-21T07:06:14.000Z

Original author: sebastian.huber

In [changeset:"f3779985681baaa4ac4e33dddfabab241008376c/rtems" f377998/rtems]:

```
imfs: Add IMFS_make_linfile()

Update #3818.
```

Author: Trac Migrate 2019-11-25T10:45:38.000Z

Original author: sebastian.huber

In [changeset:"3e9f5a55ad361fa0a96eb067ff1e92dd2c6780fe/rtems" 3e9f5a55/rtems]:

```
bsp/gen83xx: Remove obsolete linker command file

Update #3818.
```

Author: Trac Migrate 2019-11-25T10:45:42.000Z

Original author: sebastian.huber

In [changeset:"05a32e15c7a1fd2d886abce3321f4bf42c38cc27/rtems" 05a32e15/rtems]:

```
bsp/mpc55xxevb: Remove obsolete linker cmd file

Update #3818.
```

Author: Trac Migrate 2019-11-25T10:45:45.000Z

Original author: sebastian.huber

In [changeset:"a0304e8d62325b4f3c07c0c520220c7929eea1c0/rtems" a0304e8d/rtems]:

```
libtest: Output basename of source files

Output only the basename of source files to be independent of the build
system source paths.

In the future it may be better to use the GCC -fmacro-prefix-map option.
This option is available in GCC 8 and later.  It is not yet available in
clang.

Update #3818.
```

Author: Trac Migrate 2019-11-25T10:45:55.000Z

Original author: sebastian.huber

In [changeset:"273e8b72c8ff5780939dedce913e58fc01bb78e5/rtems" 273e8b7/rtems]:

```
libtests/tar0[12]:: Use static archive content

This simplifies the build process.  Do not generate the archive content
through the build system.  Let the version control system deal with
symbolic links.

Update #3818.
```

Author: Trac Migrate 2019-11-25T10:45:59.000Z

Original author: sebastian.huber

In [changeset:"8f021bdbf9a83a7bd5c94f1f4dc275da2135b52f/rtems" 8f021bd/rtems]:

```
libtests/dl*: Do not generate files via "echo"

Add the static files to the repository.  This simplifies the build.

Update #3818.
```

Author: Trac Migrate 2019-11-25T12:02:10.000Z

Original author: sebastian.huber

In [changeset:"5c2e7104e7de6ac70fae6e8d1e84c9f36c476d43/rtems" 5c2e7104/rtems]:

```
libtests: Use '-' for TAR file names

Use uniform pattern for all TAR file names.  Use the dl* tests as a
template.

Update #3818.
```

Author: Trac Migrate 2019-11-26T07:35:02.000Z

Original author: sebastian.huber

In [changeset:"4a056523cf7f721d674e4898e434184128d3d9f4/rtems" 4a05652/rtems]:

```
libtests/dl*: Rename source files

Rename source files to use a %.c -> %.o and %.cc -> %.o pattern.  Use
*.cc for C++ source files instead of *.cpp to be in line with other C++
source files.

Update #3818.
```

Author: Trac Migrate 2019-11-27T11:03:45.000Z

Original author: sebastian.huber

In [changeset:"1fca16659754d1e7c0ac12a81bd24003dbc80c56/rtems" 1fca1665/rtems]:

```
testsuites/ada: Introduce init.c files

Provide an init.c for each Ada test instead of the #include <config.h>
magic which works only due to hand crafted include paths.

Update #3818.
```

Author: Trac Migrate 2019-11-29T18:13:05.000Z

Original author: sebastian.huber

In [changeset:"ae716da79fe549c403cd2fcf4c221a9a57bf7b20/rtems" ae716da/rtems]:

```
ada/sp19: Add m4 generated sptest.adb

Update #3818.
```

Author: Trac Migrate 2019-12-02T06:47:45.000Z

Original author: sebastian.huber

In [changeset:"8f6b7abd1aed966f205cc26e09ef38f9b0d40744/rtems" 8f6b7abd/rtems]:

```
Move feature macro before "config.h" include

This allows to use header includes in "config.h" to reduce the build
configuration checks.

Update #3818.
```

Author: Trac Migrate 2019-12-04T06:43:57.000Z

Original author: sebastian.huber

In [changeset:"a6879a418dee37c31728af0d2491cb8924f23de3/rtems" a6879a4/rtems]:

```
testsuites: Remove rtems_test_pause*()

The rtems_test_pause() and rtems_test_pause_and_screen_number() macros
had different implementations depending on the RTEMS_TEST_NO_PAUSE
define.  This define was defined to 1 by default.  The user was able to
change this via the undocumented --disable-test-no-pause configure
command line option.

Pausing tests and waiting for user input contradicts the goal of having
automated test runs.  Remove this feature.

Update #3818.
```

Author: Trac Migrate 2019-12-05T06:52:52.000Z

Original author: sebastian.huber

In [changeset:"1380c822a53aa64fff190e2818610ca5732363cf/rtems" 1380c822/rtems]:

```
bsp/xen: Use BSP options for all linkcmds vars

Update #3818.
```

Author: Trac Migrate 2019-12-13T09:10:28.000Z

Original author: sebastian.huber

In [changeset:"f30dd1f13ba3cb653f4ea9cdcb37edbcfb0098ff/rtems" f30dd1f/rtems]:

```
mptests: Fix configuration

Update #3818.
```

Author: Trac Migrate 2020-02-25T07:21:40.000Z

Original author: sebastian.huber

- **Milestone** changed from %"5.1" to %"6.1"
- **Version** changed from ~"5" to ~"6"

Author: Trac Migrate 2020-09-13T12:01:52.000Z

Original author: sebastian.huber

In [changeset:"449fc7463f77a75d9acc8cd54abffec1825f7e05/rtems-docs" 449fc74/rtems-docs]:

```
eng: Add BSP build system chapter

Update #3818.
```

Author: Trac Migrate 2020-09-13T12:01:54.000Z

Original author: sebastian.huber

In [changeset:"4ea43e39c76ba4a5407916a21d0300a7099305e9/rtems-docs" 4ea43e3/rtems-docs]:

```
user: Document BSP new build system

Update #3818.
```

Author: Trac Migrate 2020-09-14T07:00:02.000Z

Original author: sebastian.huber

In [changeset:"f3f0370f1054f4e49aa8f5ea70485d673e8e94b6/rtems" f3f0370f/rtems]:

```
build: Alternative build system based on waf

Update #3818.
```

Author: Trac Migrate 2020-09-14T21:14:39.000Z

Original author: sebastian.huber

with new build system smp enabled build of pc686 fails. Linkage of samples fails with

```
/export/home/karel/sfw/rtems/6-tools-core2/lib/gcc/i386-rtems6/10.2.1/../../../../i386-rtems6/bin/ld: ./librtemsbsp.a(smp-imps.c.10.o): in function `boot_cpu':
/export/home/karel/git/rtems/rtems-head/build/i386/pc686/../../../bsps/i386/pc386/start/smp-imps.c:274: undefined reference to `_binary_appstart_bin_start'
/export/home/karel/sfw/rtems/6-tools-core2/lib/gcc/i386-rtems6/10.2.1/../../../../i386-rtems6/bin/ld: /export/home/karel/git/rtems/rtems-head/build/i386/pc686/../../../bsps/i386/pc386/start/smp-imps.c:274: undefined reference to `_binary_appstart_bin_size'
collect2: error: ld returned 1 exit status
```

that's due to fact this part of Makefile based build was not translated to the new build system:

```
appcpustart.$(OBJEXT): ../../../../../../bsps/i386/pc386/start/startAP.S
$(CPPASCOMPILE) $(AM_CPPFLAGS) -o $@ -c $<

appstart.$(OBJEXT): appcpustart.$(OBJEXT)
$(LD) -N  \\
-Ttext 0x70000 -e app_processor_start -nostdlib \\
-o appstart_tmp.exe $<
$(OBJCOPY) -O binary appstart_tmp.exe appstart.bin
$(OBJCOPY) -I binary -O elf32-i386 -B i386 appstart.bin $@
```

besides this there is also error in files (getcpuid.c seems to be gone, bspsmp.c needs to be there:

```
diff --git a/spec/build/bsps/i386/pc386/objsmp.yml b/spec/build/bsps/i386/pc386/objsmp.yml
index af882cb425..9e83bd7a01 100644
--- a/spec/build/bsps/i386/pc386/objsmp.yml
+++ b/spec/build/bsps/i386/pc386/objsmp.yml
@@ -11,6 +11,7 @@ includes: []
install: []
links: []
source:
-- bsps/i386/pc386/start/getcpuid.c
+#- bsps/i386/pc386/start/getcpuid.c
+- bsps/i386/pc386/start/bspsmp.c
- bsps/i386/pc386/start/smp-imps.c
type: build
```

unfortunately so far I struggle with translating this to waf, probably should look for some waf doc or so. E.g. linking steps of appcpustart.o into appstart.o is what makes me trouble. Also I'm not able to find out how rtemsbsp lib is linked and its dependency specified...

Author: Trac Migrate 2020-09-15T07:20:48.000Z

Original author: sebastian.huber

In [changeset:"127c3ea527658b140dac74d6b3ca72e3e9b19e12/rtems" 127c3ea5/rtems]:

```
build: Fix i386/pc386 with SMP enabled

Update #3818.
```

Author: Trac Migrate 2020-09-15T07:24:54.000Z

Original author: sebastian.huber

Replying to kgardas:

> unfortunately so far I struggle with translating this to waf, probably should look for some waf doc or so. E.g. linking steps of appcpustart.o into appstart.o is what makes me trouble. Also I'm not able to find out how rtemsbsp lib is linked and its dependency specified...
>
> Thanks testing the new build system and for the bug report. I checked in a fix, could you please test if this fixes the issues on this BSP.
>
> Working with waf is also not easy for me. Fortunately, we don't have that many areas in the build which need a special treatment like this. It was the first spot which needed to include a specially build object file in a library.

Author: Trac Migrate 2020-09-15T08:02:05.000Z

Original author: sebastian.huber

Replying to Sebastian Huber:

> Replying to kgardas:
>
> > unfortunately so far I struggle with translating this to waf, probably should look for some waf doc or so. E.g. linking steps of appcpustart.o into appstart.o is what makes me trouble. Also I'm not able to find out how rtemsbsp lib is linked and its dependency specified...
>
> Thanks testing the new build system and for the bug report. I checked in a fix, could you please test if this fixes the issues on this BSP. Working with waf is also not easy for me. Fortunately, we don't have that many areas in the build which need a special treatment like this. It was the first spot which needed to include a specially build object file in a library.
>
> Build builds both no-SMP and SMP BSPs fine, but neither of them runs on neither qemu nor on real hardware. If you find helpful, then qemu connected gdb shows those 3 traces over few seconds of BSP run:

```
Program received signal SIGINT, Interrupt.
0x00008d54 in _RBTree_Insert_inline (less=<optimized out>,␣
↪key=<synthetic pointer>, the_node=0x5ccc3d04, the_
↪rbtree=0x736f4d74) at ../../../cpukit/include/rtems/score/
↪rbtree.h:523
523       while ( *link != NULL ) {
(gdb) where
#0  0x00008d54 in _RBTree_Insert_inline (less=<optimized out>,
↪ key=<synthetic pointer>, the_node=0x5ccc3d04, the_
↪rbtree=0x736f4d74) at ../../../cpukit/include/rtems/score/
↪rbtree.h:523
#1  _Priority_Plain_insert (priority=0, node=0x5ccc3d04,␣
↪aggregation=0xc031 <vesa_realmode_bootup_init+3305>) at ../.
↪./../cpukit/include/rtems/score/priorityimpl.h:417
#2  _Thread_queue_Priority_do_enqueue (heads=0xc031 <vesa_
↪realmode_bootup_init+3305>, queue_context=0x6c6c6544, the_
↪thread=0x74 <_establish_stack+19>, queue=0x726f5020)
at ../../../cpukit/score/src/threadqops.c:484
#3  _Thread_queue_Queue_enqueue (enqueue=<optimized out>,␣
↪initialize=<optimized out>, queue_context=0x6c6c6544, the_
↪thread=0x74 <_establish_stack+19>, queue=0x726f5020)
at ../../../cpukit/score/src/threadqops.c:96
#4  _Thread_queue_Priority_enqueue (queue=0x726f5020, the_
↪thread=0x74 <_establish_stack+19>, queue_
↪context=0x6c6c6544) at ../../../cpukit/score/src/threadqops.
↪c:566
#5  0x6c616972 in ?? ()
#6  0x00000000 in ?? ()
(gdb) c
Continuing.
^C
Program received signal SIGINT, Interrupt.
0x00008d48 in _Chain_Insert_unprotected (the_node=0x283d4
↪<idtHdl+2708>, after_node=0x9002d0ff) at ../../../cpukit/
↪include/rtems/score/chainimpl.h:666
666       before_node->previous = the_node;
(gdb) where
#0  0x00008d48 in _Chain_Insert_unprotected (the_node=0x283d4
↪<idtHdl+2708>, after_node=0x9002d0ff) at ../../../cpukit/
↪include/rtems/score/chainimpl.h:666
#1  _Chain_Prepend_unprotected (the_node=0x283d4 <idtHdl+2708>
↪, the_chain=0x9002d0ff) at ../../../cpukit/include/rtems/
↪score/chainimpl.h:737
#2  _Thread_queue_Queue_enqueue (enqueue=<optimized out>,␣
↪initialize=<optimized out>, queue_context=0x6c6c6544, the_
↪thread=0x74 <_establish_stack+19>, queue=0x726f5020)
at ../../../cpukit/score/src/threadqops.c:95
#3  _Thread_queue_Priority_enqueue (queue=0x726f5020, the_
↪thread=0x74 <_establish_stack+19>, queue_
↪context=0x6c6c6544) at ../../../cpukit/score/src/threadqops.
```

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```
↪c:566
#4  0x6c616972 in ?? ()
#5  0x00000000 in ?? ()
(gdb) c
Continuing.
^C
Program received signal SIGINT, Interrupt.
0x00008d54 in _RBTree_Insert_inline (less=<optimized out>,␣
↪key=<synthetic pointer>, the_node=0x5ccc3d04, the_
↪rbtree=0x736f4d74) at ../../../cpukit/include/rtems/score/
↪rbtree.h:523
523       while ( *link != NULL ) {
(gdb) where
#0  0x00008d54 in _RBTree_Insert_inline (less=<optimized out>,
↪ key=<synthetic pointer>, the_node=0x5ccc3d04, the_
↪rbtree=0x736f4d74) at ../../../cpukit/include/rtems/score/
↪rbtree.h:523
#1  _Priority_Plain_insert (priority=0, node=0x5ccc3d04,␣
↪aggregation=0xc031 <vesa_realmode_bootup_init+3305>) at ../.
↪./../cpukit/include/rtems/score/priorityimpl.h:417
#2  _Thread_queue_Priority_do_enqueue (heads=0xc031 <vesa_
↪realmode_bootup_init+3305>, queue_context=0x6c6c6544, the_
↪thread=0x74 <_establish_stack+19>, queue=0x726f5020)
at ../../../cpukit/score/src/threadqops.c:484
#3  _Thread_queue_Queue_enqueue (enqueue=<optimized out>,␣
↪initialize=<optimized out>, queue_context=0x6c6c6544, the_
↪thread=0x74 <_establish_stack+19>, queue=0x726f5020)
at ../../../cpukit/score/src/threadqops.c:96
#4  _Thread_queue_Priority_enqueue (queue=0x726f5020, the_
↪thread=0x74 <_establish_stack+19>, queue_
↪context=0x6c6c6544) at ../../../cpukit/score/src/threadqops.
↪c:566
#5  0x6c616972 in ?? ()
#6  0x00000000 in ?? ()
(gdb)
```

Author: Trac Migrate 2020-09-15T08:09:11.000Z

Original author: sebastian.huber

Replying to kgardas: [...]

> Build builds both no-SMP and SMP BSPs fine, but neither of them runs on neither qemu nor on real hardware. If you find helpful, then qemu connected gdb shows those 3 traces over few seconds of BSP run: With the old build system both configuration work I guess?
>
> What is the qemu command line to test this BSP?

Author: Trac Migrate 2020-09-15T08:26:14.000Z

Original author: sebastian.huber

Replying to Sebastian Huber:

> Replying to kgardas: [...]
>
> > Build builds both no-SMP and SMP BSPs fine, but neither of them runs on neither qemu nor on real hardware. If you find helpful, then qemu connected gdb shows those 3 traces over few seconds of BSP run:
>
> With the old build system both configuration work I guess?
>
> Yes, hello/smp works
>
> > What is the qemu command line to test this BSP?

```
qemu-system-i386 -m 128 -no-reboot -nographic -
↪append "--video=off --console=/dev/com1" -kernel .
↪/hello.exe
```

Author: Trac Migrate 2020-09-15T11:33:18.000Z

Original author: sebastian.huber

In [changeset:"3be2380927e3cc5ff302e05a6b539d3a2c842e27/rtems" 3be23809/rtems]:

```
build: Fix i386/pc386 ABI flags

Update #3818.
```

Author: Trac Migrate 2020-09-15T11:33:22.000Z

Original author: sebastian.huber

In [changeset:"d9d31b381c301d921dde7a691d8e27e2e39d68f3/rtems" d9d31b3/rtems]:

```
build: Add RELOCADDR to i386/pc386 options

Update #3818.
```

Author: Trac Migrate 2020-09-15T13:14:56.000Z

Original author: sebastian.huber

In [changeset:"8f424e4580b23e1212b7e56009dbc784937a2ab4/rtems" 8f424e45/rtems]:

```
build: Fix i386/pc386 link of SMP start file

Update #3818.
```

Author: Trac Migrate 2020-09-15T13:15:00.000Z

Original author: sebastian.huber

In [changeset:"2a4ccc4f8d699ac87cfa057ec887855377d702c1/rtems" 2a4ccc4/rtems]:

```
bsp/pc386: Remove support for obsolete Binutils

Update #3818.
```

Author: Trac Migrate 2020-09-15T13:16:33.000Z

Original author: sebastian.huber

Replying to kgardas:

> Replying to Sebastian Huber:
>
> > Replying to kgardas: [...]
> >
> > > Build builds both no-SMP and SMP BSPs fine, but neither of them runs on neither qemu nor on real hardware. If you find helpful, then qemu connected gdb shows those 3 traces over few seconds of BSP run:
> >
> > With the old build system both configuration work I guess?
>
> Yes, hello/smp works
>
> With the recent fixes I was able to run the tests on Qemu.
>
> > What is the qemu command line to test this BSP?
>
> {{{ qemu-system-i386 -m 128 -no-reboot -nographic -append "–video=off –console=/dev/com1" -kernel ./hello.exe }}}

Author: Trac Migrate 2020-09-15T13:47:12.000Z

Original author: sebastian.huber

Replying to Sebastian Huber:

> With the recent fixes I was able to run the tests on Qemu.
>
> Thanks a lot for fast fixes! I can confirm running no-SMP hello and SMP smp01 on both qemu and real hardware. Thanks!

Author: Trac Migrate 2020-09-17T16:09:15.000Z

Original author: sebastian.huber

In [changeset:"845674e3fb51dcbdd4e4f2e93a4e5fa4e6b311d2/rtems" 845674e/rtems]:

```
build: Fix mghttpd01 test exclude

Update #3818.
```

Author: Trac Migrate 2020-09-17T16:09:18.000Z

Original author: sebastian.huber

In [changeset:"11c1b862df08e841a57c6fde5db63d7dd314302f/rtems" 11c1b862/rtems]:

```
build: Allow test program item UIDs with a "-"

Update #3818.
```

Author: Trac Migrate 2020-09-20T15:32:24.000Z

Original author: sebastian.huber

In [changeset:"2b1a4ac84fd5fee86426fcb56ca0e78e94599eca/rtems" 2b1a4ac/rtems]:

```
build: Fix linker path

Use -B for the linker since some architectures use extra start files␣
↪defined by
the GCC specification and provided by the BSP, for example powerpc. ␣
↪Start
files are not found by -L.

In the long run, the GCC defined start files should be provided by GCC.␣
↪ This
is a GCC 11 topic.

Update #3818
```

Author: Trac Migrate 2020-09-21T04:47:26.000Z

Original author: sebastian.huber

In [changeset:"d110e6e3b3611d66734954a3567d02c11ab0b737/rtems" d110e6e3/rtems]:

```
bsp/gen83xx: Add missing source file

Update #3818.
```

Author: Trac Migrate 2020-09-25T16:51:26.000Z

Original author: sebastian.huber

In [changeset:"73926320d7f00ab079f04777fd924fee48d84000/rtems" 7392632/rtems]:

```
build: Add RTEMS_PROFILING

Update #3818.
```

Author: Trac Migrate 2020-09-25T16:56:48.000Z

Original author: sebastian.huber

In [changeset:"2fb86e27ce4dc4bf061867efa9df11131c357939/rtems-docs" 2fb86e2/rtems-docs]:

```
user: Add migration hints from old build system

Update #3818.
```

Author: Trac Migrate 2020-09-27T07:40:41.000Z

Original author: sebastian.huber

In [changeset:"9a27c9cfd8b661af7b1135c3cb17896e61551abd/rtems" 9a27c9c/rtems]:

```
build: Simplify get_compiler()

Update #3818.
```

Author: Trac Migrate 2020-09-27T07:40:44.000Z

Original author: sebastian.huber

In [changeset:"b8d84015a4bc30f280b3e39f3f806e1ec0b2ec7a/rtems" b8d8401/rtems]:

```
build: Fix enabled-by evaluation

For the enabled-by evaluation we have to use the BSP name defined by the
```

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```
build specification and not the user.

Update #3818.
```

Author: Trac Migrate 2020-09-27T07:40:48.000Z

Original author: sebastian.huber

In [changeset:"71ccc156a55af6abda1be611610ceb0420c5e923/rtems" 71ccc15/rtems]:

```
build: Fix option default values

For the option default values we have to use the BSP name defined by␣
↪the build
specification and not the user.

Update #3818.
```

Author: Trac Migrate 2020-09-28T04:21:56.000Z

Original author: sebastian.huber

In [changeset:"cbd4f542ec6550e3aaaaf80989f5b86213b070d1/rtems" cbd4f54/rtems]:

```
build: Add comment

Update #3818.
```

Author: Trac Migrate 2020-09-30T11:02:08.000Z

Original author: sebastian.huber

In [changeset:"31c333d71c5146edac27566e6d066b73a411739e/rtems" 31c333d/rtems]:

```
build: Include cpuopts.h in "config.h"

The Autoconf/Automake build system did something similar.  This fixes
the build of sigprogmask.c which uses RTEMS_POSIX_API and expects to get
it defined via "config.h".

Update #3818.
```

Author: Trac Migrate 2020-10-02T14:30:05.000Z

Original author: sebastian.huber

In [changeset:"f53712a0e39be59773d171da8cd281d98f16bed2/rtems" f53712a/rtems]:

```
build: Use exact match by default for BSP names

Update #3818.
```

Author: Trac Migrate	2020-10-07T06:06:50.000Z

Original author: sebastian.huber

In [changeset:"94b8d85b1612bdd52744afa977e05a612954926a/rtems" 94b8d85b/rtems]:

```
build: Fix BSP name

Update #3818.
```

Author: Trac Migrate	2021-04-26T12:06:12.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

The new build system is operational. Issues with the new build system should use new tickets.

Author: Amar Takhar	2024-04-25T20:47:29.422Z

changed the description

3.9.1.417 3726 - Select a requirements engineering tool

Id	3726
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-03-13T06:37:47.000Z
Updated	2024-04-25T20:47:18.451Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3726
Merges	0

Original author: sebastian.huber

In order to ease the requirements engineering process (such a process doesn't exist currently, see #3715) select a supporting tool (or tools). Define tool selection criteria. Do a market survey. Use the following wiki page for this work:

Developer/RequirementsEngineering

Author: Trac Migrate 2021-06-18T08:08:00.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

The work to select a requirements management tool was done:

https://docs.rtems.org/branches/master/eng/req/tooling.html

Author: Amar Takhar 2024-04-25T20:47:07.894Z

mentioned in issue #3701

Author: Amar Takhar 2024-04-25T20:47:18.501Z

changed the description

3.9.1.418 3719 - Update libcrypt to latest FreeBSD to address Coverity Scan Issues

Id	3719
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2019-03-07T18:58:44.000Z
Updated	2024-04-25T20:47:17.952Z
Milestone	6.1
Labels	library, priority::normal, qualification, resolution::fixed, ticket-type::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3719
Merges	0

Coverity issues 1018087, 1018088, 1018089, and 1018090 all appear to be addressed in the latest source code for libcrypt from FreeBSD. This code needs to be updated. This is one of the issues (1018087) in crypt-sha512.c from Scan but the same issues are in sha256.c

```
275         if (copied_key != NULL)
CID 1018088: \ |md_0_39|\ Constant\ |md_0_39|\  variable guards dead code␣
↪(DEADCODE) [select issue]
```

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```
276                 memset(copied_key, '\\0', key_len);
null: At condition copied_salt != NULL, the value of copied_salt must be NULL.
dead_error_condition: The condition copied_salt != NULL cannot be true.
277         if (copied_salt != NULL)

CID 1018087 (#1 of 1): 'Constant' variable guards dead code (DEADCODE)
dead_error_line: Execution cannot reach this statement: memset(copied_salt, 0,␣
↪salt....
Local variable copied_salt is assigned only once, to a constant value, making it␣
↪effectively constant throughout its scope. If this is not the intent, examine␣
↪the logic to see if there is a missing assignment that would make copied_salt␣
↪not remain constant.
278                 memset(copied_salt, '\\0', salt_len);
```

Author: Trac Migrate 2019-12-19T08:07:34.000Z

- **Milestone** changed from %"5.1" to %"6.1"

Author: Trac Migrate 2022-09-09T04:51:17.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

This should be fixed now.

Author: Trac Migrate 2022-09-22T06:17:18.000Z

In [changeset:"ade8d995aa74f28a664c533bf85dfab82f2be4af/rtems" ade8d99/rtems]:

```
build: Install SHA header files

Update #3719.
```

Author: Amar Takhar 2024-04-25T20:47:18.058Z

changed the description

3.9.1.419 3718 - Add support for test plans

Id	3718
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-03-04T13:02:17.000Z
Updated	2024-04-25T20:47:17.495Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3718
Merges	0

Original author: sebastian.huber

Test plans are required by ECSS-Q-ST-40C:

- 5.5.3.2, Software unit testing, a.
- 5.5.4.1, Software integration test plan development
- 5.6.3.1, Development and documentation of a software validation specification with respect to the technical specification, a.

The test plans are a content of several documentation sets. Test plans are subject to verification activities:

- 5.8.3.6, Verification of software unit testing (plan and results)
- 5.8.3.7, Verification of software integration
- 5.8.3.8, Verification of software validation with respect to the technical specifications and the requirements baseline

It should be possible to create documents from individual test plan fragments for a particular test case. There are two approaches possible:

1. Add the test plan directly to the test code in form of a specially formatted comment.
2. Use separate files with a specific format for test plans.

The test plans should include a

- test identifier,
- test classification (unit, integration, validation),
- test steps,
- links to requirements, design, architecture, unit, component, etc.

It should be possible to verify that a test is executed according to the plan from the test output. For example the test plan could specify test steps. The test output could print the test steps. A tool could check that the test steps in the output and the plan are consistent.

Author: Trac Migrate 2021-09-29T13:31:41.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Test cases are specified by specification items:

https://docs.rtems.org/branches/master/eng/req/items.html#spectypetestcaseitemtype

Author: Amar Takhar	2024-04-25T20:47:08.122Z

mentioned in issue #3701

Author: Amar Takhar	2024-04-25T20:47:16.588Z

mentioned in issue #3716

Author: Amar Takhar	2024-04-25T20:47:17.554Z

changed the description

3.9.1.420 3717 - Add test guidelines chapter to RTEMS Software Engineering Handbook

Id	3717
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-03-04T12:25:45.000Z
Updated	2024-04-25T20:47:17.038Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3717
Merges	0

Original author: sebastian.huber

The test guidelines chapter should cover the following topics:

- tools involved in testing
- test classification
- test organization
- how to plan tests
- how to write tests
- how to run tests

- how to report tests

Author: Trac Migrate 2022-11-30T08:53:19.000Z

Original author: sebastian.huber

- **Milestone** changed from %”6.1” to %”7.1”

Author: Trac Migrate 2023-06-26T14:54:43.000Z

Original author: sebastian.huber

In [changeset:”bb19475be4b7d931795719c0027c3238c2c303de/rtems-docs” bb19475/rtems-docs]:

```
eng: Add guidelines for validation tests

Update #3717.
```

Author: Trac Migrate 2023-10-23T13:44:55.000Z

Original author: sebastian.huber

- **Milestone** changed from %”7.1” to %”6.1”
- **Resolution** set to ~”fixed”
- **Status** changed from *assigned* to *closed*

There is always room improvement, however, the guidelines in the how-to section should do it for now:

https://docs.rtems.org/branches/master/eng/req/howto.html#

Author: Amar Takhar 2024-04-25T20:47:08.094Z

mentioned in issue #3701

Author: Amar Takhar 2024-04-25T20:47:16.561Z

mentioned in issue #3716

Author: Amar Takhar 2024-04-25T20:47:17.102Z

changed the description

3.9.1.421 3715 - Add Requirements Engineering chapter to RTEMS Software Engineering Handbook

Id	3715
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-03-04T11:03:16.000Z
Updated	2024-04-25T20:47:15.864Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3715
Merges	0

Original author: sebastian.huber

The chapter should cover the following topics:

- Overview and introduction
- Evaluation of tools for requirements management
- Selected tool for requirements management
- Evaluation of data models and formats for the requirements
- Definition of data model and format actually used for the project (may overlap with tool)
- Requirements management workflow used in the project
- Requirements on requirements, e.g. derived from standards such as ECSS-E-ST-10-06C
- Requirement identifiers used to ensure traceability

Author: Trac Migrate 2019-03-04T13:10:43.000Z

Original author: sebastian.huber

- **Status** changed from *assigned* to *accepted*
- **Summary** changed from *Add Requirements Engineering chaper to RTEMS Software Engineering Handbook* to *Add Requirements Engineering chapter to RTEMS Software Engineering Handbook*

Author: Chris Johns 2019-03-04T23:02:03.000Z

Original author: sebastian.huber

How does the quality of RTEMS and it's requirements depend on the evaluation and selection of the tools for requirement management? I can understand the quality of the requirements effecting the quality of RTEMS but not the tools used to capture them? Why have the process, ie a sort of log book, in the engineering handbook? I

would have expected this document to contain the out come of the discovery process and not the process itself.

I am concerned adding these things just creates a liability for the project. Can an email archive can perform this task?

Author: Joel Sherrill 2019-03-04T23:06:15.000Z

Original author: sebastian.huber

I agree with Chris. A trade study of requirements tools shouldn't end up in the handbook. Perhaps our requirements for a tool.

- open source
- supports format XXX for interchange
- supports links for requirement derivation
- ...

Author: Trac Migrate 2019-03-07T07:34:38.000Z

Original author: sebastian.huber

Yes, maybe this is not the best place for the tool overview. I though it would be helpful in case someone asks in two years, why did you use this, have you considered that, etc.? Should I add a ticket for the tool selection instead?

Author: Chris Johns 2019-03-07T21:00:27.000Z

Original author: sebastian.huber

Replying to Sebastian Huber:

> Yes, maybe this is not the best place for the tool overview. I though it would be helpful in case someone asks in two years, why did you use this, have you considered that, etc.?
>
> A brief rational can be helpful, but the details can be distracting. I feel the simpler and more direct this document is the more effective it will be.
>
> > Should I add a ticket for the tool selection instead?
> >
> > Yes, it can links to mailing lists discussions and attachments and it is easy to link too.

Author: Trac Migrate 2020-01-07T09:14:04.000Z

Original author: sebastian.huber

In [changeset:"d412c5bf2a35bd6d24ef388d68a718390cfee41e/rtems-docs" d412c5b/rtems-docs]:

```
eng: Add Software Requirements Engineering chapter

Update #3715.
```

Author: Trac Migrate 2020-04-02T07:47:16.000Z

Original author: sebastian.huber

In [changeset:"6f0bc56893aa73de85c4dbd483dc7d6a6fe4a2a2/rtems-docs" 6f0bc56/rtems-docs]:

```
eng: Add glossary terms

Define the following terms:

* assembler language
* C language
* ELF
* interrupt service
* software component
* software unit

Clarify:

* task

Update #3715.
```

Author: Trac Migrate 2020-05-05T05:37:31.000Z

Original author: sebastian.huber

In [changeset:"d4ba908e426f260cbd24c72a0875857cb557b4de/rtems-docs" d4ba908/rtems-docs]:

```
eng: Update requirements engineering chapter

Update requirements engineering chapter due to the removal of Doorstop
as the requirements management tool.

Update the application configuration related specification items.

Update #3715.
```

Author: Trac Migrate 2020-06-01T11:02:31.000Z

Original author: sebastian.huber

In [changeset:"59312aa9653a9d4133209e25e21ff9724ecd476f/rtems-docs" 59312aa/rtems-docs]:

```
eng: Split up requirements engineering chapter

This allows to more easily generate the specification item section with
a script using specification items.

Update #3715.
```

Author: Trac Migrate 2020-06-01T11:02:33.000Z

Original author: sebastian.huber

In [changeset:"23ab40d3e6899c5956c26770f07f3a5eb910be8b/rtems-docs" 23ab40d/rtems-docs]:

```
eng: Add generated documentation of spec items

The documentation of the specification items is generated by an RTEMS
qualification tool from a specification of specification items.

Move non-generated content to "req-for-req.rst".

Update #3715.
```

Author: Trac Migrate 2020-06-01T11:02:35.000Z

Original author: sebastian.huber

In [changeset:"459326c2b9a829852782170deed0e5876c1258f5/rtems-docs" 459326c/rtems-docs]:

```
eng: Update requirements tooling section

Update #3715.
```

Author: Trac Migrate 2020-06-01T11:02:37.000Z

Original author: sebastian.huber

In [changeset:"9b269adc6c1ab6847c40dd533ca2e0151151c3f7/rtems-docs" 9b269ad/rtems-docs]:

```
eng: Add interface specification how-to

Update #3715.
```

Author: Trac Migrate 2020-06-08T07:05:29.000Z

Original author: sebastian.huber

In [changeset:"f54798854ff8e96b201777613ca83eb04f2d3deb/rtems-docs" f547988/rtems-docs]:

```
eng: Simplify wording for specification items

Update #3715.
```

Author: Trac Migrate 2020-06-08T07:05:31.000Z

Original author: sebastian.huber

In [changeset:"0c43c520c84474c181fd32ede5f2aab65aee7072/rtems-docs" 0c43c52/rtems-docs]:

```
eng: Add generic attribute key types

Update #3715.
```

Author: Trac Migrate 2020-06-08T07:05:33.000Z

Original author: sebastian.huber

In [changeset:"0213e8efab9dcc1f0feac1a16d48f9ee2b6e43da/rtems-docs" 0213e8e/rtems-docs]:

```
eng: Add a specification type for actions

Add support to specify functional requirements for actions (functions or
macros) via a transition map of pre-conditions to post-conditions.  This
will be the work horse for functional requirements.  Generation of
corresponding validation tests is supported.

Update #3715.
```

Author: Trac Migrate 2020-06-08T07:05:35.000Z

Original author: sebastian.huber

In [changeset:"ca2f5e638459459868bebd270bda0f82433cf36d/rtems-docs" ca2f5e6/rtems-docs]:

```
eng: Update specification how-to section

Update #3715.
```

Author: Trac Migrate 2020-06-10T08:12:37.000Z

Original author: sebastian.huber

In [changeset:"db3892b5b8eaed97705bf552ed010bc7f8e80149/rtems-docs" db3892b/rtems-docs]:

```
eng: Update action requirement specification

Update #3715.
```

Author: Trac Migrate 2020-06-17T07:11:35.000Z

Original author: sebastian.huber

In [changeset:"87a9478da6764e36dd91a1d2d1d20c92548b9cf3/rtems-docs" 87a9478/rtems-docs]:

```
eng: Clarify action requirement specification

Update #3715.
```

Author: Trac Migrate 2020-07-03T08:34:03.000Z

Original author: sebastian.huber

In [changeset:"1bd14cda6098d73b605aa7077a2878eadd2e09de/rtems-docs" 1bd14cd/rtems-docs]:

```
eng: Reformat to maximize the text width

Remove extra "X" character in some labels.

Update #3715.
```

Author: Trac Migrate 2020-07-03T08:34:05.000Z

Original author: sebastian.huber

In [changeset:"0c13e946d0a2724880ab8f7276491a8a1fd5331f/rtems-docs" 0c13e94/rtems-docs]:

```
eng: Fix typo

Update #3715.
```

Author: Trac Migrate 2020-07-28T05:33:52.000Z

Original author: sebastian.huber

In [changeset:"fd2fc509a3cadb484cb9ef91ed2de2d94f2a1dc9/rtems-docs" fd2fc50/rtems-docs]:

```
eng: Add requirement text to interface groups

This allows to state the requirement for an interface group directly in
the item.

Update #3715.
```

Author: Trac Migrate 2020-07-28T05:33:54.000Z

Original author: sebastian.huber

In [changeset:"f12cae140e78e426f8b6f93e225eb7ca2dfd1a36/rtems-docs" f12cae1/rtems-docs]:

```
eng: Add brief description to header file items

Update #3715.
```

Author: Trac Migrate 2020-07-28T05:33:56.000Z

Original author: sebastian.huber

In [changeset:"c2595631da2782fbc3b59f4b65aa5703d460f903/rtems-docs" c259563/rtems-docs]:

```
eng: Support N/A in the action transitions

Sometimes the pre-conditions in an action requirement are not
independent and it is necessary to mark pre-conditions as not applicable
in a particular transition.

Update #3715.
```

Author: Trac Migrate 2020-07-28T05:33:58.000Z

Original author: sebastian.huber

In [changeset:"3f9fa47dc018c5eb35dbe1818c73f446ac85a0e0/rtems-docs" 3f9fa47/rtems-docs]:

```
eng: Add ability to skip action transitions

Sometimes the pre-conditions in an action requirement are not
independent and it is necessary skip a certain set of pre-condition
states.  This should be used with care since no test code is run in
these cases.  There shall be a reason given why skipping a transition is
justified.

Update #3715.
```

Author: Trac Migrate 2020-07-28T05:34:01.000Z

Original author: sebastian.huber

In [changeset:"1bb694719fc9921ccb52fb42c2e666f76a545d3c/rtems-docs" 1bb6947/rtems-docs]:

```
eng: Fix format of regular expressions

Update #3715.
```

Author: Trac Migrate 2020-08-06T07:12:00.000Z

Original author: sebastian.huber

In [changeset:"bac4398afc6fdc808f1fe91db60ea8b4ad1819e9/rtems-docs" bac4398/rtems-docs]:

```
eng: Fix typo

Update #3715.
```

Author: Trac Migrate 2020-08-06T07:18:47.000Z

Original author: sebastian.huber

In [changeset:"e1e04083e392711e50ff70c0b9cc583e90764a0e/rtems-docs" e1e0408/rtems-docs]:

```
eng: Partially revert previous commit

The previous commit contained more than just a typo fix.  Remove this
part.

Update #3715.
```

Author: Trac Migrate 2020-08-07T04:44:14.000Z

Original author: sebastian.huber

In [changeset:"83e13b70e2a332099f3c849b0eaecd3b9aeed6ff/rtems-docs" 83e13b7/rtems-docs]:

```
eng: Add application config options how-to

Update #3715.
```

Author: Trac Migrate 2020-08-07T05:15:28.000Z

Original author: sebastian.huber

In [changeset:"3e8e301b068bb6d3f3689f460be337423c4edbce/rtems-docs" 3e8e301/rtems-docs]:

```
eng: Add more variants of unspecified interfaces

Update #3715.
```

Author: Trac Migrate 2020-08-07T05:15:31.000Z

Original author: sebastian.huber

In [changeset:"5cb493eeb169dfd6ed3debc0e5180aa2735cabb8/rtems-docs" 5cb493e/rtems-docs]:

```
eng: Add reference to unspecified interfaces

Update #3715.
```

Author: Trac Migrate 2020-08-20T07:01:23.000Z

Original author: sebastian.huber

In [changeset:"9633e98d5df0bfa19989fea5c5753cb6f8d84fa8/rtems-docs" 9633e98/rtems-docs]:

```
eng: Add test case attributes

Update #3715.
```

Author: Trac Migrate 2020-08-20T07:01:25.000Z

Original author: sebastian.huber

In [changeset:"1a4865512e70e51a7f70f3922d0fa55eadf65102/rtems-docs" 1a48655/rtems-docs]:

```
eng: Remove test name attribute

Derive the test name from the item UID.

Update #3715.
```

Author: Trac Migrate 2020-08-20T07:01:27.000Z

Original author: sebastian.huber

In [changeset:"83a3522df1743cfdbef1cb0052d317ce5d60f03c/rtems-docs" 83a3522/rtems-docs]:

```
eng: Add test header to test case

Update #3715.
```

Author: Trac Migrate 2020-08-20T07:01:29.000Z

Original author: sebastian.huber

In [changeset:"93938c707b9f4278e9efea9d6ff5dbc0c1f4fbbc/rtems-docs" 93938c7/rtems-docs]:

```
eng: Unify test attribute keys

Update #3715.
```

Author: Trac Migrate 2020-08-20T07:01:32.000Z

Original author: sebastian.huber

In [changeset:"57fb30d1664170546479f53ab424acda99ee4e26/rtems-docs" 57fb30d/rtems-docs]:

```
eng: Add automatically generated warning

Update #3715.
```

Author: Trac Migrate 2020-10-11T13:20:43.000Z

Original author: sebastian.huber

In [changeset:"c18215c8e81fd07e644f4107f9edebd7bc6fbe3c/rtems-docs" c18215c/rtems-docs]:

```
eng: Move index-entries to all interfaces

Update #3715.
```

Author: Trac Migrate 2020-10-11T13:20:45.000Z

Original author: sebastian.huber

In [changeset:"bcf4a95ae3cc6ccfddc7d37be18df03918b00200/rtems-docs" bcf4a95/rtems-docs]:

```
eng: Add placement link role

Update #3715.
```

Author: Trac Migrate 2020-10-24T10:15:38.000Z

Original author: sebastian.huber

In [changeset:"abc9c4498df24d521991ee1eb1d8c1356b235dde/rtems-docs" abc9c44/rtems-docs]:

```
eng: Replace spec2doc.py with spec2modules.py

Update #3715.
```

Author: Trac Migrate 2020-11-09T14:05:33.000Z

Original author: sebastian.huber

In [changeset:"f6102914ebcfffd41eea32c214c61d32f1cd9fb3/rtems-docs" f610291/rtems-docs]:

```
eng: Add function attributes

Update #3715.
```

Author: Trac Migrate 2020-11-19T10:24:36.000Z

Original author: sebastian.huber

In [changeset:"bbd8d4a56f00069dee06947e4d33447f80442eec/rtems-docs" bbd8d4a/rtems-docs]:

```
eng: Fix typo

Update #3715.
```

Author: Trac Migrate 2020-11-27T08:17:00.000Z

Original author: sebastian.huber

In [changeset:"4b03ff7fb56e41ada325c5a3d3ea21bebcc6ae5f/rtems-docs" 4b03ff7/rtems-docs]:

```
eng: Add performance specification items

Add items to specify runtime performance requirements.

Update #3715.
```

Author: Trac Migrate 2021-01-15T05:40:59.000Z

Original author: sebastian.huber

In [changeset:"a08e672abffa1f243c8093a03fdc1db4b58bb14c/rtems-docs" a08e672/rtems-docs]:

```
eng: Add design group requirement item type

Update #3715.
```

Author: Trac Migrate 2021-02-08T14:02:53.000Z

Original author: sebastian.huber

In [changeset:"174444f655cd46162ba2c51e511fbd8e67a102dc/rtems-docs" 174444f/rtems-docs]:

```
eng: Update test case item

Update #3715.
```

Author: Trac Migrate 2021-03-02T07:29:25.000Z

Original author: sebastian.huber

In [changeset:"fcac22e5b72b1e478b27fc0994ee6ec0845d7c0a/rtems-docs" fcac22e/rtems-docs]:

```
eng: Fix typo

Update #3715.
```

Author: Trac Migrate 2021-03-08T07:29:24.000Z

Original author: sebastian.huber

In [changeset:"a4b3019d99956226fcc28cf56880264b8cc84017/rtems-docs" a4b3019/rtems-docs]:

```
eng: Add how-to for action requirements

Update #3715.
```

Author: Trac Migrate 2021-03-08T09:19:49.000Z

Original author: sebastian.huber

In [changeset:"e05df2864380b917b3800ac55bec026870b4a27d/rtems-docs" e05df28/rtems-docs]:

```
eng: Clarify how-to for action requirements

Update #3715.
```

Author: Trac Migrate 2021-03-11T05:57:22.000Z

Original author: sebastian.huber

In [changeset:"0518d94f302632497332493586d45286be3ba53c/rtems-docs" 0518d94/rtems-docs]:

```
eng: Clarify how-to for action requirements

Update #3715.
```

Author: Trac Migrate 2021-03-11T06:54:01.000Z

Original author: sebastian.huber

In [changeset:"bc0a85723c7b8f4cf5af2735173b5334623bb259/rtems-docs" bc0a857/rtems-docs]:

```
eng: Clarify how-to for action requirements

Bring how-to in line with current action requirements.

Update #3715.
```

Author: Trac Migrate 2021-03-19T07:20:33.000Z

Original author: sebastian.huber

In [changeset:"239644be82bf36a1263741d6c6bfee6b81adbea3/rtems-docs" 239644b/rtems-docs]:

```
eng: Update EARS syntax

The document used the EARS syntax from 2009 which slightly changed in
2016, see "Listens Learned (8 Lessons Learned Applying EARS)".  The
optional pre-conditions moved to the state-driven pattern.  This refined
syntax fits better to the action requirements.

Update #3715.
```

Author: Trac Migrate 2021-03-19T07:20:35.000Z

Original author: sebastian.huber

In [changeset:"b580a6da148eaa1b94a70db62f002b1a8009a09c/rtems-docs" b580a6d/rtems-docs]:

```
eng: Add build/appl config clauses to how-to

Update #3715.
```

Author: Trac Migrate 2021-03-19T07:20:37.000Z

Original author: sebastian.huber

In [changeset:"b40e043190676752b8c8b40f5eed05c528fe2371/rtems-docs" b40e043/rtems-docs]:

```
eng: Document expressions in action requirements

Update #3715.
```

Author: Trac Migrate 2021-03-19T07:20:40.000Z

Original author: sebastian.huber

In [changeset:"4476290486ae0258589adbe812de69a024403cbf/rtems-docs" 4476290/rtems-docs]:

```
eng: Add example to action requirements how-to

Update #3715.
```

Author: Trac Migrate 2021-04-27T07:46:36.000Z

Original author: sebastian.huber

In [changeset:"3fa9ed4323fd69b01d7ea760190f065cc159b7ec/rtems-docs" 3fa9ed4/rtems-docs]:

```
eng: Allow multiple interface references

Update #3715.
```

Author: Trac Migrate 2021-04-29T05:31:36.000Z

Original author: sebastian.huber

In [changeset:"889a5ffcc7548468ed48dd188b887da8f593bce3/rtems-docs" 889a5ff/rtems-docs]:

```
eng: Remove embedded constraints

Update #3715.
```

Author: Trac Migrate 2021-04-29T05:31:39.000Z

Original author: sebastian.huber

In [changeset:"e263e84a98298d5773a20b72c3b1c2064eaa747c/rtems-docs" e263e84/rtems-docs]:

```
eng: Add unit test link role

Update #3715.
```

Author: Trac Migrate 2021-04-29T09:05:21.000Z

Original author: sebastian.huber

In [changeset:"b6cb05736717f695f1645c438ae4245994605556/rtems-docs" b6cb057/rtems-docs]:

```
eng: Remove scope from constraints

Use links instead of this special purpose attributes.

Update #3715.
```

Author: Trac Migrate 2021-04-29T09:05:24.000Z

Original author: sebastian.huber

In [changeset:"a95c9688acf769fbce4f8860833643f36e0c89cd/rtems-docs" a95c968/rtems-docs]:

```
eng: Add test suite name

Update #3715.
```

Author: Trac Migrate 2021-04-30T05:06:27.000Z

Original author: sebastian.huber

In [changeset:"aa0c495b1eb1bb13bd057b608bf6769b70989b67/rtems-docs" aa0c495/rtems-docs]:

```
eng: Remove text attribute from acfg options

Update #3715.
```

Author: Trac Migrate 2021-05-08T08:27:49.000Z

Original author: sebastian.huber

In [changeset:"b7970090a82b1a2c03dbb863ae843f9694192d24/rtems-docs" b797009/rtems-docs]:

```
eng: Add unspecified interface groups

Update #3715.
```

Author: Trac Migrate 2021-08-03T08:40:02.000Z

Original author: sebastian.huber

In [changeset:"76b5b8101c14be00bbfe63ca593de6f9183d6cc6/rtems-docs" 76b5b81/rtems-docs]:

```
eng: Add freestanding test cases

Update #3715.
```

Author: Trac Migrate 2021-09-10T14:26:52.000Z

Original author: sebastian.huber

In [changeset:"7b2b1b4827beca660d11d5fb7f1930e1f6372a53/rtems-docs" 7b2b1b4/rtems-docs]:

```
eng: Simplify interface return specification

Update #3715.
```

Author: Trac Migrate 2021-09-10T14:26:54.000Z

Original author: sebastian.huber

In [changeset:"9dd61353f651a215a62714e15dc9fef1f70869ad/rtems-docs" 9dd6135/rtems-docs]:

```
eng: Add interface params/return to typedefs

Update #3715.
```

Author: Trac Migrate 2021-09-10T14:26:57.000Z

Original author: sebastian.huber

In [changeset:"60e08fd84f5713fbee5f43781b5ece6a4771b7c5/rtems-docs" 60e08fd/rtems-docs]:

```
eng: Make interface definitions optional

Update #3715.
```

Author: Trac Migrate 2021-09-10T14:26:59.000Z

Original author: sebastian.huber

In [changeset:"2df0d6453797266e9376ec91db65dde81fcfc875/rtems-docs" 2df0d64/rtems-docs]:

```
eng: Add hidden interface group membership

Update #3715.
```

Author: Trac Migrate 2022-01-24T14:28:03.000Z

Original author: sebastian.huber

In [changeset:"dd60a4a2477cf1ce1077001f52ab38c7286fb273/rtems-docs" dd60a4a/rtems-docs]:

```
eng: Add script usage to how-to

Update #3715.
```

Author: Trac Migrate 2022-10-04T06:29:00.000Z

Original author: sebastian.huber

In [changeset:"889a498dbbff886b029b8370c7af8b72815ea8d3/rtems-docs" 889a498d/rtems-docs]:

```
eng: Remove interface container item type

Update #3715.
```

Author: Trac Migrate 2022-10-04T06:29:01.000Z

Original author: sebastian.huber

In [changeset:"c812323f0f4212c0ccd85b48f841d94de702de0a/rtems-docs" c812323/rtems-docs]:

```
eng: Unify interface function and macro

This allows the documentation of parameter and return types for macros.

Update #3715.
```

Author: Trac Migrate 2022-10-04T06:29:02.000Z

Original author: sebastian.huber

In [changeset:"1d9f9afbb8681b98f2c57f6175fb7468d475ced0/rtems-docs" 1d9f9af/rtems-docs]:

```
eng: Add function implementation link role

Update #3715.
```

Author: Trac Migrate 2022-10-04T06:29:03.000Z

Original author: sebastian.huber

In [changeset:"c909228c7d65a7ad21bffdc5bcdec8612d422ce7/rtems-docs" c909228/rtems-docs]:

```
eng: Refine unspecified interfaces

Update #3715.
```

Author: Trac Migrate 2022-10-04T06:29:05.000Z

Original author: sebastian.huber

In [changeset:"4966ed06115ba60cff444587c48358175d5ac55e/rtems-docs" 4966ed0/rtems-docs]:

```
eng: Remove appl config group member link role

Update #3715.
```

Author: Trac Migrate 2022-10-04T06:29:06.000Z

Original author: sebastian.huber

In [changeset:"b55c8bf2956ebb1689e9053b22ea58106f9861cd/rtems-docs" b55c8bf/rtems-docs]:

```
eng: Use type refinement for validation method

Update #3715.
```

Author: Trac Migrate 2022-10-04T06:29:07.000Z

Original author: sebastian.huber

In [changeset:"4fddb23a8f5896f070e8bfde46c1e426924ab18d/rtems-docs" 4fddb23/rtems-docs]:

```
eng: Add memory benachmark type refinement

Update #3715.
```

Author: Trac Migrate 2022-11-30T08:52:47.000Z

Original author: sebastian.huber

- **Milestone** changed from %"6.1" to %"7.1"

Author: Trac Migrate 2023-01-23T06:38:37.000Z

Original author: sebastian.huber

In [changeset:"0b0dd797faada226993781320646c4acc7e542a9/rtems-docs" 0b0dd79/rtems-docs]:

```
eng: Use a recommendation for requirement texts

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:21:00.000Z

Original author: sebastian.huber

- **Milestone** changed from %"7.1" to %"6.1"

Author: Trac Migrate 2023-05-19T05:21:26.000Z

Original author: sebastian.huber

In [changeset:"6dc190beeaad686cf926c3f047ac38c8419fa6fa/rtems-docs" 6dc190b/rtems-docs]:

```
eng: Rework performance meansurement items

Use links to specify runtime performance limits in target-specific
items.  Clarify wording.

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:21:27.000Z

Original author: sebastian.huber

In [changeset:"5928d04c84f0b88eaeae2a686dc207885b7c6d09/rtems-docs" 5928d04/rtems-docs]:

```
eng: Generalize external references

Use a common subtype for external references of interfaces and
requirements.  Add specializations for document and file references.

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:21:29.000Z

Original author: sebastian.huber

In [changeset:"c81a24418a18041ba3a2d1bd50a5aeab6a87dade/rtems-docs" c81a244/rtems-docs]:

```
eng: Add conditional build dependencies

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:21:30.000Z

Original author: sebastian.huber

In [changeset:"98172bc9a40d1715ff2d03be3d9b5faba19880f6/rtems-docs" 98172bc/rtems-docs]:

```
eng: Use type refinement for validation method

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:21:31.000Z

Original author: sebastian.huber

In [changeset:"77e8b566b73f54070f6b5aef32c012d2bd6a0ff7/rtems-docs" 77e8b56/rtems-docs]:

```
eng: Add optional floating-point number type

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:21:32.000Z

Original author: sebastian.huber

In [changeset:"7158449cc58eef5f85e5749336fc58a734ed9dba/rtems-docs" 7158449/rtems-docs]:

```
eng: Update application configuration how-to

Change paths to be in line with the actual specification.  Fix group
membership link role.

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:21:34.000Z

Original author: sebastian.huber

In [changeset:"c69046ef485f3fade9fe6638ed791a937bf90ad2/rtems-docs" c69046e/rtems-docs]:

```
eng: Remove obsolete type listing

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:21:35.000Z

Original author: sebastian.huber

In [changeset:"2a5e59d34f80eb1813c75cbad6238c0ac39a3949/rtems-docs" 2a5e59d/rtems-docs]:

```
eng: Add design target item type

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:21:36.000Z

Original author: sebastian.huber

In [changeset:"8bc24e5f54eac0084e4b02e44ad218d385f4c67f/rtems-docs" 8bc24e5/rtems-docs]:

```
eng: Add proxy item type

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:21:37.000Z

Original author: sebastian.huber

In [changeset:"9a5fb293773963ff9a139a506cae820cdbbb259d/rtems-docs" 9a5fb29/rtems-docs]:

```
eng: Remove ambiguous interface types

Use an item proxy instead.

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:21:39.000Z

Original author: sebastian.huber

In [changeset:"63286a5f85fecca514cb7f2f3d13661b92d42f72/rtems-docs" 63286a5/rtems-docs]:

```
eng: Add an item type for not defined defines

This helps to deduce that a missing define in the software design is
intended.

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:21:40.000Z

Original author: sebastian.huber

In [changeset:"2fecb7a0251541cbc8fd1871e114c6a9eca4dfd0/rtems-docs" 2fecb7a/rtems-docs]:

```
eng: Make design group identifiers optional

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:21:41.000Z

Original author: sebastian.huber

In [changeset:"9c2498a728370d395ce7fc22ce58a79008297b3e/rtems-docs" 9c2498a/rtems-docs]:

```
eng: Add unspecified header file item type

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:21:43.000Z

Original author: sebastian.huber

In [changeset:"2e939ff735c99d99a336e8394aba0e21ad893e7a/rtems-docs" 2e939ff/rtems-docs]:

```
eng: Add register block specification types

A register block may be used to specify the interface of devices which
contain registers associated with an integer address.  Register blocks
consist of register block members specified by the ``definition``
attribute.  Register block members are either instances of registers
specified by the ``registers`` attribute or instances of other register
blocks specified by links with the "register-block-include" link role.
Registers consists of bit fields.  The register block members are placed
into the address space of the device relative to the base address of the
register block.  Register member offests and the register block size are
specified in units of the address space granule.

Update #3715.
```

Author: Trac Migrate 2023-05-19T05:25:41.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

The initial work for this chapter is now done. The specification of the specification items in rtems-central is in line with the rtems-docs repository. Further work in this area should be done under a new ticket.

Author: Amar Takhar 2024-04-25T20:47:07.865Z

mentioned in issue #3701

Author: Amar Takhar 2024-04-25T20:47:15.912Z

changed the description

Author: Amar Takhar 2024-04-25T20:47:18.564Z

mentioned in issue #3726

3.9.1.422 3706 - Create a hierarchy of RTEMS software components using Doxygen groups

Id	3706
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-02-26T13:23:37.000Z
Updated	2024-04-25T20:47:10.523Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3706
Merges	0

Original author: sebastian.huber

Create a hierarchy of RTEMS software components using Doxygen groups. Review the existing Doxygen groups (software components) first.

https://docs.rtems.org/doxygen/branches/master/modules.html

Grouping should be done by at BSP level architecture and then by BSP.

There should be a device driver group with subgroups for each device class and specific device drivers, e.g. a BSP-specific device driver belongs to a device class and BSP.

There should be groups for APIs, file systems, support libraries, super core, etc.

- Board Support Packages
- Device Drivers
- Block Devices
- Block Device Buffer Management
- Block Device Disk Management
- Block Device Management
- XYZ Block Device
- Block Device Partition Management
- Cache
- XYZ Cache Support
- Console
- Termios
- XYZ Driver
- Framebuffer
- XYZ Driver

- I2C
- Bus Driver
- XYZ Driver
- Device Driver
- XYZ Driver
- Legacy I2C
- Legacy Network
- RTC
- XYZ Driver
- Serial Mouse
- XYZ Driver
- SPI
- Bus Driver
- XYZ Driver
- Device Driver
- XYZ Driver
- API
- Classic
- Tasks
- Dynamic Loading
- File Systems
- Memory Management
- Shell
- Tracing
- Event Recording
- Capture Engine
- Internal
- C Library Support
- POSIX
- Shell
- Super Core
- Thread Handler
- CPU
- ARM

Author: Trac Migrate 2019-02-26T13:30:45.000Z

Original author: sebastian.huber

- **Status** changed from *assigned* to *accepted*

Author: Trac Migrate 2019-03-04T06:54:58.000Z

Original author: sebastian.huber

In [changeset:"212663bede5c183df679560f90f0ad92f995de9b/rtems" 212663be/rtems]:

```
bsps: Adjust architecture Doxygen groups

- Use CamelCase as it is not used in our C code.  Enables simple search␣
↪and
replace.

- Prefix with "RTEMS" to aid deployment and integration.  It aids
searching and sorting.

Update #3706.
```

Author: Trac Migrate 2019-03-04T06:55:01.000Z

Original author: sebastian.huber

In [changeset:"631ccd7caba4d8de45cf311ba6e597de421f97f7/rtems" 631ccd7/rtems]:

```
bsp/altera-cyclone-v: Adjust Doxygen groups

Update #3706
```

Author: Trac Migrate 2019-03-08T07:02:01.000Z

Original author: sebastian.huber

In [changeset:"c991eeeccc21901011ddd9ecc626c4d164fe2041/rtems" c991eeec/rtems]:

```
bsps: Adjust bsp.h Doxygen groups

Update #3706.
```

Author: Trac Migrate 2019-03-08T07:02:05.000Z

Original author: sebastian.huber

In [changeset:"828276b0814e519961b30506cad83ebc0065bcbb/rtems" 828276b/rtems]:

```
bsps: Adjust shared Doxygen groups

Update #3706.
```

Author: Trac Migrate 2019-03-08T07:02:08.000Z

Original author: sebastian.huber

In [changeset:"15359bb6cb785c01ccbbb3249eaa78164140560b/rtems" 15359bb/rtems]:

```
bsps/arm: Adjust CMSIS Doxygen groups

Update #3706.
```

Author: Trac Migrate 2019-03-08T07:02:11.000Z

Original author: sebastian.huber

In [changeset:"f3db383528b99e5ad271aec65bc1d54d229f9af4/rtems" f3db3835/rtems]:

```
bsp/altera-cyclone-v: Add Doxygen groups

Add Doxygen groups for contributed code which would otherwise end up at
the top level.

Update #3706.
```

Author: Trac Migrate 2019-03-08T07:02:14.000Z

Original author: sebastian.huber

In [changeset:"cbf773d3100f3cf4ff54a2da215011a21e3808fa/rtems" cbf773d3/rtems]:

```
bsp/atsam: Add Doxygen groups

Add Doxygen groups for contributed code which would otherwise end up at
the top level (about 178 groups).

Update #3706.
```

Author: Trac Migrate 2019-03-08T07:02:17.000Z

Original author: sebastian.huber

In [changeset:"529b58687f58d5af32b2cfb871f1fbda1e047468/rtems" 529b5868/rtems]:

```
bsps: Adjust umon Doxygen groups

Update #3706.
```

Author: Trac Migrate 2019-03-13T09:15:25.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
Create a hierarchy of RTEMS software components using Doxygen groups. Review the existing Doxygen groups (software components) first.

https://docs.rtems.org/doxygen/branches/master/modules.html

Grouping should be done by at BSP level architecture and then by BSP.

There should be a device driver group with subgroups for each device class and specific device drivers, e.g. a BSP-specific device driver belongs to a device class and BSP.

There should be groups for APIs, file systems, support libraries, super core, etc.
+
+ * Board Support Packages
+ * Device Drivers
+   * Block Devices
+     * Block Device Buffer Management
+     * Block Device Disk Management
+     * Block Device Management
+       * XYZ Block Device
+     * Block Device Partition Management
+   * Cache
+     * XYZ Cache Support
+   * Console
+     * Termios
+       * XYZ Driver
+   * Framebuffer
+     * XYZ Driver
+   * I2C
+     * Bus Driver
+       * XYZ Driver
+     * Device Driver
+       * XYZ Driver
```

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```
+   * Legacy I2C
+   * Legacy Network
+   * RTC
+       * XYZ Driver
+   * Serial Mouse
+       * XYZ Driver
+   * SPI
+     * Bus Driver
+       * XYZ Driver
+     * Device Driver
+       * XYZ Driver
+ * API
+   * Classic
+     * Tasks
+   * Dynamic Loading
+   * File Systems
+   * Memory Management
+   * Shell
+   * Tracing
+     * Event Recording
+     * Capture Engine
+ * Internal
+   * C Library Support
+   * POSIX
+   * Shell
+   * Super Core
+     * Thread Handler
+     * CPU
+       * ARM
```

Author: Trac Migrate 2019-03-26T10:28:40.000Z

Original author: sebastian.huber

In [changeset:"40d15f5f2ab6a55b6c9950aa5feda21a3a65e390/rtems" 40d15f5/rtems]:

```
score: Add implementation top-level group

Update #3706.
```

Author: Trac Migrate 2019-03-26T10:28:44.000Z

Original author: sebastian.huber

In [changeset:"5526527e5111c0fc5b6daaee63edc21f658410a6/rtems" 5526527e/rtems]:

```
score: Rename ScoreCPU Doxygen group

Update #3706.
```

Author: Trac Migrate 2019-03-26T10:28:48.000Z

Original author: sebastian.huber

In [changeset:"5a19915bf1633ddc752567553bd12e208bb82af4/rtems" 5a19915/rtems]:

```
score: Add example CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-03-26T10:28:51.000Z

Original author: sebastian.huber

In [changeset:"abec398940e4117b30e51751752654ca3f8b90d0/rtems" abec398/rtems]:

```
score: Add ARM CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:31:55.000Z

Original author: sebastian.huber

In [changeset:"eca13a8f926a6ec915e093010e16b395e770f1b0/rtems" eca13a8f/rtems]:

```
doxygen: score: Add Blackfin CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:31:58.000Z

Original author: sebastian.huber

In [changeset:"40b90a080ef85252d5f57d985d406bc6a8325b9f/rtems" 40b90a08/rtems]:

```
doxygen: score: Add Epiphany CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:03.000Z

Original author: sebastian.huber

In [changeset:"d670ef99c06c0806d4659a06818287ba0abd7aab/rtems" d670ef9/rtems]:

```
doxygen: score: Add i386 CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:07.000Z

Original author: sebastian.huber

In [changeset:"9fa3561b2d7fadd104e16196221537c854b2ed11/rtems" 9fa3561b/rtems]:

```
doxygen: score: Add lm32 CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:11.000Z

Original author: sebastian.huber

In [changeset:"ee38c54685dc5df75a18c1aeaadfa5b6014352fa/rtems" ee38c54/rtems]:

```
doxygen: score: Change no_cpu architecture group

Groups CPUContext and CPUInterrupt are now defined with a unique name
for this architecture group.
Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:15.000Z

Original author: sebastian.huber

In [changeset:"0be1e54a26807b33952c8ca72f123fa583b2f420/rtems" 0be1e54/rtems]:

```
doxygen: score: Add m68k CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:19.000Z

Original author: sebastian.huber

In [changeset:"f2e282dd4b5884f25bdff2db92e58b302d78245b/rtems" f2e282d/rtems]:

```
doxygen: score: Add Moxie CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:22.000Z

Original author: sebastian.huber

In [changeset:"92c2db645ef91c40f4af4a6cd5b0f1add57cfd57/rtems" 92c2db64/rtems]:

```
doxygen: score: Add nios2 CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:26.000Z

Original author: sebastian.huber

In [changeset:"39594416c42c38f757f4195fca61986dc83bb583/rtems" 39594416/rtems]:

```
doxygen: score: Add or1k CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:29.000Z

Original author: sebastian.huber

In [changeset:"6ddbcbcd51a3de512a2ef9af010d3a0f331c4af1/rtems" 6ddbcbc/rtems]:

```
doxygen: score: Add powerpc CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:32.000Z

Original author: sebastian.huber

In [changeset:"71f90982dc217815ab873698b1852640b9d66534/rtems" 71f9098/rtems]:

```
doxygen: score: Add RISC-V CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:35.000Z

Original author: sebastian.huber

In [changeset:"2b37eca5dd136cf6e01a1a3b4f8597b50782738f/rtems" 2b37eca5/rtems]:

```
doxygen: score: Add SuperH CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:38.000Z

Original author: sebastian.huber

In [changeset:"25afa79a77757752ebee372079103a1025345d18/rtems" 25afa79/rtems]:

```
doxygen: score: Add SPARC CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:42.000Z

Original author: sebastian.huber

In [changeset:"2a50f875cacefe45ed28c6e44accec61b3c62429/rtems" 2a50f87/rtems]:

```
doxygen: score: Add SPARC64 CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:45.000Z

Original author: sebastian.huber

In [changeset:"9f8af67ff180ff9c2833989640f0f7f372bbcf0f/rtems" 9f8af67/rtems]:

```
doxygen: score: Add V850 CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:48.000Z

Original author: sebastian.huber

In [changeset:"95c760301d125e8e134f998e53d79c0b58c624fc/rtems" 95c7603/rtems]:

```
doxygen: score: Add x86-64 CPU architecture group

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:52.000Z

Original author: sebastian.huber

In [changeset:"69d6671f647ad24c06d89b5215f8ef1ea0f78468/rtems" 69d6671f/rtems]:

```
doxygen: Reviewed cpukit/include/rtems/score

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:55.000Z

Original author: sebastian.huber

In [changeset:"7a722e75a7013cda2401b409dfdac2553b4902ac/rtems" 7a722e7/rtems]:

```
doxygen: Reviewed cpukit/include/rtems/rtems

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:32:59.000Z

Original author: sebastian.huber

In [changeset:"b86148a624177fd2303be2dd2d03c020fda19567/rtems" b86148a/rtems]:

```
doxygen: Reviewed cpukit/include/rtems/posix

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:33:02.000Z

Original author: sebastian.huber

In [changeset:"b07c721fc46498fd2a98b11f5574d8258b6dd263/rtems" b07c721/rtems]:

```
doxygen: Restructured cpukit/include/rtems/rtems

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:33:05.000Z

Original author: sebastian.huber

In [changeset:"493c1e8a7f600526622fffa4b4aae64121fb30df/rtems" 493c1e8/rtems]:

```
doxygen: score: Put ARM Co-Processor 15 group in ARM

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:33:08.000Z

Original author: sebastian.huber

In [changeset:"534226146902db71f4a4c0bd3663977685f0194d/rtems" 5342261/rtems]:

```
doxygen: Added groups to IO library

Update #3706.
```

Author: Trac Migrate 2019-04-02T05:33:12.000Z

Original author: sebastian.huber

In [changeset:"058f63739414c066fd21b26f4c7e995d0c49e3b5/rtems" 058f637/rtems]:

```
doxygen: score: Added ScoreRWLock to Score group

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:27:42.000Z

Original author: sebastian.huber

In [changeset:"6644867c6b2faaf1a48f5e8162b3c8cf337b9f16/rtems" 6644867/rtems]:

```
doxygen: User Extensions Implementation group now in Internal->Classic

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:27:46.000Z

Original author: sebastian.huber

In [changeset:"ff1f374c95803d15ed197f63212645e22a13dbda/rtems" ff1f374/rtems]:

```
doxygen: Added Mainpage to RTEMSAPIClassic

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:27:49.000Z

Original author: sebastian.huber

In [changeset:"b7927efc5a02275beffb0205fc514637b39391b1/rtems" b7927ef/rtems]:

```
doxygen: Added further groups to RTEMSAPI

Update #3706.

Associativity Routines, BSD Compatibility Support now part of
RTEMSAPI
```

Author: Trac Migrate 2019-04-04T06:27:53.000Z

Original author: sebastian.huber

In [changeset:"0f02e6f639d8615eb3b6e6311b5c83326fb724b8/rtems" 0f02e6f/rtems]:

```
doxygen: Added toplevel group for device drivers

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:27:56.000Z

Original author: sebastian.huber

In [changeset:"529d251bbadf9f45db2b43f1e1a4e4147b418981/rtems" 529d251b/rtems]:

```
doxygen: Added libmisc group and libmisc mouse group

Update #3706.

@ingroup for these groups already existed, but no @defgroup

Further restructuring necessary
```

Author: Trac Migrate 2019-04-04T06:27:59.000Z

Original author: sebastian.huber

In [changeset:"1964b2689ca1165bf4df5afe5c773d8842ad8a4e/rtems" 1964b268/rtems]:

```
doxygen: Added subgroup Generic to BSP->SPARC64

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:28:03.000Z

Original author: sebastian.huber

In [changeset:"b2b7b58e45dabea56930c10ba5213105e555c749/rtems" b2b7b58e/rtems]:

```
doxygen: Added Management to Example CPU Architecture

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:28:07.000Z

Original author: sebastian.huber

In [changeset:"333bead12e6b5f533e0041d1b54733b9b1b6276b/rtems" 333bead/rtems]:

```
doxygen: Removed XXX group

Update #3706.

Content was added to Classic Barrier Implementation
```

Author: Trac Migrate 2019-04-04T06:28:11.000Z

Original author: sebastian.huber

In [changeset:"4b841b30388e74e79118ce4172b5427a051ff408/rtems" 4b841b3/rtems]:

```
doxygen: Added some subgroups to IO Library

Update #3706.

Types and Mount, IO Internal, Kernel Print Support
```

Author: Trac Migrate 2019-04-04T06:28:14.000Z

Original author: sebastian.huber

In [changeset:"6b23763eb7caa5d76286c2d1b4a53dc3a1974737/rtems" 6b23763/rtems]:

```
doxygen: Added Frame Buffer Device Driver Interface to Device Drivers

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:28:18.000Z

Original author: sebastian.huber

In [changeset:"e78e7fe0dea2627b5485a6de9bee748a73da6510/rtems" e78e7fe0/rtems]:

```
doxygen: Added Version to API->Classic

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:28:21.000Z

Original author: sebastian.huber

In [changeset:"7cb1c2b0fd2c59611088a3dc9b18d6c890e4f5ed/rtems" 7cb1c2b0/rtems]:

```
doxygen: Added I2C Driver to Device Drivers

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:28:25.000Z

Original author: sebastian.huber

In [changeset:"b6b00917b26410359297536aa852039f4e1c7f7b/rtems" b6b00917/rtems]:

```
doxygen: Added some subgroups to API and IO

I2C library, Media Manager and Profiling Support

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:28:29.000Z

Original author: sebastian.huber

In [changeset:"f91da319639ab42ff21dfa990d70513e8cd9780b/rtems" f91da319/rtems]:

```
doxygen: Put C Library Support and POSIX in Internal

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:28:32.000Z

Original author: sebastian.huber

In [changeset:"38a3b6160ca86c30c277f9691bccbf356004d5c4/rtems" 38a3b61/rtems]:

```
doxygen: Put SPI Driver into group Device Drivers

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:28:36.000Z

Original author: sebastian.huber

In [changeset:"2a56a1cf5f104ccf2abe2d2c6e0ec3273eab8621/rtems" 2a56a1cf/rtems]:

```
doxygen: Real Time Clock Time of Day API Definition in BSP->Shared

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:28:39.000Z

Original author: sebastian.huber

In [changeset:"885c9a70667299deff12b135fe1e85f073cfe3cc/rtems" 885c9a70/rtems]:

```
doxygen: Put Print Support in IO

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:28:43.000Z

Original author: sebastian.huber

In [changeset:"2bc058dbff2d7c275efe3aa9a9a6b4871e157e5a/rtems" 2bc058d/rtems]:

```
doxygen: Put Real-Timer Clock Driver Interface into group Device Drivers

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:28:47.000Z

Original author: sebastian.huber

In [changeset:"b8cff580fa1396f372820adc2c74e9548a637003/rtems" b8cff58/rtems]:

```
doxygen: Benchmark Timer Driver Interface now in Device Drivers

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:28:50.000Z

Original author: sebastian.huber

In [changeset:"74bfbc1f5fa54fd9b5003603de297970754d58b4/rtems" 74bfbc1f/rtems]:

```
doxygen: Time Test 27 now in Device Drivers

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:28:54.000Z

Original author: sebastian.huber

In [changeset:"bd675f394c5a4d1874ee02c0b8c5eb6353e52256/rtems" bd675f39/rtems]:

```
doxygen: Mouse now in Device Drivers

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:28:58.000Z

Original author: sebastian.huber

In [changeset:"7e5ed6b78934bc9fe102dd37a11cffa73c7b7c0d/rtems" 7e5ed6b/rtems]:

```
doxygen: Print Support now in API->IO

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:29:01.000Z

Original author: sebastian.huber

In [changeset:"7155b5bc294bde4e64f5a152c022db80e4818a2f/rtems" 7155b5bc/rtems]:

```
doxygen: Zero and Null Device Drivers now in Device Drivers

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:29:05.000Z

Original author: sebastian.huber

In [changeset:"57a076cd11ad6d31be59cd0b9d309b80fa85d223/rtems" 57a076cd/rtems]:

```
doxygen: Added subclasses to API

Update #3706.

RTEMS Application Loader, RTEMS Runtime Link Editor, Status Checks
and Test Support
```

Author: Trac Migrate 2019-04-04T06:29:09.000Z

Original author: sebastian.huber

In [changeset:"51f8d73bdb702c71ac5ac1d01caebb350bd2e9dc/rtems" 51f8d73b/rtems]:

```
doxygen: Added inttypes.h to Print Support

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:29:13.000Z

Original author: sebastian.huber

In [changeset:"bbdf93869d9a07fcecc8baa013b6c5dadfc23c9a/rtems" bbdf938/rtems]:

```
doxygen: Added RTEMS Test Framework to API

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:29:16.000Z

Original author: sebastian.huber

In [changeset:"c9bd696eb40da5d9891bc57086323d25f1befdea/rtems" c9bd696/rtems]:

```
doxygen: New API subgroup Tracing

Update #3706.
```

Author: Trac Migrate 2019-04-04T06:29:20.000Z

Original author: sebastian.huber

In [changeset:"7b0903293b56cb9c7fd3630ba9a2bebdc07da2ea/rtems" 7b09032/rtems]:

```
doxygen: Split up "libmisc" subgroups and removed libmisc

Update #3706.
```

Author: Trac Migrate 2019-04-04T07:19:12.000Z

Original author: sebastian.huber

In [changeset:"4c20da4be441c519074df7d488d1e54354dac85b/rtems" 4c20da4/rtems]:

```
doxygen: Rename Score* groups in RTEMSScore*

Update #3706
```

Author: Trac Migrate 2019-05-13T05:52:41.000Z

Original author: sebastian.huber

In [changeset:"93dcd2b605296fed2f5b9ce7e07992053e760293/rtems" 93dcd2b/rtems]:

```
doxygen: score: adjust doc in address.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:52:44.000Z

Original author: sebastian.huber

In [changeset:"76a9857cabf22ec2a93f2dff1d836126fda2e0d4/rtems" 76a9857c/rtems]:

```
doxygen: score: adjust doc in apimutex.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:52:48.000Z

Original author: sebastian.huber

In [changeset:"3b977b86385b3b0bb56b1c738f2b2ab5d9973aee/rtems" 3b977b86/rtems]:

```
doxygen: score: adjust doc in basedefs.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:52:52.000Z

Original author: sebastian.huber

In [changeset:"827e2606300daa53e2dfd2c0e3b6c05526d371cf/rtems" 827e260/rtems]:

```
doxygen: score: adjust doc in chain.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:52:55.000Z

Original author: sebastian.huber

In [changeset:"0153acf254312ce278dfdfbc337eeb61ff7805d9/rtems" 0153acf2/rtems]:

```
doxygen: score: adjust doc in chainimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:52:58.000Z

Original author: sebastian.huber

In [changeset:"59de8ef40b13cf04021868fd5201bb011e6b1300/rtems" 59de8ef/rtems]:

```
doxygen: score: adjust doc in context.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:01.000Z

Original author: sebastian.huber

In [changeset:"4bb0f00d3c70fdc55fcf0b1be1b23713bd4a3f6f/rtems" 4bb0f00/rtems]:

```
doxygen: score: adjust doc in copyrt.h to doxygen guidelines

Also renamed the group SuperCoreCopyright to RTEMSSuperCoreCopyright
Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:04.000Z

Original author: sebastian.huber

In [changeset:"37ab9081f5f1477a92f66a4823f14fdb21285770/rtems" 37ab908/rtems]:

```
doxygen: score: adjust doc in corebarrier.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:08.000Z

Original author: sebastian.huber

In [changeset:"4bd8757626b825baf53ae99388ec1a175fbabffe/rtems" 4bd8757/rtems]:

```
doxygen: score: adjust doc in coremsg.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:11.000Z

Original author: sebastian.huber

In [changeset:"62128be07b813fe6df67a79b52f8ddeca59b92f8/rtems" 62128be0/rtems]:

```
doxygen: score: added dox in assert.h according to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:15.000Z

Original author: sebastian.huber

In [changeset:"accbe670a0be2d5324b982ff4cab2d634c99fc76/rtems" accbe67/rtems]:

```
doxygen: score: adjust doc in corebarrierimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:18.000Z

Original author: sebastian.huber

In [changeset:"0865cd2716777beab1bb7a873de06111b19e1abd/rtems" 0865cd2/rtems]:

```
doxygen: score: adjust doc in coremsgimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:21.000Z

Original author: sebastian.huber

In [changeset:"d369903b0ec6655a17c7fc445718faf84edffc83/rtems" d369903/rtems]:

```
doxygen: score: adjust doc in coremutex.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:25.000Z

Original author: sebastian.huber

In [changeset:"86b05bf6e5aed860455f565483343e66fec1f8b0/rtems" 86b05bf6/rtems]:

```
doxygen: score: adjust doc in coremuteximpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:28.000Z

Original author: sebastian.huber

In [changeset:"d16a90197b58e1ad948608db126df0eb64be11bd/rtems" d16a9019/rtems]:

```
doxygen: score: adjust doc in corerwlockimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:32.000Z

Original author: sebastian.huber

In [changeset:"eab90bff1dde147be688079ae34f5090583c48ba/rtems" eab90bf/rtems]:

```
doxygen: score: adjust doc in coresem.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:35.000Z

Original author: sebastian.huber

In [changeset:"d5b63c2b212907a41dbe450f8176e32e2225a321/rtems" d5b63c2/rtems]:

```
doxygen: score: adjust doc in coresemimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:38.000Z

Original author: sebastian.huber

In [changeset:"54733e66c74e6f26b2b4c80b4f68077ca8248c68/rtems" 54733e6/rtems]:

```
doxygen: score: adjust doc in cpustdatomic.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:41.000Z

Original author: sebastian.huber

In [changeset:"d69b7a50bb94e415f54c3461f6f81c7c1eba89b9/rtems" d69b7a5/rtems]:

```
doxygen: score: adjust doc in freechain.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:45.000Z

Original author: sebastian.huber

In [changeset:"cf6ce4afe7b62e84cf34f9eea3a86b0f337097b4/rtems" cf6ce4a/rtems]:

```
doxygen: score: adjust doc in heap.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:48.000Z

Original author: sebastian.huber

In [changeset:"4c99921a5e1e3b7a3ff6d800990607c5e30a760e/rtems" 4c99921/rtems]:

```
doxygen: score: adjust doc in heapimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:51.000Z

Original author: sebastian.huber

In [changeset:"0cdcb27c42e8b28128da159be951c947d7a09f8d/rtems" 0cdcb27/rtems]:

```
Removed entry from Related Pages

SAM V71 Xplained Ultra - Board explanation now in Modules->BSPs->ARM
Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:54.000Z

Original author: sebastian.huber

In [changeset:"5ad74fd6d2ee08bc0dd578ed1608f5916b9c9d2c/rtems" 5ad74fd6/rtems]:

```
doxygen: score: adjust doc in interr.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:53:58.000Z

Original author: sebastian.huber

In [changeset:"24787d086bf9b7ac143fab3fa990c721dbf5b186/rtems" 24787d08/rtems]:

```
doxygen: score: adjust doc in isr.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:01.000Z

Original author: sebastian.huber

In [changeset:"bb0ccc17f5c79ca8efc636ae906fea237268cc72/rtems" bb0ccc1/rtems]:

```
doxygen: score: adjust doc in isrlevel.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:04.000Z

Original author: sebastian.huber

In [changeset:"318b70be6596ecb87f47b163e6e937cb26da450f/rtems" 318b70b/rtems]:

```
doxygen: score: adjust doc in isrlock.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:08.000Z

Original author: sebastian.huber

In [changeset:"976c0950c0827cef4707af257380f55ce36138a9/rtems" 976c095/rtems]:

```
doxygen: score: adjust doc in mpci.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:11.000Z

Original author: sebastian.huber

In [changeset:"57cd05cf5844a500b1cc79ec0f576d98663d1654/rtems" 57cd05cf/rtems]:

```
doxygen: score: adjust doc in mpciimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:15.000Z

Original author: sebastian.huber

In [changeset:"3da777eab762471b086b0a58a82d3da8e1565fdc/rtems" 3da777e/rtems]:

```
doxygen: score: adjust doc in mppkt.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:18.000Z

Original author: sebastian.huber

In [changeset:"b817de6d475018e532fe43e89312e155a433b384/rtems" b817de6d/rtems]:

```
doxygen: score: adjust doc in mrsp.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:22.000Z

Original author: sebastian.huber

In [changeset:"0b1bfab89f37276ff96c2bd75df04ad17c45994f/rtems" 0b1bfab/rtems]:

```
doxygen: score: adjust doc in mrspimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:25.000Z

Original author: sebastian.huber

In [changeset:"ae8be3f1c2f19030e7e83dcf7d3f3db586fdc128/rtems" ae8be3f/rtems]:

```
doxygen: score: adjust doc in object.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:28.000Z

Original author: sebastian.huber

In [changeset:"c389f5b713f94c52e4aef2ce3b92480b359ae4db/rtems" c389f5b7/rtems]:

```
doxygen: score: adjust doc in objectimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:32.000Z

Original author: sebastian.huber

In [changeset:"316894e624e88ef8c85084a4547c12240b6f93e6/rtems" 316894e6/rtems]:

```
doxygen: score: adjust doc in objectmp.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:35.000Z

Original author: sebastian.huber

In [changeset:"0bef82fbecc72f149dcadaf29a71ed13536e7e54/rtems" 0bef82f/rtems]:

```
doxygen: score: adjust doc in percpudata.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:38.000Z

Original author: sebastian.huber

In [changeset:"96d375109e6ddee1f0c51474765b88cc697569da/rtems" 96d37510/rtems]:

```
doxygen: score: adjust doc in prioritybitmap.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:42.000Z

Original author: sebastian.huber

In [changeset:"536458a41495896bf65eb93f24cd9609e363fdd6/rtems" 536458a/rtems]:

```
doxygen: score: adjust doc in prioritybitmapimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:45.000Z

Original author: sebastian.huber

In [changeset:"1d6e6b1feb2735c99d06a66fab5996a7cd38f168/rtems" 1d6e6b1f/rtems]:

```
doxygen: score: adjust doc in priority.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:48.000Z

Original author: sebastian.huber

In [changeset:"35a07c468246a26d459b2be7d9b6b6d83026e1ac/rtems" 35a07c4/rtems]:

```
doxygen: score: adjust doc in priorityimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:52.000Z

Original author: sebastian.huber

In [changeset:"acdb99ebaea6a35966a35dbf429d4585ade19030/rtems" acdb99eb/rtems]:

```
doxygen: score: adjust doc in processormask.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:55.000Z

Original author: sebastian.huber

In [changeset:"ee8eb2181a59022d5460c8b1f4a46c48505ae91e/rtems" ee8eb21/rtems]:

```
doxygen: score: adjust doc in profiling.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:54:59.000Z

Original author: sebastian.huber

In [changeset:"1e6a7c7aa6cbb9f788dec1a3df695620f438dae0/rtems" 1e6a7c7a/rtems]:

```
doxygen: score: adjust doc in protectedheap.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:02.000Z

Original author: sebastian.huber

In [changeset:"f61a3f852451c880f1310ec701d0026155b1434f/rtems" f61a3f85/rtems]:

```
doxygen: score: adjust doc in rbtree.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:05.000Z

Original author: sebastian.huber

In [changeset:"334de12ea98c58e5a5d76fd717a89f810c0a4977/rtems" 334de12/rtems]:

```
doxygen: score: adjust doc in rbtreeimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:09.000Z

Original author: sebastian.huber

In [changeset:"65f19f09e11a090b66b5f1996c57b900aaa60f5a/rtems" 65f19f0/rtems]:

```
doxygen: score: adjust doc in schedulercbs.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:12.000Z

Original author: sebastian.huber

In [changeset:"06821fa5b8b3413c19793a43d5e37adf776fa86c/rtems" 06821fa5/rtems]:

```
doxygen: score: adjust doc in schedulercbsimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:15.000Z

Original author: sebastian.huber

In [changeset:"f66069162cb31d15ce1a4687e66c773605a8cdd2/rtems" f660691/rtems]:

```
doxygen: score: adjust doc in scheduleredf.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:18.000Z

Original author: sebastian.huber

In [changeset:"6852f7e85f5fbbb4c13328f66b00e583fa9e0eb0/rtems" 6852f7e/rtems]:

```
doxygen: score: adjust doc in scheduleredfimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:22.000Z

Original author: sebastian.huber

In [changeset:"e2d575c28759b3a05a365c35f46712194a5b5827/rtems" e2d575c2/rtems]:

```
doxygen: score: adjust doc in scheduler.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:25.000Z

Original author: sebastian.huber

In [changeset:"11e789320864dcd923a6692725df3b1427a62788/rtems" 11e7893/rtems]:

```
doxygen: score: adjust doc in schedulerimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:29.000Z

Original author: sebastian.huber

In [changeset:"d5548b655dc77469672bc40fa4721c9efed0628a/rtems" d5548b65/rtems]:

```
doxygen: score: adjust doc in schedulernode.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:32.000Z

Original author: sebastian.huber

In [changeset:"08901bf1823150ca9d63c06e34879eb101c90fe0/rtems" 08901bf/rtems]:

```
doxygen: score: adjust doc in schedulernodeimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:36.000Z

Original author: sebastian.huber

In [changeset:"263fa5efb5ebcacbc7a79fbb6f0245923c2ff599/rtems" 263fa5ef/rtems]:

```
doxygen: score: adjust doc in schedulerpriorityaffinitysmp.h to doxygen␣
↪guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:39.000Z

Original author: sebastian.huber

In [changeset:"4aed19438e5924ba5da95ef9b83c0cd4c37c7598/rtems" 4aed194/rtems]:

```
doxygen: score: adjust doc in schedulerpriority.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:43.000Z

Original author: sebastian.huber

In [changeset:"ed6b2e087899d98169801ee9f56b97f7ab541400/rtems" ed6b2e0/rtems]:

```
doxygen: score: adjust doc in schedulerpriorityimpl.h to doxygen␣
↪guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:46.000Z

Original author: sebastian.huber

In [changeset:"391f92b9eb6723b96b6cfe2c202a63b751146a6e/rtems" 391f92b9/rtems]:

```
doxygen: score: adjust doc in schedulerprioritysmp.h to doxygen␣
↪guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:49.000Z

Original author: sebastian.huber

In [changeset:"776ec05e44cca6c36b854785f8c4b3eb91e0685f/rtems" 776ec05/rtems]:

```
doxygen: score: adjust doc in schedulersimple.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:53.000Z

Original author: sebastian.huber

In [changeset:"d0839ddd986a39637a4a1efc798fd4663f4042ee/rtems" d0839dd/rtems]:

```
doxygen: score: adjust doc in scheduleredfsmp.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:56.000Z

Original author: sebastian.huber

In [changeset:"f8047f1476a70b312e85efa086165bb1d41ec7c2/rtems" f8047f14/rtems]:

```
doxygen: score: adjust doc in schedulersimpleimpl.h to doxygen␣
↪guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:55:59.000Z

Original author: sebastian.huber

In [changeset:"1bfdc06f7ee4c9398455f7e4609f6f1cbfb01944/rtems" 1bfdc06/rtems]:

```
doxygen: score: adjust doc in schedulersimplesmp.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:03.000Z

Original author: sebastian.huber

In [changeset:"ceff06f8fb8584bbbd8aa36e52c4133b5d27b495/rtems" ceff06f/rtems]:

```
doxygen: score: adjust doc in schedulersmp.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:06.000Z

Original author: sebastian.huber

In [changeset:"6a1734a3a9b8127679e18306ebdb5373d54d400f/rtems" 6a1734a3/rtems]:

```
doxygen: score: adjust doc in schedulersmpimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:09.000Z

Original author: sebastian.huber

In [changeset:"ee3351cfadd9b616a0dbc6bc3a6f1c6888788daf/rtems" ee3351c/rtems]:

```
doxygen: score: adjust doc in schedulerstrongapa.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:13.000Z

Original author: sebastian.huber

In [changeset:"6a9cb56b44c0bf6705ec474695f087ed0b966f8e/rtems" 6a9cb56/rtems]:

```
doxygen: score: adjust doc in semaphoreimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:16.000Z

Original author: sebastian.huber

In [changeset:"d057bb29734d060ce3b90a34b01ffdf12742a200/rtems" d057bb29/rtems]:

```
doxygen: score: adjust doc in smpbarrier.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:20.000Z

Original author: sebastian.huber

In [changeset:"79249a55177b51e0799bbc3ff216d3308e2c6545/rtems" 79249a5/rtems]:

```
doxygen: score: adjust doc in smpimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:24.000Z

Original author: sebastian.huber

In [changeset:"9503db61a4e07d9405bb7827179c0473571848fa/rtems" 9503db6/rtems]:

```
doxygen: score: adjust doc in smplock.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:28.000Z

Original author: sebastian.huber

In [changeset:"93afceb20c18409b7e0df9cbcceac807527d82e9/rtems" 93afceb/rtems]:

```
doxygen: score: adjust doc in smplockmcs.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:31.000Z

Original author: sebastian.huber

In [changeset:"2adc5f10ff51dbd2a5a76764ef786d5f54228381/rtems" 2adc5f10/rtems]:

```
doxygen: score: adjust doc in smplockseq.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:34.000Z

Original author: sebastian.huber

In [changeset:"c624340e4494f83e1e9aa9d7fd706acb20d6e232/rtems" c624340e/rtems]:

```
doxygen: score: adjust doc in smplockstats.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:38.000Z

Original author: sebastian.huber

In [changeset:"366dbf6a852faaa6ba5d66fa6909a36ec372c0f4/rtems" 366dbf6/rtems]:

```
doxygen: score: adjust doc in smplockticket.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:41.000Z

Original author: sebastian.huber

In [changeset:"0938899f02f069ba19fa5a8e6e19cf7632050ea6/rtems" 0938899/rtems]:

```
doxygen: score: adjust doc in stack.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:45.000Z

Original author: sebastian.huber

In [changeset:"0e829b26375ba89f991a2a286504eccf8a235513/rtems" 0e829b26/rtems]:

```
doxygen: score: adjust doc in stackimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:48.000Z

Original author: sebastian.huber

In [changeset:"fa3b4a21dbb50f448a1cdf8aefe3bf80e189ce16/rtems" fa3b4a2/rtems]:

```
doxygen: score: adjust doc in stackimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:51.000Z

Original author: sebastian.huber

In [changeset:"5ba93a53c14d1f9d8aca96d7ed494399288a057c/rtems" 5ba93a5/rtems]:

```
doxygen: score: adjust doc in statesimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:55.000Z

Original author: sebastian.huber

In [changeset:"6af85ee616b8aaf7d6df410436323cfed3b56881/rtems" 6af85ee6/rtems]:

```
doxygen: score: adjust doc in sysstate.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:56:58.000Z

Original author: sebastian.huber

In [changeset:"7d93c447c303d419be1e22fbd89e961449ea5e22/rtems" 7d93c447/rtems]:

```
doxygen: score: adjust doc in threaddispatch.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:02.000Z

Original author: sebastian.huber

In [changeset:"5bb6ac955203878ebdf974e0aa987de3732463ce/rtems" 5bb6ac9/rtems]:

```
doxygen: score: adjust doc in thread.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:05.000Z

Original author: sebastian.huber

In [changeset:"3657cdeb6bbc247f56d8c8193f2344464520e307/rtems" 3657cde/rtems]:

```
doxygen: score: adjust doc in threadimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:09.000Z

Original author: sebastian.huber

In [changeset:"8f89dc62633c42f2570e86ec16b81ce55227b114/rtems" 8f89dc62/rtems]:

```
doxygen: score: adjust doc in threadmp.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:12.000Z

Original author: sebastian.huber

In [changeset:"f1507fb848c7ea14bfdb231098b4265816bd531c/rtems" f1507fb/rtems]:

```
doxygen: score: adjust doc in threadq.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:16.000Z

Original author: sebastian.huber

In [changeset:"b6bbe83c81b3c29dbd83e04896ac7dba836b2cd9/rtems" b6bbe83/rtems]:

```
doxygen: score: adjust doc in threadqimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:19.000Z

Original author: sebastian.huber

In [changeset:"843879d0fc4592793ea4cf044c06664ba56b4e53/rtems" 843879d0/rtems]:

```
doxygen: score: adjust doc in timecounter.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:22.000Z

Original author: sebastian.huber

In [changeset:"3e980496dccb3a259151c4c33a7a15136c9d4df4/rtems" 3e98049/rtems]:

```
doxygen: score: adjust doc in timecounterimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:26.000Z

Original author: sebastian.huber

In [changeset:"bded63fc94752420b3f2c3e46370a204d7e5ba9b/rtems" bded63fc/rtems]:

```
doxygen: score: adjust doc in timespec.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:29.000Z

Original author: sebastian.huber

In [changeset:"1b5ba76d0347cbf2d6011e4ad45612e13c82e489/rtems" 1b5ba76/rtems]:

```
doxygen: score: adjust doc in timestamp.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:32.000Z

Original author: sebastian.huber

In [changeset:"4a693e70bf1c12a0ba573aa9c3530327ddc1fec2/rtems" 4a693e7/rtems]:

```
doxygen: score: adjust doc in timestampimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:36.000Z

Original author: sebastian.huber

In [changeset:"5c91b54b2fdf36c3927a7e1b08316dd398e03b38/rtems" 5c91b54b/rtems]:

```
doxygen: score: adjust doc in tls.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:39.000Z

Original author: sebastian.huber

In [changeset:"5791a3c5fcdbc2c85fc17d6a571581c79f69b9e8/rtems" 5791a3c/rtems]:

```
doxygen: score: adjust doc in todimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:42.000Z

Original author: sebastian.huber

In [changeset:"7d2cc98b9cb1449f609fd67ff3d134dafe876f89/rtems" 7d2cc98/rtems]:

```
doxygen: score: adjust doc in userextimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:45.000Z

Original author: sebastian.huber

In [changeset:"eb84cc3fe78e411bba20b4202dcc10aeb08e6aeb/rtems" eb84cc3f/rtems]:

```
doxygen: score: adjust doc in watchdog.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:49.000Z

Original author: sebastian.huber

In [changeset:"c53ec8c4455470579ccb91849e520e33e79554af/rtems" c53ec8c4/rtems]:

```
doxygen: score: adjust doc in watchdogimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:52.000Z

Original author: sebastian.huber

In [changeset:"904c2312972baa3f2cde060ab63196654b69a063/rtems" 904c2312/rtems]:

```
doxygen: score: adjust doc in watchdogticks.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:55.000Z

Original author: sebastian.huber

In [changeset:"7b90bb5929c736adaa3273f56e0b4d43c4d3e0ee/rtems" 7b90bb5/rtems]:

```
doxygen: score: adjust doc in wkspace.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:57:59.000Z

Original author: sebastian.huber

In [changeset:"2463c100ccfb86d2bbc57ca86cccbe9db583a849/rtems" 2463c10/rtems]:

```
doxygen: score: adjust doc in muteximpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:58:02.000Z

Original author: sebastian.huber

In [changeset:"1bd608b91ef9d042825508bd1628ede79dc268c1/rtems" 1bd608b/rtems]:

```
doxygen: score: adjust doc in onceimpl.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:58:05.000Z

Original author: sebastian.huber

In [changeset:"3238c162268c2d6d786dd53403d6f196977bf477/rtems" 3238c162/rtems]:

```
doxygen: score: adjust doc in smp.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2019-05-13T05:58:08.000Z

Original author: sebastian.huber

In [changeset:"f49618df2ac14c12f7352ef758c4849b7f8a70b0/rtems" f49618d/rtems]:

```
doxygen: score: adjust doc in percpudata.h to doxygen guidelines

Update #3706.
```

Author: Trac Migrate 2020-12-02T06:46:18.000Z

Original author: sebastian.huber

In [changeset:"e07088d9ba894d8d1fd4dba8b2ff03ccffebba05/rtems" e07088d9/rtems]:

```
rtems: Canonicalize implementation Doxygen groups

Rename Classic API top-level group from Classic to RTEMSImplClassic.
Use RTEMSImplClassic as a prefix for the subgroups.  Change the group
names to be in line with the API group names.  Use common phrases for
the group brief descriptions.

Update #3706.
```

Author: Trac Migrate 2020-12-02T06:46:21.000Z

Original author: sebastian.huber

In [changeset:"c81ac0e750776294fce56f6744671e3090b0579a/rtems" c81ac0e/rtems]:

```
score: Canonicalize Doxygen groups

Adjust group identifier and names to be in line with a common pattern.
Use common phrases for the group brief descriptions.

Update #3706.
```

Author: Trac Migrate 2020-12-02T06:46:27.000Z

Original author: sebastian.huber

In [changeset:"6b5f22dcbb4a876080a3713233e4d5a23d6383ed/rtems" 6b5f22dc/rtems]:

```
rtems: Canonicalize Doxygen @file comments

Use common phrases for the file brief descriptions.

Update #3706.
```

Author: Trac Migrate 2020-12-02T06:46:31.000Z

Original author: sebastian.huber

In [changeset:"9278f3d04f1e26071cb98a5e2940177abc40b6d8/rtems" 9278f3d/rtems]:

```
score: Canonicalize Doxygen @file comments

Use common phrases for the file brief descriptions.

Update #3706.
```

Author: Trac Migrate 2020-12-02T06:46:34.000Z

Original author: sebastian.huber

In [changeset:"3db9c820e55aad1e784bf926e551a7de8dae0cdf/rtems" 3db9c820/rtems]:

```
sapi: Canonicalize @defgroup and @file comments

Adjust group identifier and names to be in line with a common pattern.
Use common phrases for the group and file brief descriptions.

Update #3706.
```

Author: Trac Migrate 2020-12-02T06:46:37.000Z

Original author: sebastian.huber

In [changeset:"70dbafbf5ed26d0d434d6428d9f3de1be2ee502a/rtems" 70dbafb/rtems]:

```
config: Canonicalize @defgroup and @file comments

Adjust group identifier and names to be in line with a common pattern.
Use common phrases for the group and file brief descriptions.

Update #3706.
```

Author: Trac Migrate 2020-12-02T07:13:58.000Z

Original author: sebastian.huber

In [changeset:"226b90b455c7d797b34225db4b3a109e9d684cbb/rtems" 226b90b4/rtems]:

```
rtems: Fix Doxygen group memberships

Update #3706.
```

Author: Trac Migrate 2020-12-02T07:15:50.000Z

Original author: sebastian.huber

In [changeset:"5555c0cb98c21f17e68d5d92dbb67cbe72e5c62c/rtems" 5555c0c/rtems]:

```
rtems: Fix Doxygen group name

Update #3706.
```

Author: Trac Migrate 2020-12-02T10:35:07.000Z

Original author: sebastian.huber

In [changeset:"1c6062230ffe3ac71357dbe6bdf554f86fd705b5/rtems" 1c60622/rtems]:

```
score: Fix Doxygen group name

Update #3706.
```

Author: Trac Migrate 2020-12-02T10:35:11.000Z

Original author: sebastian.huber

In [changeset:"1fa3821ad64d8ab8a16a6fac87c43d99d984ec74/rtems" 1fa3821/rtems]:

```
score: Fix Doxygen group membership

Update #3706.
```

Author: Trac Migrate 2020-12-02T12:05:27.000Z

Original author: sebastian.huber

In [changeset:"295b05f9652f6e69ce659f43fe41563cee9b0e6b/rtems" 295b05f9/rtems]:

```
nfsclient: Rework Doxygen groups

Update #3706.
```

Author: Trac Migrate 2020-12-02T12:05:30.000Z

Original author: sebastian.huber

In [changeset:"ab8538385b8b2ac6edd70832400f60dbab335a55/rtems" ab85383/rtems]:

```
nfsclient: Remove from Doxygen output

The libnetworking is excluded from the Doxygen output.  Exclude also the
nfsclient source code, otherwise there are some orphaned Doxygen groups.

Update #3706.
```

Author: Trac Migrate 2020-12-02T12:19:09.000Z

Original author: sebastian.huber

In [changeset:"3393ff1dcff5a9613b530072fd93d14009df318d/rtems" 3393ff1d/rtems]:

```
libfs: Fix Doxygen group placement

Update #3706.
```

Author: Trac Migrate 2020-12-02T12:19:13.000Z

Original author: sebastian.huber

In [changeset:"ef0fe8ee60fbad214569e144a9481d25b922c4d8/rtems" ef0fe8e/rtems]:

```
dosfs: Fix Doxygen group placement

Update #3706.
```

Author: Trac Migrate 2021-10-06T06:41:16.000Z

Original author: sebastian.huber

In [changeset:"dba2e690bb9319a29e8eb8dff887a0227bf83248/rtems" dba2e690/rtems]:

```
rtems: Canonicalize Doxygen in <rtems/seterr.h>

Update #3706.
```

Author: Trac Migrate 2021-10-06T06:41:20.000Z

Original author: sebastian.huber

In [changeset:"4c0b006fc0ce78e61a9995b3d4b93d1075f040f0/rtems" 4c0b006/rtems]:

```
rtems: Canonicalize Doxygen in <rtems/counter.h>

Update #3706.
```

Author: Trac Migrate 2021-10-06T06:41:24.000Z

Original author: sebastian.huber

In [changeset:"a950c1355b9590473d28c5941ce3d9f22b44d149/rtems" a950c135/rtems]:

```
score: Add Hash Handler to group

Update #3706.
```

Author: Trac Migrate 2021-10-06T06:41:27.000Z

Original author: sebastian.huber

In [changeset:"5a6f94da45f7731c58c790b54491ad6e56feaee1/rtems" 5a6f94d/rtems]:

```
rtems: Add ASR implementation to existing group

Update #3706.
```

Author: Trac Migrate 2021-10-06T06:41:31.000Z

Original author: sebastian.huber

In [changeset:"8b762a88c1ffe130dada57c45b2f1d2845f6dfc1/rtems" 8b762a88/rtems]:

```
scoe: Move workspace group definition

Define the group in the header file which is used by <rtems/confdefs.h>.

Update #3706.
```

Author: Trac Migrate 2021-10-06T06:41:36.000Z

Original author: sebastian.huber

In [changeset:"e9063644ae44da36839ea181b5448abd543cf336/rtems" e9063644/rtems]:

```
posix: Remove "RTEMS" from POSIX API group

Clarify group description.

Update #3706.
```

Author: Trac Migrate 2022-11-30T08:55:14.000Z

Original author: sebastian.huber

- **Milestone** changed from %"6.1" to %"7.1"

Author: Trac Migrate 2023-01-24T10:26:29.000Z

Original author: sebastian.huber

In [changeset:"6136e28bf95c8cadf4892fd3e1333e489aff139a/rtems" 6136e28b/rtems]:

```
clockdrv: Add clock driver implementation group

Use standard wording in Clock Driver related files.

Update #3706.
```

Author: Trac Migrate 2023-01-24T10:26:34.000Z

Original author: sebastian.huber

In [changeset:"d36070fec8758a745a0b33f1ffa9f8192fceec51/rtems" d36070f/rtems]:

```
intr: Add Interrupt Manager implementation group

The shared BSP interrupt controller support code actually implements
parts of the Interrupt Manager.

Update #3706.
```

Author: Trac Migrate 2023-07-14T10:02:05.000Z

Original author: sebastian.huber

In [changeset:"97f5e1c0cbd74e819aad1bf434dd592d8fdb82ec/rtems" 97f5e1c/rtems]:

```
bsp/leon3: Fix group memberships

Update #3706.
```

Author: Trac Migrate 2023-07-26T04:56:40.000Z

Original author: sebastian.huber

In [changeset:"58840ffbb0c04dd19f0f532bf5b6e496159e070b/rtems" 58840ffb/rtems]:

```
rtems: Add files to Doxygen groups

Provide basic Doxygen comments.

Update #3706.
Update #3707.
```

Author: Trac Migrate 2023-07-26T05:08:21.000Z

Original author: sebastian.huber

- **Milestone** changed from %"7.1" to %"6.1"
- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

For RTEMS 6, the group hierarchy is good enough.

Author: Amar Takhar 2024-04-25T20:47:07.981Z

mentioned in issue #3701

Author: Amar Takhar 2024-04-25T20:47:10.604Z

changed the description

3.9.1.423 3705 - Software Design Document (SDD) for space profile

Id	3705
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-02-26T13:12:31.000Z
Updated	2024-04-25T20:47:09.974Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3705
Merges	0

Original author: sebastian.huber

A Software Design Document (SDD) is required by ECSS-E-ST-40C specified by Annex F. The plan is to use Doxygen for the software * architecture, and * detailed design.

How should links to from a software component (Doxygen group) to requirements be handled?

Author: Trac Migrate 2019-02-26T13:30:45.000Z

Original author: sebastian.huber

- **Status** changed from *assigned* to *accepted*

Author: Trac Migrate 2019-03-01T10:01:45.000Z

Original author: sebastian.huber

In [changeset:"e6dd36ca70afd66f6cafb8f6cecd559bf6a93b42/rtems" e6dd36ca/rtems]:

```
bsp/gen5200: Remove offending @mainpage

Update #3705.
```

Author: Trac Migrate 2019-03-04T06:54:54.000Z

Original author: sebastian.huber

In [changeset:"a6e39d4a5928ddcb63f95e9108eefb8b8d79ce56/rtems" a6e39d4a/rtems]:

```
Update Doxyfile to Doxygen 1.8.15

Generate Doxygen output in doc and ignore this directory in Git.  Add
RTEMS logo.  The Doxygen documentation is now built using the source
tree.  Just invoke "doxygen" in the top-level source directory.

The Doxyfile works also with at least Doxygen 1.8.13 and Doxygen 1.8.14.

Update #3705.
```

Author: Trac Migrate 2022-11-30T08:52:11.000Z

Original author: sebastian.huber

- **Milestone** changed from %"6.1" to %"7.1"

Author: Trac Migrate 2023-10-23T08:55:24.000Z

Original author: sebastian.huber

In [changeset:"b8f1988f15dd489b20301772ecef7df2e927eccb/rtems" b8f1988/rtems]:

```
doxygen: Replace and move main page

Replace the main page with a high level description of the RTEMS feature
set similar to:

https://docs.rtems.org/branches/master/user/overview/index.html#features

The replaced content can be found in the RTEMS Classic API Guide:

https://docs.rtems.org/branches/master/c-user/overview.html

https://docs.rtems.org/branches/master/c-user/key_concepts.html

Update #3705.
```

Author: Trac Migrate 2023-10-23T08:57:53.000Z

Original author: sebastian.huber

- **Milestone** changed from %"7.1" to %"6.1"
- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

The Doxygen support is now good enough for the pre-qualified feature set of RTEMS.

Author: Amar Takhar 2024-04-25T20:47:07.923Z

mentioned in issue #3701

Author: Amar Takhar 2024-04-25T20:47:10.020Z

changed the description

3.9.1.424 3704 - Review and update Doxygen recommendations

Id	3704
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-02-26T13:10:56.000Z
Updated	2024-04-25T20:47:09.518Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3704
Merges	0

Original author: sebastian.huber

Review and update the Doxygen recommendations.

Due to the removal of the pre-install build step we can now use Doxygen directly with header files in the source tree. It should be possible to generate documentation for all architectures and BSPs.

All code files (headers, C source, assembler) should have an @file entry belong to at least one Doxygen group (@ingroup).

There are a lot of source file in RTEMS (excluding test code and legacy network stack):

```
find bsps cpukit -name '*.[chsS]' | grep -v libnetworking | wc
4898    4898  187167
```

Creating the groups and categorizing all code file is a labour intensive work package. Therefore it should be discussed if the @brief and descriptions for files should be removed. The file content will be covered by groups and individual documentation.

The use of @param should be clarified. It is not clear if the [in], [out] or [in,out] should be used. If they should be used, what they mean exactly.

Author: Trac Migrate 2019-02-26T13:30:45.000Z

Original author: sebastian.huber

- **Status** changed from *assigned* to *accepted*

Author: Trac Migrate 2019-04-04T05:22:51.000Z

Original author: sebastian.huber

In [changeset:"fbe8a7ab90165ebfd9f3fab166cefe74e4e6de6d/rtems" fbe8a7a/rtems]:

```
doxygen: Rework some Doxygen comments

They are intended as examples in the RTEMS Software Engineering manual.

Update #3704.
```

Author: Trac Migrate 2019-04-04T05:40:37.000Z

Original author: sebastian.huber

In [changeset:"1d48fb5a0035362ee462172696043691a700a0cc/rtems-docs" 1d48fb5/rtems-docs]:

```
bsp-howto: Move BSP Doxygen recommendations

Update #3704.
```

Author: Trac Migrate 2019-04-05T05:47:11.000Z

Original author: sebastian.huber

In [changeset:"8a8b95aa1d6932ba9d2acd7a785100f7d0919205/rtems" 8a8b95aa/rtems]:

```
doxygen: Update _Objects_Build_name()

This is intended as an example in the RTEMS Software Engineering manual.

Update #3704.
```

Author: Trac Migrate 2019-04-05T07:40:39.000Z

Original author: sebastian.huber

In [changeset:"ef1911298e3cfe5998bbc9fba243658ae36f471b/rtems-docs" ef19112/rtems-docs]:

```
eng: Rework Doxygen guidelines

Update #3704.
```

Author: Trac Migrate 2022-11-30T08:51:58.000Z

Original author: sebastian.huber

- **Milestone** changed from %”6.1” to %”7.1”

Author: Trac Migrate 2023-07-26T05:05:47.000Z

Original author: sebastian.huber

- **Milestone** changed from %”7.1” to %”6.1”
- **Resolution** set to ~”fixed”
- **Status** changed from *accepted* to *closed*

For RTEMS 6, the guidelines in https://docs.rtems.org/branches/master/eng/coding-doxygen.html are good enough.

Author: Amar Takhar 2024-04-25T20:47:07.952Z

mentioned in issue #3701

Author: Amar Takhar 2024-04-25T20:47:09.570Z

changed the description

3.9.1.425 3702 - Space profile for RTEMS SMP

Id	3702
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-02-26T10:33:00.000Z
Updated	2024-04-25T20:47:08.535Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3702
Merges	0

Original author: sebastian.huber

Define a subset of RTEMS SMP functionality which is

- useful for space applications, and
- can be pre-qualified by project #3701.

To figure out the feature set carry out an online survey. In addition, do a workshop at ESA / ESTEC premises (also accessible on-line via Skype for Business).

The space profile needs to be documented.

Author: Trac Migrate 2019-02-26T13:30:45.000Z

Original author: sebastian.huber

- **Status** changed from *assigned* to *accepted*

Author: Trac Migrate 2021-11-19T14:44:03.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

The Technical Note: Space Profile is finalized:

https://ftp.rtems.org/pub/rtems/people/sebh/tn-space-profile-r6-23062019.pdf

Please note that the pre-qualified feature set of RTEMS is a proper superset of the space profile.

Author: Joel Sherrill 2021-11-19T14:56:54.000Z

Original author: sebastian.huber

Would it be possible to generate a document similar to the one you linked to which documents that superset? Asked another way, how could someone approaching RTEMS.org know the subset of RTEMS which has the supporting artifacts for pre-qualification?

Author: Trac Migrate 2021-11-19T15:00:19.000Z

Original author: sebastian.huber

Yes, this is possible, but I think this belongs to another ticket. I am currently busy with integrating all my work in progress.

Author: Trac Migrate 2021-12-02T11:10:16.000Z

Original author: sebastian.huber

Just for reference, a list of pre-qualified interfaces can be obtained via the `./specview.py --filter=api`.

- rtems_configuration_get_idle_task
- rtems_configuration_get_idle_task_stack_size

- rtems_configuration_get_interrupt_stack_size
- rtems_configuration_get_maximum_barriers
- rtems_configuration_get_maximum_extensions
- rtems_configuration_get_maximum_message_queues
- rtems_configuration_get_maximum_partitions
- rtems_configuration_get_maximum_periods
- rtems_configuration_get_maximum_processors
- rtems_configuration_get_maximum_semaphores
- rtems_configuration_get_maximum_tasks
- rtems_configuration_get_maximum_timers
- rtems_configuration_get_microseconds_per_tick
- rtems_configuration_get_milliseconds_per_tick
- rtems_configuration_get_nanoseconds_per_tick
- rtems_configuration_get_stack_allocate_for_idle_hook
- rtems_configuration_get_stack_allocate_hook
- rtems_configuration_get_stack_allocator_avoids_work_space
- rtems_configuration_get_stack_free_hook
- rtems_configuration_get_ticks_per_timeslice
- rtems_barrier_create
- rtems_barrier_delete
- rtems_barrier_ident
- rtems_barrier_release
- rtems_barrier_wait
- RTEMS_ALIAS
- RTEMS_ALIGNED
- RTEMS_ALIGNOF
- RTEMS_ALIGN_DOWN
- RTEMS_ALIGN_UP
- RTEMS_ALLOC_ALIGN
- RTEMS_ALLOC_SIZE
- RTEMS_ALLOC_SIZE_2
- RTEMS_ARRAY_SIZE
- RTEMS_COMPILER_MEMORY_BARRIER
- RTEMS_CONCAT

- RTEMS_CONTAINER_OF
- RTEMS_DECLARE_GLOBAL_SYMBOL
- RTEMS_DECONST
- RTEMS_DEFINE_GLOBAL_SYMBOL
- RTEMS_DEQUALIFY
- RTEMS_DEQUALIFY_DEPTHX
- RTEMS_DEVOLATILE
- RTEMS_EXPAND
- RTEMS_HAVE_MEMBER_SAME_TYPE
- RTEMS_OBFUSCATE_VARIABLE
- RTEMS_PREDICT_FALSE
- RTEMS_PREDICT_TRUE
- RTEMS_PRINTFLIKE
- RTEMS_RETURN_ADDRESS
- RTEMS_SECTION
- RTEMS_STATIC_ASSERT
- RTEMS_STRING
- RTEMS_SYMBOL_NAME
- RTEMS_TYPEOF_REFX
- RTEMS_UNREACHABLE
- RTEMS_WEAK_ALIAS
- RTEMS_XCONCAT
- RTEMS_XSTRING
- clock_nanosleep
- flsl
- memcpy
- memset
- posix_memalign
- rtems_cpu_usage_reset
- rtems_cache_disable_data
- rtems_cache_disable_instruction
- rtems_cache_enable_data
- rtems_cache_enable_instruction
- rtems_cache_flush_entire_data

- rtems_cache_flush_multiple_data_lines
- rtems_cache_get_data_cache_size
- rtems_cache_get_data_line_size
- rtems_cache_get_instruction_cache_size
- rtems_cache_get_instruction_line_size
- rtems_cache_get_maximal_line_size
- rtems_cache_instruction_sync_after_code_change
- rtems_cache_invalidate_entire_data
- rtems_cache_invalidate_entire_instruction
- rtems_cache_invalidate_multiple_data_lines
- rtems_cache_invalidate_multiple_instruction_lines
- CONFIGURE_MAXIMUM_BARRIERS
- CONFIGURE_MAXIMUM_MESSAGE_QUEUES
- CONFIGURE_MAXIMUM_PARTITIONS
- CONFIGURE_MAXIMUM_PERIODS
- CONFIGURE_MAXIMUM_SEMAPHORES
- CONFIGURE_MAXIMUM_TASKS
- CONFIGURE_MAXIMUM_THREAD_LOCAL_STORAGE_SIZE
- CONFIGURE_MAXIMUM_TIMERS
- CONFIGURE_MAXIMUM_USER_EXTENSIONS
- CONFIGURE_MINIMUM_TASKS_WITH_USER_PROVIDED_STORAGE
- CONFIGURE_INIT_TASK_ARGUMENTS
- CONFIGURE_INIT_TASK_ATTRIBUTES
- CONFIGURE_INIT_TASK_CONSTRUCT_STORAGE_SIZE
- CONFIGURE_INIT_TASK_ENTRY_POINT
- CONFIGURE_INIT_TASK_INITIAL_MODES
- CONFIGURE_INIT_TASK_NAME
- CONFIGURE_INIT_TASK_PRIORITY
- CONFIGURE_RTEMS_INIT_TASKS_TABLE
- rtems_clock_get_boot_time
- rtems_clock_get_boot_time_bintime
- rtems_clock_get_boot_time_timeval
- rtems_clock_get_monotonic
- rtems_clock_get_monotonic_bintime

- rtems_clock_get_monotonic_coarse
- rtems_clock_get_monotonic_coarse_bintime
- rtems_clock_get_monotonic_coarse_timeval
- rtems_clock_get_monotonic_sbintime
- rtems_clock_get_monotonic_timeval
- rtems_clock_get_realtime
- rtems_clock_get_realtime_bintime
- rtems_clock_get_realtime_coarse
- rtems_clock_get_realtime_coarse_bintime
- rtems_clock_get_realtime_coarse_timeval
- rtems_clock_get_realtime_timeval
- rtems_clock_get_ticks_per_second
- rtems_clock_get_ticks_since_boot
- rtems_clock_get_tod
- rtems_clock_get_uptime
- rtems_clock_set
- CONFIGURE_APPLICATION_DOES_NOT_NEED_CLOCK_DRIVER
- CONFIGURE_APPLICATION_NEEDS_CLOCK_DRIVER
- rtems_are_statuses_equal
- rtems_is_status_successful
- rtems_status_text
- rtems_calloc
- rtems_malloc
- rtems_event_receive
- rtems_event_send
- rtems_fatal
- CONFIGURE_APPLICATION_DISABLE_FILESYSTEM
- CONFIGURE_MAXIMUM_PRIORITY
- CONFIGURE_SCHEDULER_ASSIGNMENTS
- CONFIGURE_SCHEDULER_EDF_SMP
- CONFIGURE_SCHEDULER_NAME
- CONFIGURE_SCHEDULER_PRIORITY
- CONFIGURE_DISABLE_BSP_SETTINGS
- CONFIGURE_DISABLE_NEWLIB_REENTRANCY

- CONFIGURE_INITIAL_EXTENSIONS
- CONFIGURE_INTERRUPT_STACK_SIZE
- CONFIGURE_MAXIMUM_FILE_DESCRIPTORS
- CONFIGURE_MAXIMUM_PROCESSORS
- CONFIGURE_MICROSECONDS_PER_TICK
- CONFIGURE_MINIMUM_TASK_STACK_SIZE
- CONFIGURE_TICKS_PER_TIMESLICE
- CONFIGURE_IDLE_TASK_BODY
- CONFIGURE_IDLE_TASK_INITIALIZES_APPLICATION
- CONFIGURE_IDLE_TASK_STACK_SIZE
- RTEMS_INTERRUPT_ENTRY_INITIALIZER
- RTEMS_INTERRUPT_LOCK_DECLARE
- RTEMS_INTERRUPT_LOCK_DEFINE
- RTEMS_INTERRUPT_LOCK_INITIALIZER
- RTEMS_INTERRUPT_LOCK_MEMBER
- RTEMS_INTERRUPT_LOCK_REFERENCE
- rtems_interrupt_clear
- rtems_interrupt_entry_initialize
- rtems_interrupt_entry_install
- rtems_interrupt_entry_remove
- rtems_interrupt_get_affinity
- rtems_interrupt_get_attributes
- rtems_interrupt_handler_iterate
- rtems_interrupt_is_pending
- rtems_interrupt_local_disable
- rtems_interrupt_local_enable
- rtems_interrupt_lock_acquire
- rtems_interrupt_lock_acquire_isr
- rtems_interrupt_lock_destroy
- rtems_interrupt_lock_initialize
- rtems_interrupt_lock_interrupt_disable
- rtems_interrupt_lock_release
- rtems_interrupt_lock_release_isr
- rtems_interrupt_raise

- rtems_interrupt_raise_on
- rtems_interrupt_set_affinity
- rtems_interrupt_vector_disable
- rtems_interrupt_vector_enable
- rtems_interrupt_vector_is_enabled
- getchark
- rtems_put_char
- rtems_putc
- RTEMS_MESSAGE_QUEUE_BUFFER
- rtems_message_queue_broadcast
- rtems_message_queue_construct
- rtems_message_queue_delete
- rtems_message_queue_flush
- rtems_message_queue_get_number_pending
- rtems_message_queue_ident
- rtems_message_queue_receive
- rtems_message_queue_send
- rtems_message_queue_urgent
- _Futex_Wait
- _Futex_Wake
- _Mutex_Acquire
- _Mutex_Acquire_timed
- _Mutex_Release
- _Mutex_Try_acquire
- _Mutex_recursive_Acquire
- _Mutex_recursive_Acquire_timed
- _Mutex_recursive_Release
- _Mutex_recursive_Try_acquire
- rtems_build_name
- rtems_object_get_local_node
- rtems_partition_create
- rtems_partition_delete
- rtems_partition_get_buffer
- rtems_partition_ident

- rtems_partition_return_buffer
- rtems_rate_monotonic_cancel
- rtems_rate_monotonic_create
- rtems_rate_monotonic_delete
- rtems_rate_monotonic_get_status
- rtems_rate_monotonic_ident
- rtems_rate_monotonic_period
- rtems_scheduler_add_processor
- rtems_scheduler_get_maximum_priority
- rtems_scheduler_get_processor
- rtems_scheduler_get_processor_maximum
- rtems_scheduler_get_processor_set
- rtems_scheduler_ident
- rtems_scheduler_ident_by_processor
- rtems_scheduler_ident_by_processor_set
- rtems_scheduler_remove_processor
- rtems_semaphore_create
- rtems_semaphore_delete
- rtems_semaphore_flush
- rtems_semaphore_ident
- rtems_semaphore_obtain
- rtems_semaphore_release
- rtems_semaphore_set_priority
- rtems_signal_catch
- rtems_signal_send
- rtems_is_name_valid
- rtems_name_to_characters
- RTEMS_TASK_STORAGE_SIZE
- rtems_task_construct
- rtems_task_create
- rtems_task_delete
- rtems_task_exit
- rtems_task_get_affinity
- rtems_task_get_priority

- rtems_task_get_scheduler
- rtems_task_ident
- rtems_task_is_suspended
- rtems_task_iterate
- rtems_task_mode
- rtems_task_restart
- rtems_task_resume
- rtems_task_self
- rtems_task_set_affinity
- rtems_task_set_priority
- rtems_task_set_scheduler
- rtems_task_start
- rtems_task_suspend
- rtems_task_wake_after
- rtems_task_wake_when
- RTEMS_INTERRUPT_LEVEL
- CONFIGURE_TASK_STACK_ALLOCATOR
- CONFIGURE_TASK_STACK_ALLOCATOR_AVOIDS_WORK_SPACE
- CONFIGURE_TASK_STACK_ALLOCATOR_FOR_IDLE
- CONFIGURE_TASK_STACK_DEALLOCATOR
- rtems_timer_cancel
- rtems_timer_create
- rtems_timer_delete
- rtems_timer_fire_after
- rtems_timer_fire_when
- rtems_timer_ident
- rtems_timer_initiate_server
- rtems_timer_reset
- rtems_timer_server_fire_after
- rtems_timer_server_fire_when
- rtems_extension_create
- rtems_extension_delete
- rtems_extension_ident

Author: Joel Sherrill 2021-12-02T22:15:47.000Z

Original author: sebastian.huber

I'm sure that list is right but wasn't there a small set of POSIX APIs which were candidates? I looked for pthread_once() which I expected but isn't there. Was thinking of the pthread APIs which were always on before the POSIX configuration was reworked – once and keys.

Author: Trac Migrate 2021-12-03T05:54:40.000Z

Original author: sebastian.huber

We considered to add POSIX keys and once, but we had no time left over to do this.

Author: Amar Takhar 2024-04-25T20:47:07.807Z

mentioned in issue #3701

Author: Amar Takhar 2024-04-25T20:47:08.587Z

changed the description

3.9.1.426 3199 - New test framework

Id	3199
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2017-10-19T10:12:46.000Z
Updated	2024-04-25T20:47:08.171Z
Milestone	6.1
Labels	library, priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3199
Merges	0

Original author: sebastian.huber

Requirements:

- Support for RTEMS and general POSIX systems such as Linux or FreeBSD
- Test output functions
- printf() like
- No floating point support by default

- Optional floating point support
- Non-blocking
- Arbitrary context, e.g. during system start, before device drivers, in interrupt context
- Automatic test case registrations (constructors, linker set)
- Standard test case output, e.g. begin/end of test case message
- Ability to sort test cases at run-time
- Safe assert functions, e.g. assert(a == b) vs. assert(a = b) vs. assert_eq(a, b)
- Easy to write, e.g. avoid long namespace prefix rtems_test_*
- Support multiple threads
- No dependency on C++
- Context validation, context invariant validation (e.g. thread dispatch disable level, interrupt state, heap state)
- Test pattern support (e.g. spintercritical*, parallel tests on SMP)

No ready to use framework exists which fulfils these requirements. We have to write something for RTEMS.

API proposal (header file <T.h>):

```
T_eq(a, b)
T_gt(a, b)
T_printf(fmt, ...)
T_output_printf(putchar, fmt, ...)
T_output_string(putchar, s, n)
T_output_add_format_handler(handler, arg)
```

Example for T_output_add_format():

```
#include <stdio.h>
#include <string.h>

typedef void (*T_putchar)(char c);

typedef size_t (*T_format_handler)(void *arg, T_putchar putchar, const char *fmt,␣
↪const char *s, int *out);

int T_printf(const char *fmt, ...);

void T_output_printf(T_putchar putchar, const char *fmt, ...);

void T_output_string(T_putchar putchar, const char *s, size_t n);

void T_output_add_format_handler(T_format_handler handler, void *arg);

size_t T_output_float_handler(void *arg, T_putchar putchar, const char *fmt,␣
↪const char *s, int *out)
```

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```
{
char buf[32];

if (strncmp(fmt, "%f", 2) != 0) {
return 0;
}

*out = snprintf(buf, sizeof(buf), "%f", s);

if (*out > 0) {
T_output_string(putchar, s, (size_t) *out);
}

return 2;
}

void f(void)
{
T_output_add_format_handler(T_output_float_handler, NULL);
}
```

- contributor.pdf
- t.tar.gz

Author: Chris Johns 2017-10-19T20:44:08.000Z

Original author: sebastian.huber

Have you seen TAP?

http://testanything.org/ http://testanything.org/tap-version-13-specification.html https://github.com/TestAnything/test-anything-protocol/blob/master/output/draft-vaidya-test-anything-protocol-00.txt

I suggest we look at something that exists and see if it fits.

Author: Trac Migrate 2017-10-28T12:08:04.000Z

Original author: sebastian.huber

In [changeset:"f703e7f5c7082e267558fe2079140869daec8dfd/rtems" f703e7f/rtems]:

```
tests: Move rtems_test_printer definition

Statically initialize it to use printk().

Update #3170.
Update #3199.
```

Author: Trac Migrate 2017-10-28T12:08:16.000Z

Original author: sebastian.huber

In [changeset:"7bec7f2715f0f3495f59513e61c319fe65a3fd40/rtems" 7bec7f27/rtems]:

```
rtems: Add rtems_print_printer_fprintf_putc()

Update #3170.
Update #3199.
```

Author: Trac Migrate 2017-10-28T12:08:27.000Z

Original author: sebastian.huber

In [changeset:"73d892d8a8da4fd35a2cad9b52405c6da0c8cb8f/rtems" 73d892d8/rtems]:

```
tests: Use rtems_test_printer

Update #3170.
Update #3199.
```

Author: Trac Migrate 2017-10-28T12:08:39.000Z

Original author: sebastian.huber

In [changeset:"46ddc3c5daa97cd5d96f5c495e98d2854dbfa8d6/rtems" 46ddc3c5/rtems]:

```
tests: Use rtems_print_printer_fprintf_putc()

Use rtems_print_printer_fprintf_putc() instead of
rtems_print_printer_printf() to output via rtems_putc().

Update #3170.
Update #3199.
```

Author: Trac Migrate 2017-10-28T12:08:51.000Z

Original author: sebastian.huber

In [changeset:"7e1029158ed6f11e36341a57fed07fa3014068da/rtems" 7e10291/rtems]:

```
tests: Use rtems_test_printer in general

```

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```
Update #3170.
Update #3199.
```

Author: Trac Migrate 2017-10-28T12:09:02.000Z

Original author: sebastian.huber

In [changeset:"acc9d064682f79ffb77e0f1c0d1cace29f087672/rtems" acc9d064/rtems]:

```
tests: Remove obsolete TESTS_USE_PRINTK

Update #3170.
Update #3199.
```

Author: Trac Migrate 2017-10-28T12:09:15.000Z

Original author: sebastian.huber

In [changeset:"af4355459ee843fb984aafe22a7531e922ee753e/rtems" af43554/rtems]:

```
tests: Remove TEST_INIT

The TEST_EXTERN is a used only by the system.h style tests and they use
CONFIGURE_INIT appropriately.

Update #3170.
Update #3199.
```

Author: Trac Migrate 2017-10-30T05:31:17.000Z

Original author: sebastian.huber

In [changeset:"2126438a07a7763d986c7bf7fed06eea2df6cf1a/rtems" 2126438a/rtems]:

```
testsuite: Add bspIo for a local printk.

Update #3170.
Update #3199.
```

Author: Trac Migrate 2017-11-02T13:25:12.000Z

Original author: sebastian.huber

In [changeset:"0d796d6dc76c29a543411df2c8d1408999870023/rtems" 0d796d6/rtems]:

```
tests: Delete obsolete TESTS_USE_PRINTF

Update #3170.
Update #3199.
```

Author: Trac Migrate 2017-11-02T13:26:51.000Z

Original author: sebastian.huber

In [changeset:"8c1f4064ad668c6bab0fb106386e9e2d33d06d31/rtems" 8c1f4064/rtems]:

```
tests: Use printf() instead of fprintf()

Update #3170.
Update #3199.
```

Author: Trac Migrate 2017-11-06T06:29:13.000Z

Original author: sebastian.huber

In [changeset:"10827984c2cf54188a9af71b94a7e83197812bb5/rtems" 1082798/rtems]:

```
score: Add _IO_Printf() and _IO_Vprintf()

The previous vprintk() implementation had a questionable licence header,
lacks support for the 'z' and 'j' format specifiers, is not robust
against invalid format specifiers, uses a global variable for output.
Replace it with a stripped down version of the FreeBSD kernel kvprintf()
function.

The new implementation allows a low overhead rtems_snprintf() if
necessary.

Update #3199.
Close #3216.
```

Author: Trac Migrate 2017-11-06T06:29:25.000Z

Original author: sebastian.huber

In [changeset:"ac28f1588d4cfd315ec59d485df432c79d13cd46/rtems" ac28f15/rtems]:

```
Add simple console driver

Update #3170.
Update #3199.
```

Author: Trac Migrate 2017-11-06T06:29:41.000Z

Original author: sebastian.huber

In [changeset:"c4b8b147ddfc945810b60a2410efd8acc280ba3c/rtems" c4b8b147/rtems]:

```
tests: Use simple console driver

Update #3170.
Update #3199.
```

Author: Trac Migrate 2017-11-07T06:09:15.000Z

Original author: sebastian.huber

In [changeset:"7b00c2fac57740963d3c4d8bf1cf5eab3a31f22e/rtems" 7b00c2fa/rtems]:

```
tests: Use <tmacros.h> in all tests

Update #3170.
Update #3199.
```

Author: Trac Migrate 2017-11-07T07:32:57.000Z

Original author: sebastian.huber

In [changeset:"32ceb38513091f2f0c68f2db369384030262eb1f/rtems" 32ceb38/rtems]:

```
tests: Use <tmacros.h>

Update #3170.
Update #3199.
```

Author: Trac Migrate 2017-11-10T02:42:58.000Z

Original author: sebastian.huber

In [changeset:"6f3fb8a547f5700416744a7dc82b3cb83177c7a8/rtems" 6f3fb8a/rtems]:

```
cpukit: Add a Version API.

Provide functions to get the version string, major, minor and revision
numbers and the version control identifer that is a unique tag for
the version control system.
```

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```
6
7 Update #3199.
```

Author: Trac Migrate 2017-11-11T05:24:06.000Z

Original author: sebastian.huber

In [changeset:"e6df806a3f46b5488e5e383add9cda43e0059dbe/rtems" e6df806/rtems]:

```
1 tests: Use ld to map (wrap) printf, puts and putchar to tester␣
  ↪functions.
2
3 - Remove the macro defines and the need for tmacro.h by remapping the
4 symbols using ld's wrap option.
5 - Remove FLUSH_OUTPUT, it was empty.
6 - Move rtems_test_exit to libmisc/testsupport as a function.
7
8 Update #3199.
```

Author: Trac Migrate 2017-11-15T07:10:55.000Z

Original author: sebastian.huber

In [changeset:"62119d21da8c7893cecbbf57c1478dcbabb63370/rtems" 62119d2/rtems]:

```
1 dl01, dl02, dl05: Fix unresolved printf symbol
2
3 The link time wrap of printf leads to unresolved symbols in the loadable
4 modules.  This resulted in infinite loops and test timeouts.  Use
5 rtems_printf() for output.
6
7 Update #3199.
```

Author: Trac Migrate 2017-11-17T05:55:31.000Z

Original author: sebastian.huber

In [changeset:"727cf4828996d198f9beb6d98a2f5e6bb2023792/rtems" 727cf48/rtems]:

```
1 sptests/spversion01: Simplify configuration
2
3 Update #3199.
```

Author: Trac Migrate 2018-02-05T09:48:37.000Z

Original author: sebastian.huber

In [changeset:"d078405b9a8e1a83db721c3d0be781562ff4896f/rtems-docs" d078405/rtems-docs]:

```
CONFIGURE_APPLICATION_NEEDS_SIMPLE_CONSOLE_DRIVER

Close #3170.
Update #3199.
```

Author: Trac Migrate 2018-11-23T10:26:10.000Z

Original author: sebastian.huber

- **Attachment** t.tar.gz added

The T Test Framework

Author: Trac Migrate 2018-12-06T14:47:59.000Z

Original author: sebastian.huber

- **Attachment** contributor.pdf added

Draft v4

Author: Trac Migrate 2019-03-04T13:03:31.000Z

Original author: sebastian.huber

- **Status** changed from *assigned* to *accepted*

Author: Trac Migrate 2019-03-27T06:29:28.000Z

Original author: sebastian.huber

In [changeset:"6fe01e4b3d52b47c916bc4989e042255ff38e2ca/rtems" 6fe01e4b/rtems]:

```
build: Move test support to librtemstest.a

One reason to move the test support into a dedicated library are the
standard output __wrap_*() functions.  They may conflict with
application level wrappers.

Update #3199.
```

Author: Trac Migrate 2019-03-27T06:29:32.000Z

Original author: sebastian.huber

In [changeset:"cfcc2cbf7aa4e6aeb6dca83d57cf2dae610d4d65/rtems" cfcc2cbf/rtems]:

```
Add RTEMS Test Framework

Update #3199.
```

Author: Trac Migrate 2019-03-27T06:29:37.000Z

Original author: sebastian.huber

In [changeset:"cbfc3415607a6943823e8fc47c38408dcc7dbd90/rtems" cbfc3415/rtems]:

```
ttest01: New test

This is an example test using the RTEMS Test Framework.  It tests also
the framework itself.

Add T_FILE_NAME command line define to get rid of the full file path.
This is important to reduce the read-only data of test files and make
them build system independent.

Update #3199.
```

Author: Trac Migrate 2019-03-27T06:34:23.000Z

Original author: sebastian.huber

In [changeset:"c2e582db3209318444c00116a82c7cb95c0d4efd/rtems-docs" c2e582d/rtems-docs]:

```
eng: Add software test framework chapter

Update #3199.
```

Author: Trac Migrate 2019-10-11T09:02:08.000Z

Original author: sebastian.huber

In [changeset:"f88025aebe7167d2da7a0137d8149205b66f00eb/rtems" f88025a/rtems]:

```
ttest01: Adjust SPDX-License-Identifier

Update #3199.
```

Author: Trac Migrate 2019-10-11T09:02:13.000Z

Original author: sebastian.huber

In [changeset:"b406d071ec043529407f5ce4cb0fe7d71d805cc1/rtems" b406d071/rtems]:

```
libtest: Do all output in test runner

This ensures that lines are output atomically if they are produced by
different other contexts, e.g. interrupts, other processors, other
threads.

Update #3199.
```

Author: Trac Migrate 2019-10-11T09:02:18.000Z

Original author: sebastian.huber

In [changeset:"feb27f903104c1261fc2b824bfca4ae6acc6359c/rtems" feb27f9/rtems]:

```
ttest01: Add more test cases

Update #3199.
```

Author: Trac Migrate 2019-10-11T09:02:26.000Z

Original author: sebastian.huber

In [changeset:"b5e61f95ac5cf688775d4aaa41ce839aa9c674d1/rtems" b5e61f95/rtems]:

```
libtest: Add more action events

This allows more control over the initialization and finalization run.

Update #3199.
```

Author: Trac Migrate 2019-10-11T09:02:32.000Z

Original author: sebastian.huber

In [changeset:"e71f0a535829cb0933857025bb9226d56f0f3b70/rtems" e71f0a5/rtems]:

```
ttest01: Check init/final run output

Update #3199.
```

Author: Trac Migrate 2020-02-10T08:03:35.000Z

Original author: sebastian.huber

In [changeset:"45a0f65798a4cbd260b2e428d5c5077dd6f7f417/rtems-docs" 45a0f65/rtems-docs]:

```
eng: Document test framework formatted output

Update #3199.
```

Author: Trac Migrate 2020-02-10T08:03:37.000Z

Original author: sebastian.huber

In [changeset:"b6c61e38abe52f3655ec307323394abc6f05ff36/rtems-docs" b6c61e3/rtems-docs]:

```
eng: Mention test framework buffer configuration

Update #3199.
```

Author: Trac Migrate 2020-02-10T12:49:18.000Z

Original author: sebastian.huber

In [changeset:"76b3aead1b09673271f7f0afd0114f3590bf2dea/rtems-docs" 76b3aea/rtems-docs]:

```
eng: Grammar fix

Update #3199.
```

Author: Trac Migrate 2020-07-17T09:23:51.000Z

Original author: sebastian.huber

- **Milestone** changed from %"Indefinite" to %"6.1"

Author: Trac Migrate 2020-07-23T08:06:12.000Z

Original author: sebastian.huber

In [changeset:"21fa28c7ad81d59752b7c546a5c753c887c2eae6/rtems-docs" 21fa28c/rtems-docs]:

```
eng: Update test framework chapter

Document the dynamic text fixtures, utility functions, and the interrupt
test support.  Reorder some sections and reword some paragraphs based on
review comments.
```

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```
6
7 Update #3199.
```

Author: Trac Migrate 2020-07-23T08:57:50.000Z

Original author: sebastian.huber

In [changeset:"9de8d61a9a4a7eda2bef620c8dde1b659850dce9/rtems" 9de8d61/rtems]:

```
1 libtest: <rtems/test.h> to <rtems/test-info.h>
2
3 Rename this header file to later move <t.h> to <rtems/test.h>.  The main
4 feature provided by <rtems/test-info.h> is the output of standard test
5 information which is consumed by the RTEMS Tester.
6
7 Update #3199.
```

Author: Trac Migrate 2020-07-23T08:57:54.000Z

Original author: sebastian.huber

In [changeset:"361404e87d015a623be95212fea62f2337a3357a/rtems" 361404e8/rtems]:

```
1 libtest: Move <t.h> to <rtems/test.h>
2
3 Update #3199.
```

Author: Trac Migrate 2020-07-23T08:57:57.000Z

Original author: sebastian.huber

In [changeset:"e3e3b871ee7f625bb65de0836490db73badce55e/rtems" e3e3b871/rtems]:

```
1 libtest: Add T_busy()
2
3 Update #3199.
```

Author: Trac Migrate 2020-07-23T08:58:00.000Z

Original author: sebastian.huber

In [changeset:"af9266541fda63cb02cf54154d54e6b5504cef74/rtems" af92665/rtems]:

```
libtest: Add T_get_one_clock_tick_busy()

Update #3199.
```

Author: Trac Migrate 2020-07-23T08:58:04.000Z

Original author: sebastian.huber

In [changeset:"c081c68d34985748a4948a250d3cab6f74eb6e09/rtems" c081c68/rtems]:

```
libtest: Add T_make_runner()

Update #3199.
```

Author: Trac Migrate 2020-07-23T08:58:07.000Z

Original author: sebastian.huber

In [changeset:"6b27e3251eb6b3374751cdcec4015b4ee1026e0e/rtems" 6b27e32/rtems]:

```
libtest: Support custom scope messages via fixture

Update #3199.
```

Author: Trac Migrate 2020-07-23T08:58:10.000Z

Original author: sebastian.huber

In [changeset:"cb3c6bdc0f6a89609b88f2c4d647e18d8bcdd843/rtems" cb3c6bdc/rtems]:

```
libtest: Add push/pop fixture support

Update #3199.
```

Author: Trac Migrate 2020-07-23T08:58:14.000Z

Original author: sebastian.huber

In [changeset:"63e42784290b4bb103fbb3f64bad23dc9edef9f3/rtems" 63e4278/rtems]:

```
libtest: Add T_get_scope()

Update #3199.
```

Author: Trac Migrate 2020-07-23T08:58:17.000Z

Original author: sebastian.huber

In [changeset:"34e4df55901e88454029af8fe57f3c585a43b3ac/rtems" 34e4df55/rtems]:

```
libtest: Split POSIX Keys support

Update #3199.
```

Author: Trac Migrate 2020-07-23T08:58:20.000Z

Original author: sebastian.huber

In [changeset:"77814040262f2ae1a479f94d962139d68052b743/rtems" 7781404/rtems]:

```
libtest: Add T_stop()

Update #3199.
```

Author: Trac Migrate 2020-07-23T08:58:24.000Z

Original author: sebastian.huber

In [changeset:"35d9af6901647871612cc278ba28792e23708357/rtems" 35d9af69/rtems]:

```
libtest: Add T_CHECK_FMT

Rename internal function T_check_true() to T_check() and use the new
flag T_CHECK_FMT to indicate if a format string is present.  This is a
preparation step to make the format string optional.

Make the check context the first parameter.

The API remains the same.

Update #3199.
```

Author: Trac Migrate 2020-07-23T08:58:27.000Z

Original author: sebastian.huber

In [changeset:"d702c9f47d8b9b393316e0c6b54fca8c26f424a1/rtems" d702c9f4/rtems]:

```
libtest: Make check message optional

This macro magic is in line with C11 and C++11, but limits the maximum
count of arguments.

Update #3199.
```

Author: Trac Migrate 2020-07-23T08:58:30.000Z

Original author: sebastian.huber

In [changeset:"467ef5b4313af7451c1b959159e86d6f94af788f/rtems" 467ef5b4/rtems]:

```
libtest: Add T_unreachable()

Update #3199.
```

Author: Trac Migrate 2020-07-23T08:58:34.000Z

Original author: sebastian.huber

In [changeset:"dddc9a58189758395e7354223ff421b4c7532538/rtems" dddc9a58/rtems]:

```
libtest: Add quiet assert NULL pointer checks

Update #3199.
```

Author: Trac Migrate 2020-07-23T08:58:37.000Z

Original author: sebastian.huber

In [changeset:"c9d2405848bd55676578748f191c2f2317b9dd76/rtems" c9d2405/rtems]:

```
libtest: Add rtems_test_run()

Update #3199.
```

Author: Trac Migrate 2020-07-23T08:58:40.000Z

Original author: sebastian.huber

In [changeset:"cc3fd8fcf182cfa35388fc79c14e784a968570ae/rtems" cc3fd8fc/rtems]:

```
libtest: Add T_interrupt_test()

Update #3199.
```

Author: Trac Migrate 2020-08-06T17:16:12.000Z

Original author: sebastian.huber

In [changeset:"32f1f747cc7789d105f16227cafbe96b0371ae4d/rtems" 32f1f747/rtems]:

```
libtest: Fix T_interrupt_test() in SMP configs

Update #3199.
```

Author: Trac Migrate 2020-08-07T16:10:19.000Z

Original author: sebastian.huber

In [changeset:"f933b651e7737cfd2c5d6030bd77dc825c2cb702/rtems" f933b65/rtems]:

```
libtest: Improve T_check_task_context

Update #3199.
```

Author: Trac Migrate 2020-08-10T09:50:29.000Z

Original author: sebastian.huber

In [changeset:"20c79bf5eb35df83253b9ead0a6c070b575100cb/rtems" 20c79bf/rtems]:

```
libtest: Constify

Update #3199.
```

Author: Trac Migrate 2020-08-11T06:04:20.000Z

Original author: sebastian.huber

In [changeset:"c1354f05149a9290d61ff9acf39129df46d5eac5/rtems" c1354f0/rtems]:

```
libtest: Add T_thread_switch_record()

Add support to record thread switch events.  This can be used to check
```

(continues on next page)

(continued from previous page)

```
that a blocking operation results in the expected sequence of thread
switches.

Update #3199.
```

Author: Trac Migrate 2020-08-18T05:15:18.000Z

Original author: sebastian.huber

In [changeset:"5a8114c6c5a076b43375a98b50cb42f70141b78e/rtems" 5a8114c6/rtems]:

```
libtest: Change fixture scope method

Return the produced character count.  There is no need for a NUL
termination.

Update #3199.
```

Author: Trac Migrate 2020-08-18T05:15:21.000Z

Original author: sebastian.huber

In [changeset:"e67eff2b53d4178a66f48de6d496e6272898761a/rtems" e67eff2/rtems]:

```
libtest: Add output buffer drain and fill

Update #3199.
```

Author: Trac Migrate 2020-08-18T05:15:25.000Z

Original author: sebastian.huber

In [changeset:"a7af34d0cfdb8b1cfa553fad78339798334963ad/rtems" a7af34d0/rtems]:

```
libtest: Add T_do_is_runner()

Update #3199.
```

Author: Trac Migrate 2020-08-18T05:15:28.000Z

Original author: sebastian.huber

In [changeset:"5d614fdfa7ff0c4ea27cffc83451dd64d6f26352/rtems" 5d614fd/rtems]:

```
libtest: Add T_puts()

Update #3199.
```

Author: Trac Migrate 2020-08-18T05:15:31.000Z

Original author: sebastian.huber

In [changeset:"cbc1ba341d5a1d5ece514fb4f506f80bd1a6b061/rtems" cbc1ba3/rtems]:

```
libtest: Use line buffer in T_check()

Update #3199.
```

Author: Trac Migrate 2020-08-18T05:15:34.000Z

Original author: sebastian.huber

In [changeset:"33eb113c36a5418f25b3165092b622ea91c25d27/rtems" 33eb113/rtems]:

```
libtest: Add T_check_steps()

Update #3199.
```

Author: Trac Migrate 2020-08-18T05:15:37.000Z

Original author: sebastian.huber

In [changeset:"5383d4db04bc8b8c97957edb54375de304e0458b/rtems" 5383d4db/rtems]:

```
libtest: Add fixture steps

Support a new test plan for each nested fixture.

Update #3199.
```

Author: Trac Migrate 2020-08-18T05:15:41.000Z

Original author: sebastian.huber

In [changeset:"72960bc7d4c8f7eb7687827d1c1545b1eb5fdb71/rtems" 72960bc7/rtems]:

```
libtest: Change T_step() and T_assert_step()

Normally, the expected test step must be a compile time constant.  Allow
variable expected test steps for the T_step() and T_assert_step().  This
can be used for parameterized test loops with individual fixtures.

Remove the ability to use custom failure messages due to some
implementation constraints.

Update #3199.
```

Author: Trac Migrate 2020-08-18T05:15:44.000Z

Original author: sebastian.huber

In [changeset:"13acd90003f5d5b65b0a6cbae510df3bdad4c778/rtems" 13acd90/rtems]:

```
libtest: Use a destructor

Do not set up a new test steps environment.

Update #3199.
```

Author: Trac Migrate 2020-08-18T05:15:47.000Z

Original author: sebastian.huber

In [changeset:"c7289484348fc33f77dc99e74a8d0a298144514d/rtems" c7289484/rtems]:

```
libtest: Add T_push_plan() and T_pop_plan()

Update #3199.
```

Author: Trac Migrate 2020-08-31T14:21:37.000Z

Original author: sebastian.huber

In [changeset:"d556af36059c420afeb4847247b965d45d26f9dc/rtems" d556af36/rtems]:

```
bsps: Always install IPI in SMP configs

The inter-processor interrupt (IPI) may be used to process per-CPU jobs.
See for example the blocked handler in T_interrupt_test().

Update #3199.
```

Author: Trac Migrate 2020-09-17T16:09:12.000Z

Original author: sebastian.huber

In [changeset:"98d2adb935e280f71243549a4dd31eac29c49c27/rtems" 98d2adb/rtems]:

```
libtest: Fix T_thread_switch_record()

If RTEMS_DEBUG is not defined, then we have to explicitly set the node
off the chain.

Update #3199.
```

Author: Trac Migrate 2020-11-19T07:39:42.000Z

Original author: sebastian.huber

In [changeset:"c542345b257e1fda5f808d4c13c809c0c0e28af7/rtems" c542345/rtems]:

```
libtest: Simplify "Load" environment reporting

Report all runtime measurement environments with a name only and encode
the worker count of the "Load" environment in the name.

Update #3199.
```

Author: Trac Migrate 2020-11-19T07:59:18.000Z

Original author: sebastian.huber

In [changeset:"cdbd72d896ba8e48b3e6f8c2a3cb6a73f80bccb7/rtems-docs" cdbd72d/rtems-docs]:

```
eng: Rename ValidCache environment in FullCache

This name better reflects the execution envirnoment in which the cache
is fully loaded with valid data unrelated to the body request handler.

Update #3199.
```

Author: Trac Migrate 2020-11-19T07:59:20.000Z

Original author: sebastian.huber

In [changeset:"0454ad786d10e7fc4fd72dcfe1a3cbcb44d6aac3/rtems-docs" 0454ad7/rtems-docs]:

```
eng: Simplify "Load" environment reporting

Report all runtime measurement environments with a name only and encode
the worker count of the "Load" environment in the name.

Update #3199.
```

Author: Trac Migrate 2020-11-24T06:40:45.000Z

Original author: sebastian.huber

In [changeset:"aa1c6ddd5cf32ae9e7d4e0c3ef94ed57ad3c0384/rtems" aa1c6dd/rtems]:

```
libtest: Fix undefined setjmp() behaviour

Bug was introduced by 78baeb757957fa0807c30e6c4d21ae99c9639e6a.

Update #3199.
```

Author: Trac Migrate 2021-09-29T13:25:31.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

The test framework is fully implemented.

Author: Amar Takhar 2024-04-25T20:45:54.955Z

changed the description

Author: Amar Takhar 2024-04-25T20:47:08.150Z

mentioned in issue #3701

Author: Amar Takhar 2024-04-25T20:47:16.615Z

mentioned in issue #3716

3.9.1.427 3659 - LEON3 kernel entry point is overwritten - secondary processors may enter into spurious handler

Id	3659
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-12-13T14:55:49.000Z
Updated	2024-04-25T20:46:58.078Z
Milestone	6.1
Labels	arch:sparc, priority::normal, qualification, resolution::fixed, ticket-type::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3659
Merges	0

Original author: martinaberg

When linking a LEON3 RTEMS SMP application, the entry point in the ELF output file is set to the symbol “start”.

“start” is the first entry in the trap table and directly jumps to “hard_reset”.

The boot CPU does the following in the boot_card(): 1. Release other CPUs from power-down (but does not wait here) 2. Some other initializations 3. Overwrite trap entry 0 with spurious interrupt handler 4. The rest

It means that the entry point is guaranteed to be valid for the first CPU entering the RTEMS kernel. But 1. and 3. above gives a race. non-first CPU:s will either enter the kernel properly or end up in the spurious interrupt handler depending on how quick it reaches the “start” label.

One example where this has been an issue is when secondary processors run for some time (self-tests) in a ROM boot loader before entering the RTEMS (ELF) entry point. It is convenient to use the ELF file entry point for all processors.

Possible solutions:

a. Do not install spurious handler on trap table entry 0. For example by changing bsps/sparc/leon3/start/spurious.c:

```
-  for ( trap=1 ; trap<256 ; trap++ ) {
+  for ( trap=0 ; trap<256 ; trap++ ) {
```

(This changes address 0 on GR740. So following a null function pointer may not end up in spurious trap anymore.)

b. Change the SPARC ELF entry point. For example to the symbol hard_reset.

c. Document that the entry point for boot processor is “start” and entry point for other processors is “hard_reset”.

Author: Trac Migrate 2021-09-02T05:57:51.000Z

Original author: martinaberg

- **Milestone** set to %”6.1”

This was fixed by #4459. The trap table is now read-only.

Author: Trac Migrate 2021-09-29T13:28:14.000Z

Original author: martinaberg

- **Resolution** set to ~”fixed”
- **Status** changed from *new* to *closed*

Author: Amar Takhar 2024-04-25T20:46:58.129Z

changed the description

3.9.1.428 3657 - Add support for poll.h method - poll

Id	3657
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-12-11T16:35:18.000Z
Updated	2024-04-25T20:46:57.224Z
Milestone	6.1
Labels	api::posix, posix::compliance, priority::normal, resolution::fixed, ticket-type::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3657
Merges	0

Original author: Sal

According to the RTEMS POSIX 1003.1 Compliance Guide, `poll()` from `poll.h` is not supported (https://docs.rtems.org/branches/master/posix-compliance/posix-compliance.html#poll-h)

PS: I wrote the test for POSIX API Signature Compliance Test and it compiled correctly but I suppose that some things are still not fully supported.

Author: Trac Migrate 2018-12-11T19:23:39.000Z

Original author: Sal

In [changeset:”6ab788dce7a9eb6195c482de46dd005ebb60849e/rtems” 6ab788d/rtems]:

```
psxhdrs: Implement POSIX API Signature Compliance Tests for poll.h (GCI␣
↪2018)

poll.h implements poll() which is not supported by RTEMS according
```

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```
to the RTEMS POSIX 1003.1 Compliance Guide. See #3657.

This work was part of GCI 2018.
```

Author: Joel Sherrill 2021-12-03T20:50:09.000Z

Original author: Sal

- **Milestone** changed from %"Indefinite" to %"6.1"
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

poll() is in rtems-libbsd. Compliance spreadsheet updated.

Author: Amar Takhar 2024-04-25T20:46:57.265Z

changed the description

3.9.1.429 3596 - Remove deprecated rtems_rate_monotonic_period_time_t

Id	3596
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-11-07T13:01:09.000Z
Updated	2024-04-25T20:46:41.282Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3596
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2020-07-14T05:26:53.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"65dc040bfb30e651c8ec9274c038dd00f336014c/rtems" 65dc040/rtems]:

```
rtems: Remove rtems_rate_monotonic_period_time_t

This type was deprecated in RTEMS 5.1.

Close #3596.
```

Author: Amar Takhar 2024-04-25T20:46:41.319Z

changed the description

3.9.1.430 3594 - Remove deprecated rtems_thread_cpu_usage_t

Id	3594
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-11-07T12:53:29.000Z
Updated	2024-04-25T20:46:40.426Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3594
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2020-07-14T05:27:06.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"312fcf2fd454e09c71fce77d32218124d27a2a59/rtems" 312fcf2/rtems]:

```
rtems: Remove rtems_thread_cpu_usage_t

This type was deprecated in RTEMS 5.1.

Close #3594.
```

Author: Amar Takhar 2024-04-25T20:46:40.463Z

changed the description

3.9.1.431 3592 - Remove deprecated region_information_block

Id	3592
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-11-07T12:50:21.000Z
Updated	2024-04-25T20:46:39.535Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3592
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2020-07-14T05:27:03.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"1546b1c01d1f348bccb27a9bf5e2ae432e9972ba/rtems" 1546b1c0/rtems]:

```
rtems: Remove region_information_block

This type was deprecated in RTEMS 5.1.

Close #3592.
```

Author: Amar Takhar 2024-04-25T20:46:39.572Z

changed the description

3.9.1.432 3590 - Remove deprecated rtems_context_fp

Id	3590
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-11-07T12:47:08.000Z
Updated	2024-04-25T20:46:38.663Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3590
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2018-11-07T12:50:54.000Z

Original author: sebastian.huber

- **Milestone** changed from %"5.1" to %"6.1"
- **Version** changed from ~"5" to ~"6"

Author: Trac Migrate 2020-07-14T05:26:59.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"f8998f19da3dc33466a72555c80125baa9d49eb1/rtems" f8998f1/rtems]:

```
rtems: Remove rtems_context_fp

This type was deprecated in RTEMS 5.1.

Close #3590.
```

Author: Amar Takhar 2024-04-25T20:46:38.700Z

changed the description

3.9.1.433 3588 - Remove deprecated rtems_context

Id	3588
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-11-07T12:43:40.000Z
Updated	2024-04-25T20:46:37.811Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3588
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2020-07-14T05:26:56.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"df2dac388db583270a0e27f9b820156b6cc638f9/rtems" df2dac3/rtems]:

```
rtems: Remove rtems_context

This type was deprecated in RTEMS 5.1.

Close #3588.
```

Author: Amar Takhar 2024-04-25T20:46:37.849Z

changed the description

3.9.1.434 3586 - Remove deprecated proc_ptr definition

Id	3586
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-11-07T12:39:29.000Z
Updated	2024-04-25T20:46:36.951Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3586
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2020-07-14T05:27:14.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"53a5af2155f6021bdca620009cfa4a7ceb2c9834/rtems" 53a5af2/rtems]:

```
rtems: Remove deprecated proc_ptr definition

Close #3586.
```

Author: Amar Takhar 2024-04-25T20:46:36.988Z

changed the description

3.9.1.435 3584 - Remove types which are only available if RTEMS_DEPRECATED_TYPES is defined

Id	3584
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-11-07T12:36:56.000Z
Updated	2024-04-25T20:46:36.067Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3584
Merges	0

Original author: sebastian.huber

The types

- boolean,
- single_precision,
- double_precision,
- rtems_single,
- rtems_double, and
- rtems_boolean.

are only available if RTEMS_DEPRECATED_TYPES is defined. They are deprecated for a long time. Remove them in this release.

Author: Trac Migrate 2018-11-08T07:11:19.000Z

Original author: sebastian.huber

In [changeset:"a9767a07a2695cb52dc1b0d03aa83dfed171a5f0/rtems" a9767a07/rtems]:

```
score: Use RTEMS_DEPRECATED for deprecated types

Update #3584.
```

Author: Trac Migrate 2020-07-14T05:27:10.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"2adf328d050b36e5de2d9a87dc2d22f8696fa378/rtems" 2adf328/rtems]:

```
rtems: Remove support for RTEMS_DEPRECATED_TYPES

Close #3584.
```

Author: Amar Takhar 2024-04-25T20:46:36.109Z

changed the description

3.9.1.436 3456 - Add support for CPU counter timestamps

Id	3456
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-06-15T10:02:54.000Z
Updated	2024-04-25T20:46:20.942Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::score, ticket-type::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3456
Merges	0

Original author: sebastian.huber

The original use case for the CPU counter was low level profiling of SMP synchronization primitives and busy wait loops for device drivers.

For low overhead timestamps the CPU counter may be also used, e.g. for tracing. To support timestamps, the CPU counter must increment monotonically within the whole range of the CPU counter data type, e.g. 32-bit unsigned integer. In addition, it should not be affected by power saving states of the processor.

Author: Trac Migrate 2018-06-19T04:58:16.000Z

Original author: sebastian.huber

In [changeset:"4c7b18e3588db0658a77ee60170875d00c680110/rtems" 4c7b18e3/rtems]:

```
Add RTEMS_SYSINIT_CPU_COUNTER

Add initialization step for the CPU counter support.

Update #3456.
```

Author: Trac Migrate 2018-06-19T04:58:29.000Z

Original author: sebastian.huber

In [changeset:"65f868cac6f7fd5c3ad02046574c19f8f4673255/rtems" 65f868c/rtems]:

```
Add _CPU_Counter_frequency()

Add rtems_counter_frequency() API function.  Use it to initialize the
counter value converter via the new system initialization step
(RTEMS_SYSINIT_CPU_COUNTER).  This decouples the counter implementation
and the counter converter.  It avoids an unnecessary pull in of the
64-bit integer division from libgcc.

Update #3456.
```

Author: Trac Migrate 2018-06-19T04:58:39.000Z

Original author: sebastian.huber

In [changeset:"6d130e66d3200cd2c08598777ef515bae840fa87/rtems-docs" 6d130e6/rtems-docs]:

```
c-user: Document RTEMS_SYSINIT_CPU_COUNTER

Update #3456.
```

Author: Trac Migrate 2018-06-19T04:58:41.000Z

Original author: sebastian.huber

In [changeset:"762fa62ccaebadb7fa486da634c27b02960112b1/rtems" 762fa62/rtems]:

```
arm: Simplify CPU counter support

Use the standard ARMv7-M systick module for the ARMv7-M CPU counter
instead of DWT counter since the DWT counter is affected by power saving
states.

Use an inline function for _CPU_Counter_difference() for all ARM BSPs.

Update #3456.
```

Author: Trac Migrate 2018-09-20T05:28:13.000Z

Original author: sebastian.huber

In [changeset:"b3cf79b9c472ed8c219f8c9a9d8fb571671f3815/rtems" b3cf79b/rtems]:

```
bsp/leon3: Fix typo which breaks the CPU counter

Update #3456.
```

Author: Trac Migrate 2018-12-07T13:33:54.000Z

Original author: sebastian.huber

In [changeset:"0a1f5df98e52b028bf8b4de3bf63e39702fa5f34/rtems" 0a1f5df9/rtems]:

```
Simplify _CPU_Counter_difference()

In order to simplify the use of CPU counter values it is beneficial to
have monotonic increasing values within the range of the CPU counter
ticks data type, e.g. 32-bit unsigned integer.  This eases the use of
CPU counter timestamps in external tools which do not know the details
of the CPU counter hardware.  The CPU counter is the fastest way to get
a time on an RTEMS system.

Such a CPU counter may be also used as the timecounter.  Use it on SPARC
for this purpose to simplify the clock drivers.

Update #3456.
```

Author: Trac Migrate 2019-02-07T07:48:53.000Z

Original author: sebastian.huber

In [changeset:"0fb52cede19fc9706e8426fe3145724fc9ea1028/rtems" 0fb52ce/rtems]:

```
bsps/arm: Fix generic timer frequency

Update #3456.
```

Author: Trac Migrate 2019-04-09T05:32:17.000Z

Original author: sebastian.huber

In [changeset:"b8a0a49672e45ba91d42c98a6c2601cc254edb1c/rtems" b8a0a496/rtems]:

```
bsps/arm: Fix ARMv7-M CPU counter

Read the current counter value again after we know that we had an
```

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```
underflow.

Update #3456.
```

Author: Trac Migrate 2019-04-09T06:11:42.000Z

Original author: sebastian.huber

In [changeset:"222570a61b3a75635e47708f8b530fb6bc988cf6/rtems" 222570a/rtems]:

```
bsps/arm: Optimize ARMv7-M CPU counter

Update #3456.
```

Author: Trac Migrate 2019-12-19T08:07:34.000Z

Original author: sebastian.huber

- **Milestone** changed from %"5.1" to %"6.1"

Author: Trac Migrate 2022-09-09T05:46:03.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"270200e972e6c2a5733a12ee70fcc3b7e2940c6c/rtems" 270200e/rtems]:

```
score: Remove _CPU_Counter_difference()

All CPU ports used the same _CPU_Counter_difference() implementation. Remove
this CPU port interface and mandate a monotonically increasing CPU counter.

Close #3456.
```

Author: Amar Takhar 2024-04-25T20:46:20.980Z

changed the description

3.9.1.437 3269 - Make the IRQ extensions API a standard API

Id	3269
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-01-02T10:58:04.000Z
Updated	2024-04-25T20:45:59.326Z
Milestone	6.1
Labels	device, priority::normal, qualification, resolution::fixed, ticket-type::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3269
Merges	0

Original author: sebastian.huber

The IRQ extensions API defined by <rtems/irq-extensions.h> is currently only implemented by some BSPs and not covered by test cases. It is not documented in the RTEMS Classic API Guide. Change the BSPs so that every BSP implements this API at least as a stub so that we can write tests for this API. Specify and document the API.

Extend the API to enable/disable specific interrupt vectors. The proposed functions for this are rtems_interrupt_mask() and rtems_interrupt_unmask().

Extend the API to raise/clear specific interrupt vectors. This allows to test specific interrupts. The proposed functions are rtems_interrupt_raise() and rtems_interrupt_clear().

Extend the API to set/get the interrupt vector priority.

Extend the API to get some information about a particular interrupt vector, e.g. if the raise/clear functions work, if it is possible to change the priority, etc.

Author: Trac Migrate 2018-01-04T06:20:36.000Z

Original author: sebastian.huber

In [changeset:"569fd5097c4853136728f5a43b1706a8c4a253e5/rtems" 569fd50/rtems]:

```
sparc: Remove BSP specifics from <pci/irq.h>

Update #3254.
Update #3260.
Update #3269.
```

Author: Trac Migrate 2019-05-13T13:33:51.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

<details> <summary>Summary</summary> <pre> The IRQ extensions API defined by <rtems/irq-extensions.h> is currently only implemented by some BSPs and not covered by test cases. It is not documented in the RTEMS Classic API Guide. Change the BSPs so that every BSP implements this API at least as a stub so that we can write tests for this API. Specify and document the API.

Extend the API to enable/disable specific interrupt vectors. The proposed functions for this are rtems_interrupt_mask() and rtems_interrupt_unmask().

Extend the API to raise/clear specific interrupt vectors. This allows to test specific interrupts. The proposed functions are rtems_interrupt_raise() and rtems_interrupt_clear().

Extend the API to set/get the interrupt vector priority.

Extend the API to get some information about a particular interrupt vector, e.g. if the raise/clear functions work, if it is possible to change the priority, etc. </pre> </details> * **Milestone** changed from %"Indefinite" to %"5.1" * **Summary** changed from *Add functions to enable, disable, and clear interrupts to the IRQ extensions API* to *Make the IRQ extensions API a standard API* * **Version** set to ~"5"

Author: Trac Migrate 2019-05-16T07:59:21.000Z

Original author: sebastian.huber

In [changeset:"45d06591f12c108ab27207c464ce46f0d0f26980/rtems" 45d0659/rtems]:

```
bsps: Always build generic interrupt support

This makes it possible to write tests for the generic interrupt
controller support.

Update #3269.
```

Author: Trac Migrate 2019-07-05T07:04:53.000Z

Original author: sebastian.huber

In [changeset:"e9c83b46a045ea0d6dad9fc73578d0694ae8886b/rtems" e9c83b4/rtems]:

```
bsps: Regenerate headers.am

Update #3269.
```

Author: Trac Migrate 2019-12-19T08:07:34.000Z

Original author: sebastian.huber

- **Milestone** changed from %”5.1” to %”6.1”

Author: Trac Migrate 2020-07-31T05:01:26.000Z

Original author: sebastian.huber

In [changeset:”a3bcc79a1fdf069c08c2b5b7f17042e052f67a0a/rtems” a3bcc79/rtems]:

```
bsps/lm32: Use shared <bsp/irq.h>

Having a duplicate header with the shared includes is a build system
inconsistency.  You may use one header file to build the libraries and
another one is installed (overwriting the other).

Update #3269.
```

Author: Trac Migrate 2021-06-24T10:29:35.000Z

Original author: sebastian.huber

In [changeset:”61d0be7214b26e9dcbc99c7b39779569a91f4f01/rtems” 61d0be7/rtems]:

```
bsps/irq: Remove BSP_INTERRUPT_NO_HEAP_USAGE

Remove the support for BSP_INTERRUPT_NO_HEAP_USAGE.  This was only used
by one BSP and provides no real benefit.

Update #3269.
```

Author: Trac Migrate 2021-06-24T10:29:39.000Z

Original author: sebastian.huber

In [changeset:”4146d3948d10d5c4f2bcfea51b843427701d14e7/rtems” 4146d39/rtems]:

```
bsp/genmcf548x: Change BSP_INTERRUPT_VECTOR_MIN

This BSP uses a customized implementation of the interrupt extension␣
↪API.  It
was the only BSP which defined BSP_INTERRUPT_VECTOR_MIN to a value␣
↪other than
zero.  Define it to zero and use a custom bsp_interrupt_is_valid_
↪vector()
function instead.

Update #3269.
```

Author: Trac Migrate 2021-06-24T10:29:42.000Z

Original author: sebastian.huber

In [changeset:"5210c7c2193136a5f31d464f150cb022f2baa7a0/rtems" 5210c7c/rtems]:

```
bsp/generic_or1k: Remove incomplete IRQ support

Update #3269.
```

Author: Trac Migrate 2021-06-24T10:29:46.000Z

Original author: sebastian.huber

In [changeset:"f3acb8bf03b959659eb88f5ee1f9b5f33b4486db/rtems" f3acb8b/rtems]:

```
bsps/irq: Assert BSP_INTERRUPT_VECTOR_MIN == 0

After building all BSPs with this patch, this BSP-specific define can be
removed to simplify the implementation.

Update #3269.
```

Author: Trac Migrate 2021-06-24T10:29:49.000Z

Original author: sebastian.huber

In [changeset:"af73b7b64b385232eddfd899ebd9e93054b66026/rtems" af73b7b6/rtems]:

```
bsps/irq: Remove BSP_INTERRUPT_VECTOR_MIN

Remove BSP_INTERRUPT_VECTOR_MIN and unconditionally let interrupt vector
numbers start with zero.

The BSP_INTERRUPT_VECTOR_MIN == 0 invariant was tested by the previous␣
↪commit
and building all BSPs.

Update #3269.
```

Author: Trac Migrate 2021-06-24T10:29:53.000Z

Original author: sebastian.huber

In [changeset:"900a84c5d1c966b33621d24fae3c2c100b020f81/rtems" 900a84c5/rtems]:

```
smpcapture02: Fix use of BSP_INTERRUPT_VECTOR_MAX

This define represents the last valid interrupt vector number.

Update #3269.
```

Author: Trac Migrate 2021-06-24T10:29:56.000Z

Original author: sebastian.huber

In [changeset:"cd5573c09def76d3d202349639da6ba05617b31b/rtems" cd5573c/rtems]:

```
bsps/irq: Add BSP_INTERRUPT_VECTOR_COUNT

Assert BSP_INTERRUPT_VECTOR_MAX + 1 == BSP_INTERRUPT_VECTOR_COUNT.

After building all BSPs with this patch, BSP_INTERRUPT_VECTOR_MAX can be
removed and replaced by BSP_INTERRUPT_VECTOR_COUNT.  The
BSP_INTERRUPT_VECTOR_COUNT allows a default implementation which␣
↪supports no
interrupt vector at all.  Using COUNT instead of MAX may avoid some
interpretation issues, for example is the maximum value a valid vector␣
↪number
or not.

Update #3269.
```

Author: Trac Migrate 2021-06-24T10:30:00.000Z

Original author: sebastian.huber

In [changeset:"049e2b64e142ef23d7901d22c4ee6c5b87e8c3ee/rtems" 049e2b6/rtems]:

```
bsps/irq: Remove BSP_INTERRUPT_VECTOR_NUMBER

Replace it with BSP_INTERRUPT_VECTOR_COUNT.

Update #3269.
```

Author: Trac Migrate 2021-06-24T10:30:03.000Z

Original author: sebastian.huber

In [changeset:"3fee662093dabd5550d7093fe1d77080f74ab437/rtems" 3fee6620/rtems]:

```
bsps/irq: Use BSP_INTERRUPT_VECTOR_COUNT

Use BSP_INTERRUPT_VECTOR_COUNT instead of BSP_INTERRUPT_VECTOR_MAX.

Update #3269.
```

Author: Trac Migrate 2021-06-24T10:30:07.000Z

Original author: sebastian.huber

In [changeset:"94cf67ca660c4a417b9c9485a4a2ed0d75208595/rtems" 94cf67c/rtems]:

```
bsps/irq: Remove BSP_INTERRUPT_VECTOR_MAX

This define is no longer used.

Update #3269.
```

Author: Trac Migrate 2021-06-24T10:30:10.000Z

Original author: sebastian.huber

In [changeset:"fdf2ee773a06b1eb2bb4e061c21cd49ba860cbc7/rtems" fdf2ee7/rtems]:

```
bsps/irq: Default BSP_INTERRUPT_VECTOR_COUNT == 0

Change the default value of BSP_INTERRUPT_VECTOR_COUNT so that no␣
↪interrupt
vectors are supported and all related directives return RTEMS_INVALID_
↪ID.

Update #3269.
```

Author: Trac Migrate 2021-06-24T10:30:14.000Z

Original author: sebastian.huber

In [changeset:"6b7a38589a930b8b81d9052280a88a14e9518950/rtems" 6b7a3858/rtems]:

```
bsp/atsam: Fix BSP_INTERRUPT_VECTOR_COUNT

Fix an off by one error.

Update #3269.
```

Author: Trac Migrate 2021-07-12T12:27:57.000Z

Original author: sebastian.huber

In [changeset:"c7b3df3f516e0dbf032ad480ba5204de0e4d2bd6/rtems" c7b3df3f/rtems]:

```
bsps/sparc: Improve interrupt affinity support

Fully support the interrupt extension API to set/get the interrupt affinity.
Remove LEON3_irq_to_cpu which defined the interrupt to processor mapping in a
BSP-specific way.

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:42:57.000Z

Original author: sebastian.huber

In [changeset:"efb3fc284a8fd982e953e3ebea4f0caa615dd456/rtems" efb3fc2/rtems]:

```
bsps/irq: Move get/set affinity to separate file

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:00.000Z

Original author: sebastian.huber

In [changeset:"1b3b5b8428fbfee9253a978c9d63ef47663e23bb/rtems" 1b3b5b84/rtems]:

```
bsps/irq: Canonicalize get/set affinity errors

Bring the error conditions and status in line with
rtems_task_get_affinity() and rtems_task_set_affinity().

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:04.000Z

Original author: sebastian.huber

In [changeset:"04c2c0804b1404f7544b1154b410842292bd84ec/rtems" 04c2c08/rtems]:

```
bsps/irq: Move handler iterate to separate file

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:07.000Z

Original author: sebastian.huber

In [changeset:"ba9374598cce18938d3f530d00aa20471e8e5dd4/rtems" ba937459/rtems]:

```
rtems: Add rtems_interrupt_raise()

Add rtems_interrupt_raise_on().  Document the currently not implemented
rtems_interrupt_clear().  Remove the not implemented and badly named
rtems_interrupt_cause() directive.

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:11.000Z

Original author: sebastian.huber

In [changeset:"c4eafae27958ac0b2f356c953876a3b0aa6fa966/rtems" c4eafae2/rtems]:

```
rtems: Generate <rtems/irq-extension.h>

Use <rtems/score/chain.h> which just provides the data types and avoid a
dependency on <rtems/chain.h> which contains the full chain
implementation.

Change license to BSD-2-Clause according to file histories and
documentation re-licensing agreement.

Update #3269.
Update #3899.
Update #3993.
```

Author: Trac Migrate 2021-07-27T05:43:14.000Z

Original author: sebastian.huber

In [changeset:"5e33aec041c3435dbef9c20042c682a952f1c6b2/rtems" 5e33aec/rtems]:

```
rtems: Add rtems_interrupt_get_attributes()

```

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```
Add a directive to query the attributes of an interrupt vector.  This
can be used for generic tests and system diagnostics.

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:18.000Z

Original author: sebastian.huber

In [changeset:"96265c87a3122e0bef52fb343a730408e747035a/rtems" 96265c8/rtems]:

```
rtems: Add rtems_interrupt_vector_enable()

Add rtems_interrupt_vector_disable().

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:21.000Z

Original author: sebastian.huber

In [changeset:"01e7c36b39f439c9dc600cc529178b3fbd09d6c9/rtems" 01e7c36/rtems]:

```
rtems: Add rtems_interrupt_vector_is_enabled()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:25.000Z

Original author: sebastian.huber

In [changeset:"faa4b6365405ff4f881e3b3605957d2e0540bc04/rtems" faa4b636/rtems]:

```
rtems: Add rtems_interrupt_is_pending()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:28.000Z

Original author: sebastian.huber

In [changeset:"4969af41028ff7861753efe451826c2c42fc45b2/rtems" 4969af4/rtems]:

```
rtems: Add RTEMS_FATAL_SOURCE_SPURIOUS_INTERRUPT

Add RTEMS_FATAL_SOURCE_SPURIOUS_INTERRUPT as the fatal source for
spurious interrupts.  Use the interrupt vector number of the spurious
interrupt for the fatal code.

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:32.000Z

Original author: sebastian.huber

In [changeset:"781213f9ec5eb4f56c4df66253a8315ea513693e/rtems" 781213f9/rtems]:

```
bsps/irq: Add rtems_interrupt_vector_is_enabled()

Add a default implementation which just returns RTEMS_UNSATISFIED for
valid parameters.

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:35.000Z

Original author: sebastian.huber

In [changeset:"9832652c53af44367cd3a9cf789bdb997a85043c/rtems" 9832652c/rtems]:

```
bsps/irq: Add rtems_interrupt_raise()

Add rtems_interrupt_raise_on() and rtems_interrupt_clear().

Add a default implementation which just returns RTEMS_UNSATISFIED for
valid parameters.

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:38.000Z

Original author: sebastian.huber

In [changeset:"eebecd09fad576f9d5fbc57fceefc2147910dae4/rtems" eebecd0/rtems]:

```
bsps/irq: Add rtems_interrupt_get_attributes()

Add a default implementation which clears the attributes to zero and
```

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```
4 just returns RTEMS_SUCCESSFUL for valid parameters.
5
6 Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:42.000Z

Original author: sebastian.huber

In [changeset:"deb5afb2f201d26cc618c2d56cd75de179341120/rtems" deb5afb/rtems]:

```
1 bsps/irq: Add rtems_interrupt_is_pending()
2
3 Add a default implementation which just returns RTEMS_UNSATISFIED.
4
5 Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:45.000Z

Original author: sebastian.huber

In [changeset:"bc86a5fa84f764fcd6519d30daf618be1e5e6c7a/rtems" bc86a5fa/rtems]:

```
1 bsps/irq: bsp_interrupt_vector_enable()
2
3 Return a status code for bsp_interrupt_vector_enable().
4
5 Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:48.000Z

Original author: sebastian.huber

In [changeset:"32f5a195d79ecf49e9b464d3358dd4739ae82203/rtems" 32f5a195/rtems]:

```
1 bsps/irq: bsp_interrupt_vector_disable()
2
3 Return a status code for bsp_interrupt_vector_disable().
4
5 Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:52.000Z

Original author: sebastian.huber

In [changeset:"23ec04c48c522b0beaa3d6b91f19770d78000ce1/rtems" 23ec04c/rtems]:

```
bsps/irq: bsp_interrupt_get_affinity()

Return a status code for bsp_interrupt_get_affinity().

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:56.000Z

Original author: sebastian.huber

In [changeset:"85a378510d1c63418394099ef73f7f7067d7b125/rtems" 85a3785/rtems]:

```
bsps/irq: bsp_interrupt_set_affinity()

Return a status code for bsp_interrupt_set_affinity().

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:43:59.000Z

Original author: sebastian.huber

In [changeset:"fe6ce5ac9c501f94b62f402f92c5d230d05fc6a8/rtems" fe6ce5ac/rtems]:

```
bsps/irq: Implement new directives for GICv2/3

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:02.000Z

Original author: sebastian.huber

In [changeset:"09be98d9101fcf9edb5fcc9c89187798c73d3911/rtems" 09be98d/rtems]:

```
sparc/irq: Implement new interrupt directives

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:06.000Z

Original author: sebastian.huber

In [changeset:"81358d758618e97c0f0630b706b59118685cb020/rtems" 81358d7/rtems]:

```
rtems: Add rtems_interrupt_entry_install()

Add RTEMS_INTERRUPT_ENTRY_INITIALIZER(),
rtems_interrupt_entry_initialize(), and
rtems_interrupt_entry_remove().  This allows to install interrupt
handlers using user-provided storage as an alternative to
rtems_interrupt_handler_install() which has to allocate memory.

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:09.000Z

Original author: sebastian.huber

In [changeset:"73fcbf4cffb4d731be9cd72413bd7f6bce1c6b3f/rtems" 73fcbf4/rtems]:

```
bsps/irq: Use rtems_interrupt_entry

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:13.000Z

Original author: sebastian.huber

In [changeset:"63d9e840b735248d17644101996ffbefb07ab23f/rtems" 63d9e84/rtems]:

```
bsps/irq: Add bsp_interrupt_check_and_lock()

Return RTEMS_INCORRECT_STATE instead of RTEMS_INTERNAL_ERROR in case the
interrupt support is not initialized.  This is similar to
rtems_timer_server_fire_after() for example.

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:16.000Z

Original author: sebastian.huber

In [changeset:"70357f1731931a4761dca1a5026cf73adca2a85d/rtems" 70357f1/rtems]:

```
bsps/irq: Move bsp_interrupt_handler_is_empty()

This function is only used by one BSP.
```

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```
4
5 Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:20.000Z

Original author: sebastian.huber

In [changeset:"e5183238723bb35f5f5d2f0624b821f75f8b424b/rtems" e518323/rtems]:

```
1  bsps/irq: Add rtems_interrupt_entry_install()
2
3  Add rtems_interrupt_entry_remove().  Split up irq-generic.c into␣
   ↪several files.
4  In particular, place all functions which use dynamic memory into their␣
   ↪own
5  file.
6
7  Add optional macros to let the BSP customize the vector installation␣
   ↪after
8  installing the first entry and the vector removal before removing the␣
   ↪last
9  entry:
10
11 * bsp_interrupt_vector_install()
12
13 * bsp_interrupt_vector_remove()
14
15 Use these new customization options in the m68k/genmcf548x BSP so re-
   ↪use the
16 generic interrupt controller support.
17
18 Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:23.000Z

Original author: sebastian.huber

In [changeset:"b910e60e606f5bfaa378ed07c287b12c46d0b9bc/rtems" b910e60/rtems]:

```
1 bsp/raspberrypi: Add interrupt get/set affinity
2
3 Add default implementations for bsp_interrupt_get_affinity() and
4 bsp_interrupt_set_affinity() which are required to link all tests in SMP
5 configurations.
6
7 Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:26.000Z

Original author: sebastian.huber

In [changeset:"f89cf8e8c4996bb00430953ef9947fba33ccaf63/rtems" f89cf8e8/rtems]:

```
validation: Add CallWithinISR()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:30.000Z

Original author: sebastian.huber

In [changeset:"1465e78a59869ddad0432bbe9815bcba891a2ad0/rtems" 1465e78a/rtems]:

```
validation: HasInterruptVectorEntriesInstalled()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:33.000Z

Original author: sebastian.huber

In [changeset:"bfec448682f3ba9015d70a1371e2f120a80408fc/rtems" bfec448/rtems]:

```
validation: GetValidInterruptVectorNumber()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:37.000Z

Original author: sebastian.huber

In [changeset:"9e1fc366928429437310bd7fcc40bf2e79cc742a/rtems" 9e1fc36/rtems]:

```
validation: GetTestableInterruptVector()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:40.000Z

Original author: sebastian.huber

In [changeset:"e2894df9aaebfcaf1e199a9b9c73efc4ba29c952/rtems" e2894df/rtems]:

```
validation: Test rtems_interrupt_get_attributes()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:44.000Z

Original author: sebastian.huber

In [changeset:"d8be2b974e994681f5287c3874c696f9f2b253fc/rtems" d8be2b97/rtems]:

```
validation: rtems_interrupt_vector_is_enabled()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:47.000Z

Original author: sebastian.huber

In [changeset:"7a3e6c74e3b405ce03b64ba1ec6ee4522e298b6a/rtems" 7a3e6c7/rtems]:

```
validation: Test rtems_interrupt_vector_enable()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:50.000Z

Original author: sebastian.huber

In [changeset:"aa6c962668ce80fa8b937c9554980f3f07f2fbdb/rtems" aa6c962/rtems]:

```
validation: Test rtems_interrupt_vector_disable()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:54.000Z

Original author: sebastian.huber

In [changeset:"09960369866b6391bfbe2810d35e694aafb3b4ad/rtems" 09960369/rtems]:

```
validation: Test rtems_interrupt_entry_install()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:44:57.000Z

Original author: sebastian.huber

In [changeset:"7dbab6afee3050e90bc53e57f551a069ad815b36/rtems" 7dbab6af/rtems]:

```
validation: Test rtems_interrupt_entry_remove()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:45:01.000Z

Original author: sebastian.huber

In [changeset:"434105805f242dc72759e5feb8c33c38a68d3eb0/rtems" 4341058/rtems]:

```
validation: Test rtems_interrupt_raise()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:45:04.000Z

Original author: sebastian.huber

In [changeset:"1bf8139a9e6f7bc0348e9640d944008b147d4e28/rtems" 1bf8139a/rtems]:

```
validation: Test rtems_interrupt_clear()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:45:07.000Z

Original author: sebastian.huber

In [changeset:"163c1fd1a69e4779a0e9983cd9634220129a8f4d/rtems" 163c1fd/rtems]:

```
validation: Test rtems_interrupt_is_pending()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:45:11.000Z

Original author: sebastian.huber

In [changeset:"32c0cd8ff827537f02de92c0edfc02ba9b8f77bc/rtems" 32c0cd8/rtems]:

```
validation: Test rtems_interrupt_raise_on()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:45:14.000Z

Original author: sebastian.huber

In [changeset:"aab3713655e9f7512fb2db20b99e5305bccac7c4/rtems" aab3713/rtems]:

```
validation: Test rtems_interrupt_get_affinity()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:45:18.000Z

Original author: sebastian.huber

In [changeset:"17fb523964f98b775d8ffeb837680d53fc2f84f5/rtems" 17fb5239/rtems]:

```
validation: Test rtems_interrupt_set_affinity()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:45:21.000Z

Original author: sebastian.huber

In [changeset:"67c033d39a42d3594afae35f3ea1bf131e0dbd87/rtems" 67c033d3/rtems]:

```
validation: Test rtems_interrupt_handler_iterate()

Update #3269.
```

Author: Trac Migrate 2021-07-27T05:50:33.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"056886f17196e925e7842db025dd17c95691ed84/rtems-docs" 056886f/rtems-docs]:

```
c-user: Document interrupt manager extensions

Close #3269.
```

Author: Trac Migrate 2021-08-12T19:07:44.000Z

Original author: sebastian.huber

In [changeset:"75af5be6a8239ff71992d957776787341526cb0b/rtems" 75af5be/rtems]:

```
bsp/leon3: Fix rtems_interrupt_is_pending()

Take the interrupt force register into account in all configurations.

Update #3269.
```

Author: Trac Migrate 2022-01-11T15:41:33.000Z

Original author: sebastian.huber

In [changeset:"cbc92325a1575a5ace57c458b998ea6d0b49b163/rtems" cbc9232/rtems]:

```
bsp/qoriq: Implement Interrupt Manager directives

Update #3269.
```

Author: Trac Migrate 2022-03-16T06:17:15.000Z

Original author: sebastian.huber

In [changeset:"49f84b7de3399867c8e4f555734824fd5799f6e5/rtems-docs" 49f84b7/rtems-docs]:

```
c-user: Improve interrupt set affinity handling

Update #3269.
```

Author: Trac Migrate 2022-03-16T06:24:29.000Z

Original author: sebastian.huber

In [changeset:"ca4fa22e51fc55de28736f7a9461dadf8fe4241b/rtems" ca4fa22e/rtems]:

```
bsps/irq: Fix formatting

Update #3269.
```

Author: Trac Migrate 2022-03-16T06:24:33.000Z

Original author: sebastian.huber

In [changeset:"f311caf984a46b8629f891de5904af385486fa9e/rtems" f311caf/rtems]:

```
bsps/irq: Improve affinity set handling

Restrict the affinity set to the set of online processors.  Make sure
the affinity set for an interrupt vector contains at least one online
processor.

Update #3269.
```

Author: Trac Migrate 2022-06-08T08:20:07.000Z

Original author: sebastian.huber

In [changeset:"9a69e430832ba704bf534ea48bc2a4938c53bced/rtems" 9a69e430/rtems]:

```
validation: Fix CallWithinISR()

Some BSPs require that Clear_tm27_intr() is called in the interrupt
service routine.

Update #3269.
```

Author: Trac Migrate 2023-06-16T05:30:14.000Z

Original author: sebastian.huber

In [changeset:"83305f505070edd6e4e48dc1ac1e8a3b0bb54b8e/rtems" 83305f5/rtems]:

```
pci: Do not use BSP-specific interrupt API

Update #3269.
```

Author: Trac Migrate 2023-06-16T05:30:16.000Z

Original author: sebastian.huber

In [changeset:"4e3e9df1b463cf06fac323140ca2b71f39d2d5f7/rtems" 4e3e9df/rtems]:

```
bsps: Remove uses of BSP-specific interrupt API

Update #3269.
```

Author: Trac Migrate 2023-06-16T05:30:18.000Z

Original author: sebastian.huber

In [changeset:"65b0ba4d8a09c3fc4608290cc923f93afa8e1f97/rtems" 65b0ba4/rtems]:

```
bsps/sparc: Deprecate BSP-specific interrupt API

Update #3269.
```

Author: Amar Takhar 2024-04-25T20:45:59.391Z

changed the description

3.9.1.438 3250 - Remove Use of bsp_specs

Id	3250
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2017-11-21T19:27:53.000Z
Updated	2024-04-25T20:45:58.819Z
Milestone	6.1
Labels	priority::normal, qualification, resolution::fixed, rtems::build, ticket-type::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3250
Merges	0

The bsp_specs file in each BSP directory is GCC specific and a barrier to supporting other compilers including clang/llvm. The bsp_specs file is used in a variety of ways including some odd build system dependencies and this ticket is to track eliminating those uses and the direct use of bsp_specs themselves for extending GCC options.

The primary use of the bsp_specs file is to extend GCC's notion of what to link with. The bsp_specs itself commonly specifies:

- start.o file
- program entry point

- crt[in].o or crtbegin.o/crtend.o
- linker script
- Frequently, arguments which are implicitly passed to ld.

This is typical and from a recently added BSP:

```
%rename endfile old_endfile
%rename startfile old_startfile
%rename link old_link

*startfile:
%{!qrtems: %(old_startfile)} \\
%{!nostdlib: %{qrtems: start.o%s crti.o%s crtbegin.o%s -e _start}}

*link:
%{!qrtems: %(old_link)} %{qrtems: -dc -dp -N}

*endfile:
%{!qrtems: %(old_endfiles)} %{qrtems: crtend.o%s crtn.o%s }
```

Note that it has the implicit "-dc -dp -N" arguments which are passed to ld. The -dc and -dp options are equivalent and assign space to common symbols even with linking with -r. Why these two options are included is a mystery lost to time. Similarly the -N sets the .text and .data sections to be readable and writable and do NOT page align the data segment. This option is also a blast from the ancient past and likely should not be used.

The "-qrtems" option is used with this pattern when compiling and linking RTEMS programs:

```
-B${PREFIX}/${BSP}/lib/ -specs bsp_specs -qrtems
```

The -B says that the following directory is a system directory. It is treated as a "lib" directory and is also assumed to have an include/ subdirectory. They are added to the linker and include search paths, respectfully. The -specs option references the bsp_specs and adds the -qrtems options which are then tripped by specifying -qrtems. Every part of this must be eliminated and performed in a manner that is more amenable to using a compiler other than GCC.

In order to eliminate the bsp_specs, the arguments used in each BSP's version will have to be reviewed, made common, and then eliminated. A similar effort was performed when the BSP specific make-exe rules were eliminated from the "make/custom" files and a common pattern was put in place.

In addition to using the bsp_specs to specify details about linking and include files, the build system has quite a few odd dependencies on the presence of bsp_specs:

- all BSP configure.ac use bsp_specs like this:

```
AC_CONFIG_SRCDIR([bsp_specs])
```

The idea was that this was a unique file to ensure the script was in the right directory. This can be changed to use a specfic make/custom/*.cfg file and not lose any integrity checking.

- all BSP Makefile.am have this:

```
dist_project_lib_DATA = bsp_specs
```

That can just be removed when we don't use the file.

- ./aclocal/check-bsps.m4 uses it to see if it is BSP directory
- bootstrap uses it generate the list of BSP directories for the libbsp/*/acinclude.m4 files
- Other references are either comments or obvious uses of it in

some invocation of GCC.

Author: Trac Migrate 2017-12-19T17:07:13.000Z

In [changeset:"b0b93c8a1b782a77529d2c35a05ab770aaddb4c2/rtems" b0b93c8a/rtems]:

```
gensh4: Simplify bsp_specs

Updates #3250.
```

Author: Trac Migrate 2021-01-26T05:40:00.000Z

- **Milestone** changed from %"Indefinite" to %"6.1"

The bsp_specs are only used by the old build system and can be removed with along the old build system.

Author: Trac Migrate 2021-01-28T05:30:16.000Z

In [changeset:"b361eabd93e35e2c72d3721583fa83fb14e39f4d/rtems" b361eabd/rtems]:

```
bsps: Replace bsp_specs with an empty file

This fixes an issue with the latest tool chain which adds the default
linker script in the endfile specification.

Update #3250.
```

Author: Trac Migrate 2021-09-21T08:25:58.000Z

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"db8f598d56951cf43f22a5e325e0d23c8f7559f9/rtems" db8f598/rtems]:

```
build: Remove old build system

Close #3250.
Close #4081.
```

Author: Trac Migrate 2022-09-12T06:55:14.000Z

In [changeset:"8f4543f202798095353afda44141ebb6b5b2e4e5/rtems-docs" 8f4543f/rtems-docs]:

```
user: Mention that the bsp_specs are gone

Update #3250.
```

Author: Amar Takhar 2024-04-25T20:45:58.891Z

changed the description

3.9.1.439 2985 - Add documentation for printk()

Id	2985
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2017-04-07T15:11:16.000Z
Updated	2024-04-25T20:45:40.287Z
Milestone	6.1
Labels	doc, priority::normal, qualification, resolution::fixed, tickettype::defect, tickettype::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2985
Merges	0

printk() and its variants should be documented in the Classic API User's Guide. I am not sure where though.

Author: Trac Migrate 2017-05-11T07:31:02.000Z

- **Milestone** changed from %"4.12" to %"4.12.0"

Author: Trac Migrate 2017-06-08T07:50:04.000Z

- **Milestone** changed from %"4.12.0" to %"Indefinite"

Author: Trac Migrate 2021-08-12T12:30:29.000Z

- **Milestone** changed from %"Indefinite" to %"6.1"
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

This was fixed by #4482.

Author: Amar Takhar 2024-04-25T20:45:40.320Z

changed the description

3.9.1.440 2971 - Add fenv.h to newlib

Id	2971
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2017-04-03T23:54:19.000Z
Updated	2024-04-25T20:45:37.021Z
Milestone	6.1
Labels	posix::compliance, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2971
Merges	0

`fenv.h` is not present. * http://pubs.opengroup.org/onlinepubs/9699919799/ * `feclearexcept`, `fegetenv`, `fegetexceptflag`, `fegetround`, `feholdexcept`, `feraiseexcept`, `fesetenv`, `fesetexceptflag`, `fesetround`, `fetestexcept`, `feupdateenv` * Cygwin has x86 implementation. FreeBSD should be source for ARM and some other architectures. The implementation is architecture specific.

When completed, see psxtests/Makefile.am and enable the fenv.h POSIX API Compliance Tests.

Author: Joel Sherrill 2018-03-16T18:37:28.000Z

- **Summary** changed from *Add fenv,h to newlib* to *Add fenv.h to newlib*

Author: Joel Sherrill 2018-12-06T15:34:17.000Z

- **Description** changed

```
1 `fenv.h` is not present.
2 * http://pubs.opengroup.org/onlinepubs/9699919799/
3 * `feclearexcept`, `fegetenv`, `fegetexceptflag`, `fegetround`,␣
  ↪`feholdexcept`, `feraiseexcept`, `fesetenv`, `fesetexceptflag`,␣
  ↪`fesetround`, `fetestexcept`, `feupdateenv`
4 * Cygwin has x86 implementation. FreeBSD should be source for ARM and␣
  ↪some other architectures. The implementation is architecture specific.
```

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```
+
+ When completed, see psxtests/Makefile.am and enable the fenv.h POSIX␣
↪API Compliance Tests.
```

- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*
- **Version** ~"5" deleted

Author: Trac Migrate 2018-12-06T15:34:31.000Z

In [changeset:"da2621649ca002941c77295402b9052e128487ad/rtems" da262164/rtems]:

```
POSIX Signature Test for fenv.h (GCI 2018)

Updates #2971.
```

Author: Trac Migrate 2020-06-06T20:36:54.000Z

In [changeset:"e84587355a64152b8cd6ae748ac88d8c75447b51/rtems" e845873/rtems]:

```
tests for fenv.h functions

added tests for fesetexeptflag(), fegetexeptflag(),
fegetround(), fesetround().

In the test fegetround() does not return any flag
other then FE_TONEAREST in tests.
This is probably due to soft float.

The test complies successfully and returns assert
at fegetround()

Other tests run without any errors
tested on RISCV/rv32imac

The test prints nothing if runs successfully.

updates #2971

Signed-off-by: Eshan dhawan <eshandhawan51@gmail.com>
```

Author: Joel Sherrill 2021-12-03T20:16:07.000Z

- **Milestone** changed from %"Indefinite" to %"6.1"

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

fenv.h has been added to newlib for many architectures.

Author: Amar Takhar 2024-04-25T20:45:37.126Z

changed the description

3.9.1.441 2365 - Task pre-emption disable is broken due to pseudo ISR tasks

Id	2365
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2015-06-11T13:18:57.000Z
Updated	2024-04-25T20:44:48.010Z
Milestone	6.1
Labels	priority::lowest, qualification, resolution::fixed, rtems::score, ticket-type::defect, version::4.10
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2365
Merges	0

Original author: sebastian.huber

We have for example:

```
Scheduler_Void_or_thread _Scheduler_priority_Unblock (
const Scheduler_Control *scheduler,
Thread_Control          *the_thread
)
{
Scheduler_priority_Context *context =
_Scheduler_priority_Get_context( scheduler );
Scheduler_priority_Node *node = _Scheduler_priority_Thread_get_node( the_thread );

_Scheduler_priority_Ready_queue_enqueue(
&the_thread->Object.Node,
&node->Ready_queue,
&context->Bit_map
);

/* TODO: flash critical section? */

/*
*  If the thread that was unblocked is more important than the heir,
*  then we have a new heir.  This may or may not result in a
*  context switch.
```

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```
*
*  Normal case:
*    If the current thread is preemptible, then we need to do
*    a context switch.
*  Pseudo-ISR case:
*    Even if the thread isn't preemptible, if the new heir is
*    a pseudo-ISR system task, we need to do a context switch.
*/
if ( the_thread->current_priority < _Thread_Heir->current_priority ) {
_Scheduler_Update_heir(
the_thread,
the_thread->current_priority == PRIORITY_PSEUDO_ISR
);
}

SCHEDULER_RETURN_VOID_OR_NULL;
}
```

So the unblock event of a pseudo ISR task (MPCI or timer server) may pre-empt a task with disabled pre-emption. Suppose a higher priority task than the non-preemptible task is ready. Then this task gets scheduled once the pseudo ISR task blocks again.

Author: Trac Migrate 2015-06-12T12:00:01.000Z

Original author: sebastian.huber

In changeset 0562060f074eea3fdcf5274aa3b7cbc8fe14993d:

> sptests/sptasknopreempt01: New test Update #2365.

Author: Trac Migrate 2015-06-12T12:12:15.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
We have for example:

+ {{{
Scheduler_Void_or_thread _Scheduler_priority_Unblock (
const Scheduler_Control *scheduler,
Thread_Control          *the_thread
)
{
Scheduler_priority_Context *context =
_Scheduler_priority_Get_context( scheduler );
Scheduler_priority_Node *node = _Scheduler_priority_Thread_get_node(␣
↪the_thread );
```

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```
12
13 _Scheduler_priority_Ready_queue_enqueue(
14 &the_thread->Object.Node,
15 &node->Ready_queue,
16 &context->Bit_map
17 );
18
19 /* TODO: flash critical section? */
20
21 /*
22 *  If the thread that was unblocked is more important than the heir,
23 *  then we have a new heir.  This may or may not result in a
24 *  context switch.
25 *
26 *  Normal case:
27 *    If the current thread is preemptible, then we need to do
28 *    a context switch.
29 *  Pseudo-ISR case:
30 *    Even if the thread isn't preemptible, if the new heir is
31 *    a pseudo-ISR system task, we need to do a context switch.
32 */
33 if ( the_thread->current_priority < _Thread_Heir->current_priority ) {
34 _Scheduler_Update_heir(
35 the_thread,
36 the_thread->current_priority == PRIORITY_PSEUDO_ISR
37 );
38 }
39
40 SCHEDULER_RETURN_VOID_OR_NULL;
41 }
42 + }}}
43
44 So the unblock event of a pseudo ISR task (MPCI or timer server) may␣
   ↪pre-empt a task with disabled pre-emption.  Suppose a higher priority␣
   ↪task than the non-preemptible task is ready.  Then this task gets␣
   ↪scheduled once the pseudo ISR task blocks again.
```

Author: Trac Migrate 2017-01-26T07:16:00.000Z

Original author: sebastian.huber

- **Milestone** changed from %”4.11.1” to %”4.11.2”

Author: Trac Migrate 2017-02-15T13:44:44.000Z

Original author: sebastian.huber

- **Milestone** changed from %”4.11.2” to %”Indefinite”

- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2022-07-15T08:39:46.000Z

Original author: sebastian.huber

- **Milestone** changed from %"Indefinite" to %"6.1"
- **Owner** set to sebastian.huber
- **Status** changed from *assigned* to *accepted*

Author: Trac Migrate 2022-07-26T09:18:04.000Z

Original author: sebastian.huber

In [changeset:"f1eb94b1430b63f0818dea5b047e3ebbcb7f370f/rtems-docs" f1eb94b/rtems-docs]:

```
c-user: Do not mention pseudo-interrupt priority

Update #2365.
```

Author: Trac Migrate 2022-07-26T09:23:16.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"7fe6d60bf08df975c395515074c85976d9e4e3fb/rtems" 7fe6d60/rtems]:

```
score: Remove PRIORITY_PSEUDO_ISR thread priority

The uniprocessor schedulers had some special case logic for the
PRIORITY_PSEUDO_ISR priority.  Tasks with a priority of PRIORITY_PSEUDO_
↪ISR
were allowed to preempt a not preemptible task.  If other higher␣
↪priority task
are made ready while a PRIORITY_PSEUDO_ISR task preempts a not␣
↪preemptible
task, then the other tasks run before the not preemptible task.  This␣
↪made the
RTEMS_NO_PREEMPT mode ineffective.

Remove the PRIORITY_PSEUDO_ISR special case logic.  This simplifies the
uniprocessor schedulers.  Move the uniprocessor-specific scheduler␣
↪support to
```

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```
the new header file <rtems/score/scheduleruniimpl.h>.

Close #2365.
```

Author: Amar Takhar 2024-04-25T20:44:48.055Z

changed the description

3.9.1.442 2189 - Insufficient documentation for rtems_clock_get_tod()

Id	2189
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2014-09-16T06:33:52.000Z
Updated	2024-04-25T20:44:32.519Z
Milestone	6.1
Labels	priority::highest, priority::normal, qualification, resolution::fixed, ticket-type::defect, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2189
Merges	0

Original author: sebastian.huber

It is not clear which date and time is returned by rtems_clock_get_tod(). For example which time zone is used. Is there a relation to UTC?

Author: Chris Johns 2014-09-16T07:29:53.000Z

Original author: sebastian.huber

- **Cc** added @@chrisj

The timezone is the one you used when you set the time with the set call. If the time is not set this function returns RTEMS_NOT_DEFINED. It is assumed you set a suitable time in the first place and know the specific context of use.

Author: Gedare Bloom 2014-12-19T05:06:18.000Z

Original author: sebastian.huber

- **Priority** changed from ~"normal" to ~"highest"

Bump priority to highest for tickets with a fix attached or seemingly simple fix proposed in the description or comments.

Author: Gedare Bloom 2015-03-02T20:42:45.000Z

Original author: sebastian.huber

- **Milestone** changed from %”4.11” to %”4.11.1”

bump milestone

Author: Joel Sherrill 2015-10-20T23:05:06.000Z

Original author: sebastian.huber

This ticket does not have a patch attached or an obvious (to me) fix. What is the fix proposed?

Author: Trac Migrate 2015-10-21T05:42:48.000Z

Original author: sebastian.huber

We need a more precise documentation of the time services. How are leap seconds handled for example? UNIX time vs. UTC.

Author: Trac Migrate 2015-11-24T09:34:59.000Z

Original author: sebastian.huber

The wall clock time services lack documentation in general. What is the relation between rtems_time_of_day and the UNIX time as specified by IEEE Std 1003.1, 2013 Edition, 4.15 Seconds Since the Epoch (http://pubs.opengroup.org/onlinepubs/9699919799/). For example _TOD_To_seconds() does not use the expression in this standard document. This affects rtems_timer_fire_when().

Author: Joel Sherrill 2015-11-24T16:22:54.000Z

Original author: sebastian.huber

Can you provide a specific link? That is to the top of the standard.

Author: Trac Migrate 2015-11-25T06:49:43.000Z

Original author: sebastian.huber

4.15 Seconds Since the Epoch

http://pubs.opengroup.org/onlinepubs/9699919799/basedefs/V1_chap04.html

See also

http://www.madore.org/~david/computers/unix-leap-seconds.html

Author: Trac Migrate 2017-01-26T07:16:00.000Z

Original author: sebastian.huber

- **Milestone** changed from %”4.11.1” to %”4.11.2”

Author: Trac Migrate 2017-02-15T13:37:51.000Z

Original author: sebastian.huber

- **Milestone** changed from %”4.11.2” to %”Indefinite”
- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2021-09-29T13:23:52.000Z

Original author: sebastian.huber

- **Milestone** changed from %”Indefinite” to %”6.1”
- **Resolution** set to ~”fixed”
- **Status** changed from *assigned* to *closed*

Documentation was improved for RTEMS 6.

Author: Amar Takhar 2024-04-25T20:44:32.559Z

changed the description

3.9.1.443 4999 - missing bsp’s in rtems 6.1 rc2

Id	4999
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2024-03-13T17:07:04.000Z
Updated	2024-03-15T01:44:17.000Z
Milestone	6.1
Labels	arch:powerpc, priority::high, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4999
Merges	0

Original author: junkes@fhi-berlin.mpg.de

Only a few bsps are available as configurations (bsets). Not all that are listed in the documentation. E.g. ‘beatnik’ is missing.

this is the output of ../source-builder/sb-set-builder –list-bsets ... bsps/atsamv.bset bsps/beagleboneblack.bset bsps/erc32.bset bsps/gr712rc.bset bsps/gr740.bset bsps/imx7.bset bsps/pc.bset bsps/qoriq_e500.bset bsps/qoriq_e6500_32.bset bsps/qoriq_e6500_64.bset

bsps/raspberrypi2.bset bsps/xilinx_zynq_zc702.bset bsps/xilinx_zynq_zc706.bset bsps/xilinx_zynq_zedboard.bset . . .

Author: Trac Migrate 2024-03-14T08:41:12.000Z

Original author: junkes@fhi-berlin.mpg.de

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

but this works? ../source-builder/sb-set-builder –prefix=$HOME/development/rtems/6.1-rc2 –target=powerpc-rtems6 –with-rtems-bsp=powerpc/beatnik –with-rtems-tests=yes 6/rtems-kernel

Author: Joel Sherrill 2024-03-14T14:26:09.000Z

Original author: junkes@fhi-berlin.mpg.de

Is that kernel building command line equivalent? The BSP stack bsets include more than RTEMS – they usually build the tools, rtems, network stack, and likely some support libraries. This is from BBB:

```
6/rtems-arm
6/rtems-kernel
6/rtems-libbsd
6/rtems-packages
```

If you want that set easily buildable and not just RTEMS, some more BSPs need to get added.

It would be a question for Chris, but I wonder if the RSB supports a way to have a template bset that the arch and bsp come from the command line. This could reduce it to 3 bsets (libbsd, lwip, and no networking). Just a thought.

And FWIW every BSP bset gets built as part of the OAR build sweeper. Just as needed when there are changes requiring it.

Author: Chris Johns 2024-03-15T01:44:17.000Z

Original author: junkes@fhi-berlin.mpg.de

The RTEMS deployment repo has more examples and possible ways to build BSP packages:

https://git.rtems.org/chrisj/rtems-deployment.git/tree/config/epics

3.9.1.444 4995 - powerpc/qoriq_e6500_64 rtems-syms unknown machine type (cloned)

Id	4995
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2024-02-26T09:37:41.000Z
Updated	2024-02-29T08:57:20.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4995
Merges	0

Cloned from #3627:

---

rtems-syms does not know 64-bit powerpc.

```
gmake[5]: Entering directory `/data/home/joel/rtems-work/rtems-testing/rtems/
↪build-powerpc-qoriq_e6500_64-rtems/powerpc-rtems5/c/qoriq_e6500_64/testsuites/
↪libtests'
rtems-syms -e -c "-mcpu=e6500 -m64 -fno-common -O2 -g -ffunction-sections -fdata-
↪sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-
↪prototypes -Wnested-externs" -o dl07-sym.o dl07.pre
error: machine-type: unknown machine type: 21
```

Author: Trac Migrate 2024-02-29T08:57:20.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"e7d5f9c0091b3491d662591e4c5c7ee3ae81aa70/rtems-tools" e7d5f9c/rtems-tools]:

```
rld: Recognize 64-bit PowerPC

Close #4995.
```

3.9.1.445 4974 - rtems-tools buid failed with '–host=x86_64-w64-mingw32'

Id	4974
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-11-30T06:30:04.000Z
Updated	2024-02-29T08:56:09.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4974
Merges	0

Original author: jameszxj

rtems-tools build failed with "–host=x86_64-w64-mingw32" after the commit https://git.rtems.org/rtems-tools/commit/?id=a4b312ee4f3d8c93ab0d45d568879069e7ac7d7a 'writeargv' is undefined. add libierty/argv.c will solve this problem.

- 0001-add-libiberty-argv.c-for-mingw32-build.patch

Author: Trac Migrate 2023-11-30T06:31:44.000Z

Original author: jameszxj

- **Attachment** 0001-add-libiberty-argv.c-for-mingw32-build.patch added

Author: Trac Migrate 2023-11-30T06:33:40.000Z

Original author: jameszxj

argv.c file of patch is from gcc13.2

Author: Trac Migrate 2024-02-29T08:56:09.000Z

Original author: jameszxj

- **Owner** set to zhengxiaojun <jameszxj@gmail.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"ce16c8084093f8a54afdd2d22954e41588a2bc81/rtems-tools" ce16c808/rtems-tools]:

```
add libiberty/argv.c for mingw32 build

Signed-off-by: zhengxiaojun <jameszxj@gmail.com>

Close #4974.
```

3.9.1.446 4969 - Update libibery sources in rtems-tools

Id	4969
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-11-21T04:56:37.000Z
Updated	2024-02-28T08:19:04.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4969
Merges	0

MacOS is removing `vfork`. Update to `gcc` latest sources and use POSIX spawn support.

Update all files.

Author: Trac Migrate 2023-11-21T21:29:38.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"a4b312ee4f3d8c93ab0d45d568879069e7ac7d7a/rtems-tools" a4b312e/rtems-tools]:

```
rtemstoolkit/libierty: Update to gcc latest

- Use POSIX spawn support for MacOS

Closes #4969
```

Author: Trac Migrate 2023-11-23T22:36:13.000Z

In [changeset:"b7bb49321ce59f083577b0f31dcb290a63322e43/rtems-source-builder" b7bb493/rtems-source-builder]:

```
rtems/rtems-tools: Update with C++17 and Python 3.12 fixes

Updates #4969
Updates #4970
```

Author: Trac Migrate 2024-02-28T08:19:04.000Z

In [changeset:"489565f330da91bbcf35b4a51504c6cf5d32c6fb/rtems-tools" 489565f/rtems-tools]:

```
rtemstoolkit/libiberty: Add missing file

This fixes the following build error for --host=x86_64-w64-mingw32:

rtemstoolkit/libiberty.a(pex-win32.c.18.o): in function `win32_spawn':
rtemstoolkit/libiberty/pex-win32.c:643: undefined reference to␣
↪`writeargv'

Update #4969.
```

3.9.1.447 4994 - Documentation Sphinx theme broken for HTML

Id	4994
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2024-02-21T05:01:50.000Z
Updated	2024-02-21T16:54:08.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4994
Merges	0

The theme in `rtems-docs.git` breaks with newer versions of `sphinx-build`.

Author: Amar Takhar 2024-02-21T05:29:03.000Z

Are you going to fix this?

Also you didn't mention which version of Sphinx. Which one?

Author: Trac Migrate 2024-02-21T16:54:08.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"204ac80935eb82f7b32603f63a12b7f0651a17e6/rtems-docs" 204ac80/rtems-docs]:

```
sphinx: Use the pip installed sphinx-rtd-theme

- Remove the RTEMS version of the theme

- Use conf.py to specify our style sheet

- Depend on the jQuery contrib package for including jQuery

```

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```
- Detect the theme is installed

Closes #4994
```

3.9.1.448 4967 - strtof leaks memory

Id	4967
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2023-11-15T04:07:59.000Z
Updated	2024-02-16T01:01:37.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::newlib, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4967
Merges	0

The libc call `strtof` leaks memory when a thread exits if `strtof` has been made within the context of the thread. The code uses `Balloc` and `Bfree` to obtain pieces of memory it uses. The memory is recycled using newlib reent TLS variables. The `_reclaim_reent()` does not clean up `_REENT_MP_P5S`.

- 0001-Reclaim-_REENT_MP_P5S-in-_reclaim_reent.patch
- libc-strtof-init.c

Author: Chris Johns 2023-11-15T04:08:39.000Z

- **Attachment** libc-strtof-init.c added

Testsuite test to check strtof heap usage

Author: Chris Johns 2023-11-15T04:32:48.000Z

- **Attachment** 0001-Reclaim-_REENT_MP_P5S-in-_reclaim_reent.patch added

The patch fixes the memory leack in strtof family of calls.

Author: Trac Migrate 2023-11-22T06:12:50.000Z

In [changeset:"07be298e0d32b1cccfcd8456782f40fc92cddc21/rtems-source-builder" 07be298/rtems-source-builder]:

```
6/7: Update Newlib

Pick up fixes for ARM/optimized-routines and the memory reclamation at␣
```

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```
↪thread
exit.

Update #4510.
Update #4967.
```

Author: Chris Johns 2024-02-16T01:01:37.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

3.9.1.449 4666 - TFTP: Implement block and window size options

Id	4666
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-06-21T07:25:19.000Z
Updated	2024-01-18T16:36:42.000Z
Milestone	6.1
Labels	filesystem, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4666
Merges	0

Original author: sebastian.huber

Support the following TFTP options:

- RFC 2347 TFTP Option Extension
- RFC 2348 TFTP Blocksize Option
- RFC 7440 TFTP Windowsize Option

Author: Trac Migrate 2022-06-21T07:46:13.000Z

Original author: sebastian.huber

In [changeset:"c044f0502a23a1a2c61b4e1f4db8a7895b72c2d9/rtems" c044f050/rtems]:

```
TFTPFS: Cleanup: Remove spaces at lines ends

Update #4666.
```

Author: Trac Migrate 2022-06-21T07:46:16.000Z

Original author: sebastian.huber

In [changeset:"679e7f109ab686255ca1e77f8b0cbb7812cf96e6/rtems" 679e7f10/rtems]:

```
TFTPFS: Implement block and window size options

The original file cpukit/libfs/src/ftpfs/tftpDriver.c
is split into two:

tftpfs.c     - This file contains the code from tftpDriver.c
related to file system operations such as mount(),
open(), read(), and so on.

tftpDriver.c - In the original file remains only the code related
to networking.  This code implements the Trivial
File Transfer Protocol (TFTP).

Moreover, the code is extended to support

* RFC 2347 TFTP Option Extension
* RFC 2348 TFTP Blocksize Option
* RFC 7440 TFTP Windowsize Option

Update #4666.
```

Author: Trac Migrate 2022-06-21T07:46:18.000Z

Original author: sebastian.huber

In [changeset:"3e2b4ec8575d33becb06b57cf1a0fbbd09a53f68/rtems" 3e2b4ec/rtems]:

```
TFTPFS: Add tests

Update #4666.
```

Author: Trac Migrate 2022-06-21T14:06:17.000Z

Original author: sebastian.huber

In [changeset:"e38d4f79fa5479ca243a6fd9ce31d83f325bb9b2/rtems" e38d4f7/rtems]:

```
TFTPFS: Reduce test configuration

Update #4666.
```

Author: Trac Migrate 2022-06-21T14:06:19.000Z

Original author: sebastian.huber

In [changeset:"085f3637aa1b9f62d464e79f55f67c8ed848c9bc/rtems" 085f363/rtems]:

```
TFTPFS: Fix test configuration for FP targets

The test uses snprintf().

Update #4666.
```

Author: Chris Johns 2022-11-29T22:50:21.000Z

Original author: sebastian.huber

Has this task been completed?

Author: Joel Sherrill 2023-02-10T13:51:58.000Z

Original author: sebastian.huber

Pinging again. Has this task been completed? If so, please close. If not, will it be done by 6.1?

Author: Trac Migrate 2023-02-27T16:21:32.000Z

Original author: sebastian.huber

All three RFCs have been implemented and the tests are also present and working. One additional patch was needed to provide a missing diagram for the documentation:

[https://lists.rtems.org/pipermail/devel/2022-October/073561.html]

Moreover, Coverity issues were fixed later on, see #4718.

This work on TFTP is completed and this ticket can be closed.

Author: Trac Migrate 2023-02-27T16:22:47.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Author: Trac Migrate 2024-01-18T16:36:42.000Z

Original author: sebastian.huber

In [changeset:"3626fe833d75291ee738f9aae7fe25e98adaaeec/rtems" 3626fe8/rtems]:

```
fstests/tftpfs: Fix build dependency

Update #4666.
```

3.9.1.450 4980 - Build documentation using sphinx 7.2

Id	4980
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-12-19T00:29:30.000Z
Updated	2023-12-19T20:41:50.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4980
Merges	0

- Set no max version
- Fix the layout to support versions later than 5.9

I have no idea when the breakage happened and if other versions are effected.

Author: Chris Johns 2023-12-19T01:02:27.000Z

I have tested a patch with versions:

Author: Trac Migrate 2023-12-19T20:41:50.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"e31a0b22fe43e0ec910678cdc4bdcf2be661a461/rtems-docs" e31a0b2/rtems-docs]:

```
sphinx/style: Fix building with the latest sphinx

Tested on sphinx 7.2, 6.1.3 AND 5.3.0

Closes #4980
```

3.9.1.451 4959 - rtems-test tftp does not a session timeout

Id	4959
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-10-05T05:23:48.000Z
Updated	2023-12-18T05:30:16.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4959
Merges	0

The TFTP server has a timeout for session that are running however there is no timeout on the listen state. A target could fail to create a session. Add a session timeout.

Author: Trac Migrate 2023-11-07T21:07:44.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"a22b396a32f1f1ce9b2d7c2c51dd9ea4d6db12fe/rtems-tools" a22b396/rtems-tools]:

```
tester/tftp: Add a session timeout

- Fix listener done state

- Finish open with the state as finished

Closes #4959
```

Author: Trac Migrate 2023-12-18T05:30:16.000Z

In [changeset:"384acf1bcb06e7e7b794395f4ebca7254acc59fb/rtems-tools" 384acf1/rtems-tools]:

```
tester/console: Fix restart regx check

The fix to the TFTP timeout has a simple bug.

Updates #4959
```

3.9.1.452 4977 - tmux bug swaps lines and columns

Id	4977
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-12-11T06:11:30.000Z
Updated	2023-12-13T20:22:30.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4977
Merges	0

A `tmux` bug which is fixed but not released swaps the columns and rows fields:

https://github.com/tmux/tmux/issues/3457

Given it will be a while before this enters downstream packages provide a work around.

also improve response time to the query. At the moment a 50 msec delay is imposed and it does not have to be there.

Author: Trac Migrate 2023-12-13T20:22:30.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"7260887fa989c0141e7265cd851e00b4101410d8/rtems" 7260887/rtems]:

```
libmisc/shell: Work around tmux bug in row and column

- Extend the timeout to 150 msec for long remote sessions

- Improve the performance of the detection

Closes #4975
Closes #4977
```

3.9.1.453 4975 - Terminal row/col probe timeout too fast

Id	4975
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-12-05T02:33:10.000Z
Updated	2023-12-13T20:22:30.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4975
Merges	0

The timeout is too fast if the terminal and the target hardware are on different continents.

Author: Trac Migrate 2023-12-13T20:22:30.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"7260887fa989c0141e7265cd851e00b4101410d8/rtems" 7260887/rtems]:

```
libmisc/shell: Work around tmux bug in row and column

- Extend the timeout to 150 msec for long remote sessions

- Improve the performance of the detection

Closes #4975
Closes #4977
```

3.9.1.454 4973 - Add RSB options to control a specific python

Id	4973
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-11-29T03:18:18.000Z
Updated	2023-12-06T21:50:45.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4973
Merges	0

Older hosts can have varying installations of pythons. Provide a means to set a version found

in your path with:

1. `--with-python2`
2. `--with-python3`
3. `--with-python-version`

Author: Trac Migrate 2023-12-06T21:50:45.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"a970057f468d361fa122968fb690019a212ecdaa/rtems-source-builder" a970057/rtems-source-builder]:

```
gdb: Add options to control the python version

The options are:
--with-python2
--with-python3
--with-python-version

Closes #4973
```

3.9.1.455 4970 - Fix C++ 17 deprecated functionality in rtems-tools

Id	4970
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-11-22T00:54:22.000Z
Updated	2023-11-23T22:36:13.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4970
Merges	0

The C++ code uses functionality depreciated in c++17. Update and resolve.

Author: Chris Johns 2023-11-22T00:56:42.000Z

- **Summary** changed from *Fix C++ 17 depreciated funtionality* to *Fix C++ 17 depreciated funtionality in rtrems-tools*

Add the repo to the subject

Author: Trac Migrate 2023-11-22T21:01:55.000Z

In [changeset:"00af5a6ada64a1f5b3500c6f9fc17f1b393c2940/rtems-tools" 00af5a6/rtems-tools]:

```
rtemstoolkit: Update SimpleIni to latest

The resolves C++17 warnings.

Updates #4970
```

Author: Trac Migrate 2023-11-22T21:01:56.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"f408c0f8d935d53c232c67bed39e4018fd8d7a2a/rtems-tools" f408c0f/rtems-tools]:

```
rtemstoolkit, linkers: Fix C++17 warnings

Closes #4970
```

Author: Joel Sherrill 2023-11-23T16:11:17.000Z

- **Summary** changed from *Fix C++ 17 depreciated funtionality in rtrems-tools* to *Fix C++ 17 deprecated functionality in rtems-tools*

Fix spelling in title

Author: Trac Migrate 2023-11-23T22:36:13.000Z

In [changeset:"b7bb49321ce59f083577b0f31dcb290a63322e43/rtems-source-builder" b7bb493/rtems-source-builder]:

```
rtems/rtems-tools: Update with C++17 and Python 3.12 fixes

Updates #4969
Updates #4970
```

3.9.1.456 4935 - 7/rtems-mips get source fails

Id	4935
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2023-07-30T22:56:21.000Z
Updated	2023-11-20T17:08:59.000Z
Milestone	6.1
Labels	priority::highest, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4935
Merges	0

Getting sources for `7/rtems-mips` fails with:

```
error: 7/rtems-mips.bset:6: cannot find file: tools/rtems-mipstx39-gdb-head
```

Release candidates for 6 get the 7 sources because the `6-rc?` are made from `master`.

Author: Chris Johns 2023-07-30T22:58:41.000Z

To test run this command (https://git.rtems.org/rtems-release/tree/rtems-release-sources#n139):

```
../source-builder/sb-get-sources --stop-on-error
```

Author: Chris Johns 2023-09-03T05:39:22.000Z

I will point the 7 MIPS gdb to the 6 version. I have no idea about this architecture and tools and no one has picked the issue up.

Also this is present:

```
warning: 0001-gcc-config-aarch64-rtems.h-Define--USE-INIT-FINI-.patch: no hash found
warning: 0001-microblaze-Define--ELF--for-RTEMS-target.patch: no hash found
```

I need to see why an error was not generated. No hash should be a hard error.

Author: Chris Johns 2023-11-17T03:18:22.000Z

- **Owner** set to joel
- **Status** changed from *new* to *assigned*

This is still present and making a release candidate breaks:

```
] Created: 6.1-rc1/rtems-6.1-rc1-release-notes.html 6.1-rc1/rtems-6.1-
↪rc1-release-notes.pdf
] Collect tools sources
] RTEMS Release Sources, v6.1-rc1
] Package: rtems-source-builder
] Release: 6.1-rc1
tar Jxf ../rtems-source-builder-6.1-rc1.tar.xz
../source-builder/sb-get-sources
RTEMS Source Builder - Get Sources, 6.1-rc1
error: 7/rtems-mips.bset:6: cannot find file: tools/rtems-mipstx39-gdb-
↪head
Build FAILED
```

Author: Trac Migrate 2023-11-20T17:08:59.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"ae81810adcfef8bd3ab8cfca2ed5ba4ac4b9779f/rtems-source-builder" ae81810/rtems-source-builder]:

```
rtems-mipstx39-gdb-head.bset: Add missing file

This configuration file was missing for the mipstx39 gdb build for the
head/7 tools.

Closes #4935.
```

3.9.1.457 4947 - Testsuite libtest tests not built with optimise or debug flags

Id	4947
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2023-08-24T23:27:22.000Z
Updated	2023-09-12T07:27:42.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::build, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4947
Merges	0

The tests are being built with the optimsize or debug options for:

- aarch64/xilinx_zynqmp_lp64_qemu
- arm/xilinx_zynq_a9_qemu

The build is:

```
09:44:14 runner ' /opt/work/rtems/6/bin/arm-rtems6-gcc
-MMD -Wall -Wmissing-prototypes -Wimplicit-function-declaration
-Wstrict-prototypes -Wnested-externs -march=armv7-a -mthumb
-mfpu=neon -mfloat-abi=hard -mtune=cortex-a9 -DHAVE_CONFIG_H=1
-Icpukit/include -I../../../cpukit/include -Icpukit/score/cpu/arm/include
-I../../../cpukit/score/cpu/arm/include -Ibsps/include
-I../../../bsps/include -Ibsps/arm/include -I../../../bsps/arm/include
-Ibsps/arm/xilinx-zynq/include -I../../../bsps/arm/xilinx-zynq/include
-Itestsuites/support/include -I../../../testsuites/support/include
-Itestsuites/libtests/dl09 -I../../../testsuites/libtests/dl09
-c /opt/work/chris/rtems/kernel/rtems.git/testsuites/libtests/dl09/dl-load.c
-o testsuites/libtests/dl09/dl-load.o '
```

while a `cpukit` file is:

```
09:45:00 runner ['/opt/work/rtems/6/bin/arm-rtems6-gcc',
'-MMD', '-Wall', '-Wmissing-prototypes', '-Wimplicit-function-declaration',
'-Wstrict-prototypes', '-Wnested-externs', '-march=armv7-a',
'-mthumb', '-mfpu=neon', '-mfloat-abi=hard', '-mtune=cortex-a9',
'-O2', '-g', '-fdata-sections', '-ffunction-sections',
'-Icpukit/include', '-I../../../cpukit/include',
'-Icpukit/score/cpu/arm/include',
'-I../../../cpukit/score/cpu/arm/include',
'../../../cpukit/libdl/rtl-elf.c',
'-c', '-o/opt/work/chris/rtems/kernel/rtems.git/build/arm/xilinx_zynq_a9_qemu/
↪cpukit/libdl/rtl-elf.c.59.o',
'-DHAVE_CONFIG_H=1']
```

Author: Chris Johns 2023-08-24T23:48:52.000Z

The tests use the `TEST_OPTIMIZATION_FLAGS` which is defined in the BSP and based on `OPTIMIZATION_FLAGS`. This does not seem to be working.

Author: Chris Johns 2023-08-25T23:28:06.000Z

The issue is the tests are not being linked with the right or complete set of flags.

The optimization flags contain `-g` and given `-g` does not change the generated code it is questionable if this option should be here or a debug flags settings or even forced on as an invariant default.

The simplest solution at this point in time is to add `${TEST_OPTIMIZATION_FLAGS}` to the `ldflags` in the `grp.yml` for the testsuite.

Adding `TEST_OPTIMIZATION_FLAGS` to the linker flags has the benefit of linking with `-fdata-sections` and `-ffunction-sections` and given we are building all the code with those options the tests are not truly testing the build a user sees.

There is a fragility around having the separate sections flags in optimization flag set. If someone adjusts the `-O` level they need to carry the other flags over. Is the

separate sections important enough now that it needs its own setting to avoid simple mistakes?

Author: Chris Johns 2023-08-25T23:49:15.000Z

The test `dl09` does not build `dl-load.o` with the `TEST_OPTIMIZATION_FLAGS` flags. Updating the `dl09.yml` spec's `cflags` to have `TEST_OPTIMIZATION_FLAGS` works but adding that same to the `ldflags` breaks the build because the substitution does not happen.

It seems `cflags` does not pick up the top level `grp.yml` setting while `ldflags` does. I have no idea why it is like this.

Author: Trac Migrate 2023-09-12T07:27:42.000Z

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"d2d1fa18a93d39b79421ed205755fd6623b2153b/rtems" d2d1fa18/rtems]:

```
build: Use build context for custom commands

Revert duplicated listing of TEST_OPTIMIZATION_FLAGS.

Close #4947.
```

3.9.1.458 4951 - rtems-tools fail on FreeBSD to get number of cores

Id	4951
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2023-08-28T04:52:14.000Z
Updated	2023-09-03T05:27:49.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, resolution::wontfix, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4951
Merges	0

```
$ ./waf test
Waf: Entering directory `/opt/work/chris/rtems/tools/rtems-tools.git/build'
Test python rtemstoolkit.check          : fail
Test python3 rtemstoolkit.check         : fail
Test python rtemstoolkit.config         : fail
```

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```
Test python3 rtemstoolkit.config         : fail
Test python rtemstoolkit.configuration   : pass
Test python3 rtemstoolkit.configuration  : pass
Test python rtemstoolkit.error           : pass
Test python3 rtemstoolkit.error          : pass
Test python rtemstoolkit.execute         : fail
Test python3 rtemstoolkit.execute        : fail
Test python rtemstoolkit.git             : fail
Test python3 rtemstoolkit.git            : fail
Test python rtemstoolkit.host            : fail
Test python3 rtemstoolkit.host           : fail
Test python rtemstoolkit.log             : pass
Test python3 rtemstoolkit.log            : pass
Test python rtemstoolkit.macros          : pass
Test python3 rtemstoolkit.macros         : pass
Test python rtemstoolkit.mailer          : fail
Test python3 rtemstoolkit.mailer         : fail
Test python rtemstoolkit.options         : fail
Test python3 rtemstoolkit.options        : fail
Test python rtemstoolkit.path            : pass
Test python3 rtemstoolkit.path           : pass
Test python rtemstoolkit.reraise         : pass
Test python3 rtemstoolkit.reraise        : pass
Test python rtemstoolkit.rtems           : pass
Test python3 rtemstoolkit.rtems          : pass
Test python rtemstoolkit.stacktraces     : pass
Test python3 rtemstoolkit.stacktraces    : pass
Test python rtemstoolkit.textbox         : pass
Test python3 rtemstoolkit.textbox        : pass
Test python rtemstoolkit.version         : fail
Test python3 rtemstoolkit.version        : fail
Test failures
```

Author: Chris Johns 2023-08-28T04:55:22.000Z

- **Resolution** set to ~"wontfix"
- **Status** changed from *new* to *closed*
- **Summary** changed from *rtems-tools unit tests fail on FreeBSD* to *rtems-tools fail on FreeBSD to get number of cores*

The unit tests pass. I had a typo in a change I was testing. I have changed the ticket to track the original problem:

```
$ python  -m rtemstoolkit.host
Python's OS name: posix
Name      : freebsd
Windows   : No
]]]] ['/sbin/sysctl', 'hw.ncpu']
```

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```
***** 1 usage: sysctl [-bdehiNnoqTtWx] [ -B <bufsize> ] [-f filename] name[=value] ...
sysctl [-bdehNnoqTtWx] [ -B <bufsize> ] -a
```

The execute command is failing.

Author: Chris Johns 2023-08-28T04:55:42.000Z

- **Resolution** ~"wontfix" deleted
- **Status** changed from *closed* to *reopened*

Author: Trac Migrate 2023-08-29T01:20:30.000Z

- **Owner** set to Chris Johns <chrisj@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

In [changeset:"3ea0c249346fda427bf0d3c169aa3e7c2a521df8/rtems-tools" 3ea0c24/rtems-tools]:

```
rtemstoolkit: Fix shell execution

The fixes to parse the command along with the pipe options broke
a simple shell command such as '/sbin/sysctl hw.ncpu' on FreeBSD.
This patch fixes the shell command by passing a string for the
various options.

The unit test has been updated to catch errors and report them.

Closes #4951
```

Author: Trac Migrate 2023-08-29T03:50:08.000Z

In [changeset:"9ca95760eefadccd90e651b248efbe42810d2ed6/rtems-source-builder" 9ca9576/rtems-source-builder]:

```
rtems/tools: Shell execute fixes

Updates #4951
```

Author: Trac Migrate 2023-09-03T05:27:49.000Z

In [changeset:"35c73203df1e0bc7f0935cfb37ebc6581d8f1103/rtems-source-builder" 35c7320/rtems-source-builder]:

```
rtems/tools: Execute use of shlex.join fix for python < 3.8

Updates #4951
```

3.9.1.459 4950 - libdl test dl07 fails on PowerPC

Id	4950
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-08-28T01:25:22.000Z
Updated	2023-08-29T01:21:58.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4950
Merges	0

The `libdl` test `dl07` fails on PowerPC (`psim`) with:

```
rtl: alloc: del: READ_WRITE addr=0x91ca8
*** FATAL ***
fatal source: 13 (RTEMS_FATAL_SOURCE_HEAP)
heap error: heap=0x7e6d0 block=0x91cdc reason=HEAP_ERROR_BROKEN_
↪PROTECTOR(0)=[0x91ce0,0,0,0]
RTEMS version: 6.0.0.b9f11607b1731bc5f2391653cd8f4ebe48ba278e
RTEMS tools: 12.3.1 20230626 (RTEMS 6, RSB␣
↪8e568b2ca3489d6bfa48e1d29618ea9b48a5b408, Newlib 4c7d0df)
executing thread ID: 0x0a010001
executing thread name: UI1
```

The issue is the `.bss` section size is too small for the sections present. The bug has been triggered by the separate section support now being used in the testsuite.

Author: Chris Johns 2023-08-28T06:31:02.000Z

The change to use separate data and text sections exposed a bug in how symbols and section alignment are handled when locating the symbols. The issues are: 1. The base address of a section may not be aligned to the required alignment 2. The location support on PowerPC included SDATA symbols in respective data section processing while not being included in the size calculation. This pushed the symbols out past the end of the allocated memory.

Author: Trac Migrate 2023-08-29T01:21:58.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"ac6de5a3e91e05f068f8ed2e548056357024b944/rtems" ac6de5a3/rtems]:

```
cpukit/libdl: Correctly account for section alignments

- Add the section alignment to the size as the allocator may not
provide correctly aligned memory

- Only include symbols in the section when locating symbols. The
powerpc was incorrectly adding SDATA BSS symbols to the BSS offset
overrunning the section

Closes #4950
```

3.9.1.460 4944 - libdl test dl09 fails on arm and aarch64

Id	4944
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2023-08-12T06:26:29.000Z
Updated	2023-08-28T01:19:04.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4944
Merges	0

The test crashes on `arm` and fails on `aarch64` with:

```
------------------------------------------------
Run: 3
Test source (link in strstr): testsuites/libtests/dl09/dl-load.c
Allocation size: 33554432
load: /dl09-o1.o
handel: 0x4811d650: unresolved externals
handle: 0x4811d650 loaded
space alloc: /dl09-o1.o: 33554432: 0x40118940
load: /dl09-o2.o
handel: 0x421191f0: unresolved externals
handle: 0x421191f0 loaded
space alloc: /dl09-o2.o: 33554432: 0x4c1225b0
load: /dl09-o3.o
kobj_reloc: Relocation 0x40045820 too far from 0x4e122f48 (base+0x18) for 26bit␣
↪word
dlopen failed: (null)
/opt/work/chris/rtems/kernel/rtems.git/testsuites/libtests/dl09/dl-load.c: 168 o->
↪handle != NULL

[ RTEMS shutdown ]
```

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```
RTEMS version: 6.0.0.10da3025186cadf2d78e34cf81cce02121069d44
RTEMS tools: 12.3.1 20230626 (RTEMS 6, RSB␣
↪8e568b2ca3489d6bfa48e1d29618ea9b48a5b408, Newlib 4c7d0df)
executing thread ID: 0x0a010001
executing thread name: UI1
```

Author: Chris Johns 2023-08-15T02:51:10.000Z

It also fails on `powerpc`.

Author: Chris Johns 2023-08-18T23:54:04.000Z

The `dl091` test allocates large blocks of memory between loading object files to move the object's text base address out of the range of any relative addressing instructions to symbols in the base image forcing the use of trampolines.

On `aarch64` the failure is the trampoline memory is out of range to the text memory so the relocations to the trampoline memory cannot be fixed up. The allocated trampoline memory is not colocated to the allocated text memory when it should be. The overflow is:

```
rtl: JUMP26/PC26/CALL: insn=0x4e123208 where=0x4e123208␣
↪target=0xfffffffff1f24898 raddr=0x40047aa0 parsing=0
```

The `target` value is the relative offset and is `-201367832`. The instruction to fix up is located at `0x4e123208`. The trampoline allocation is:

```
rtl: tramp:elf: tramps: 14 count:14 total:14
rtl: tramp:elf: slots: 14 (224)
rtl: alloc: new: OBJECT addr=0x421190f0 size=224
```

If trace is enabled for the test a set of commands are run at the end of each pass to report the state of some things such as the heap. The heap state is returned by the `malloc_info()` call and that call causes the test to pass (see #4946). Something happens in the heap to bring the allocated memory closer together.

The intent of the original design was to have a trampoline table appended to one end of the text area of the object file's memory. This means the maximum size of code that can be loaded is half the relative instruction offset size. A review of the code shows the trampoline memory is being heap allocated as a separate block. I cannot remember why it is implement this way. Effort was spent determining how to handle the allocation because the relocation records need to be parsed to determine the amount of memory to append to the text area and this means the relocation records are processed twice slowing loading down. The double processing of the relocation records was considered a suitable compromise to solve the problem. Parsing was added however the number of relocations is not being used when allocating the text area of memory.

I think the text area needs to be extended to hold the trampoline memory. I am not sure if the text size reported should be the object file's text size or the size with the

trampoline memory. I suppose it is text type memory so it should be included. It will make the change simpler.

Author: Chris Johns 2023-08-19T00:04:35.000Z

I now see the complicating factor and the reason the memory is a separate allocation.

The trampoline memory is sized to allocate space for each unresolved symbol an object file has. When loading an object file you do not know if an unresolved symbol will need a trampoline to reach the symbol.

Author: Chris Johns 2023-08-24T06:16:08.000Z

I have added allocator `resize` support to `libdl`. The object file memory is resized if there are any trampolines found when the relocation records are parsed. The sizing determines the amount of trampoline memory needed and the `tramp_size` is added to the `text_size` resizing the `text` section.

The order of allocations has been changed so `text` is last and so lower the probability resizing moves the `text_base` address. In the output from `dl09` you can see 120 bytes of trampoline memory is being added onto the `text` section:

```
rtl: alloc: resize: READ_WRITE prev-addr=0x4e132610 addr=0x4e132610␣
↪size=8
rtl: alloc: resize: READ_WRITE prev-addr=0x4e132670 addr=0x4e132670␣
↪size=32
rtl: alloc: resize: READ prev-addr=0x4e1326e0 addr=0x4e1326e0 size=328
rtl: alloc: resize: READ_EXEC prev-addr=0x4e132870 addr=0x4e132870␣
↪size=472
rtl: resize sect: text  - b:0x4e132870 s:472 a:4
rtl: resize sect: tramp - b:0x4e1329d0 s:120 a:8
rtl: resize sect: const - b:0x4e1326e0 s:328 a:8
rtl: resize sect: eh    - b:0 s:0 a:0
rtl: resize sect: data  - b:0x4e132610 s:8 a:0
rtl: resize sect: bss   - b:0x4e132670 s:32 a:8
```

The changes will handle a section moving when resizing.

The `dl09` test now passes for `aarch64` with and without trace being turned on.

Author: Chris Johns 2023-08-26T23:05:18.000Z

Test results with the changes to fix `dl09` for `arm/ilinx_zynq_a9_qemu`:

```
Passed:         9
Failed:         1
User Input:     1
Expected Fail:  0
Indeterminate:  0
Benchmark:      0
```

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```
Timeout:        0
Test too long:  0
Invalid:        0
Wrong Version:  0
Wrong Build:    0
Wrong Tools:    0
Wrong Header:   0
-----------------
Total:         11
Failures:
dl06.exe
User Input:
dl10.exe
```

and for `aarch64/xilinx_zynqmp_lp64_qemu`:

```
Passed:         9
Failed:         1
User Input:     1
Expected Fail:  0
Indeterminate:  0
Benchmark:      0
Timeout:        0
Test too long:  0
Invalid:        0
Wrong Version:  0
Wrong Build:    0
Wrong Tools:    0
Wrong Header:   0
-----------------
Total:         11
Failures:
dl06.exe
User Input:
dl10.exe
```

Author: Trac Migrate 2023-08-28T01:19:01.000Z

In [changeset:"dcc6409f91f105a2017ca7d4540aa3409f8d8d3a/rtems" dcc6409/rtems]:

```
spec/testsuite/dl: Fix optimization flags

Updates #4944
```

Author: Trac Migrate 2023-08-28T01:19:04.000Z

- **Owner** set to Chris Johns <chrisj@rtems.org>

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"b9f11607b1731bc5f2391653cd8f4ebe48ba278e/rtems" b9f11607/rtems]:

```
libdl: Realloc text memory if there are trampolines

- Add resize to the allocator interface

- Rework the trampoline variables in the obj struct
to make better sense of what is happening

Closes #4944
```

3.9.1.461 4945 - rtems-test SIS support is broken

Id	4945
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-08-17T01:50:40.000Z
Updated	2023-08-21T00:37:35.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4945
Merges	0

The `sis` BSP is using gdb and I am not sure gdb supports the SIS simulator any more?

And `sis-run` is broken with the stand alone `sis` tool we now use. The `-a` option is not supported.

Author: Chris Johns 2023-08-17T01:51:01.000Z

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-08-21T00:37:35.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"349bbd96543365e830e5ef5e851765e4b742a8a4/rtems-tools" 349bbd9/rtems-tools]:

```
tester/sis: Use the RTEMS SIS command

```

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```
Make sis and sis-run the same as there is no SIS support in
gdb anymore.

Closes #4945
```

3.9.1.462 4924 - Add Regulator Helper to RTEMS

Id	4924
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Created	2023-07-07T20:31:03.000Z
Updated	2023-08-16T15:10:43.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4924
Merges	0

This is to add the Regulator Helper. This will include the regulator itself, a test with full coverage, an example for rtems-examples, and a chapter in the Classic API Guide.

The regulator is designed to sit logically between two entities – a source and a destination, where it limits the traffic sent to the destination to prevent it from being flooded with messages from the source. This can be used to accommodate bursty input from a source and meter it out to a destination.

Author: Joel Sherrill 2023-07-07T20:31:10.000Z

- **Owner** set to @joel
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-07-09T01:12:13.000Z

Hello joel intrested in working on this ticket would like some more info.

Author: Joel Sherrill 2023-07-09T14:57:23.000Z

The code was posted to devel@ for review Friday. Documentation will follow soon. The most helpful thing would be to review this code. Beyond this help is needed to address tickets with a 6.1 target.

Author: Trac Migrate 2023-08-11T18:21:24.000Z

In [changeset:"fd693085ea1fcfe41fedb877eac35875cad4aa08/rtems" fd69308/rtems]:

```
Add the Regulator Interface and test

Updates #4924.

The Regulator is an application support class which is used to
deal with the scenario where there is a bursty input source
which needs to be metered out to a destination sink. The maximum
size of bursts needs to be known and the delivery method must
be configured to deliver messages at a rate that allows the
traffic to not overflow.
```

Author: Joel Sherrill 2023-08-16T15:10:43.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Chapter added to the Classic API Guide and an example added to rtems-examples without having the ticket tagged:

- https://git.rtems.org/rtems-docs/commit/?id=7bd117cb00b68e5cb89aa8c237a813730876817e
- https://git.rtems.org/rtems-examples/commit/?id=d11f57cff6621fefac1d1bca5d013b8c79171cc7

This can now be closed.

3.9.1.463 4942 - Regulator warnings

Id	4942
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Joel Sherrill
Created	2023-08-11T22:30:59.000Z
Updated	2023-08-15T14:09:09.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4942
Merges	0

The recently added `regulator` has warnings on `aarch64/xilinx_zynqmp_lp64_qemu`:

```
../../../cpukit/libmisc/regulator/regulator.c: In function 'rtems_regulator_get_
↪statistics':
../../../cpukit/libmisc/regulator/regulator.c:656:3: warning: implicit␣
↪declaration of function 'memset' [-Wimplicit-function-declaration]
656 |   memset(statistics, 0, sizeof(rtems_regulator_statistics));
```

(continues on next page)

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```
|   ^~~~~~
../../../cpukit/libmisc/regulator/regulator.c:40:1: note: include '<string.h>' or␣
↪provide a declaration of 'memset'
39 | #include <rtems/regulatorimpl.h>
+++ |+#include <string.h>
40 |
../../../cpukit/libmisc/regulator/regulator.c:656:3: warning: incompatible␣
↪implicit declaration of built-in function 'memset' [-Wbuiltin-declaration-
↪mismatch]
656 |   memset(statistics, 0, sizeof(rtems_regulator_statistics));
|   ^~~~~~
../../../cpukit/libmisc/regulator/regulator.c:656:3: note: include '<string.h>'␣
↪or provide a declaration of 'memset'
```

Author: Trac Migrate 2023-08-13T00:51:08.000Z

Is there a way to compile libmisc I added the .h file but i didn't see it compile when i ran ./waf is there an option to compile libmisc?

Author: Joel Sherrill 2023-08-13T04:46:16.000Z

Replying to z.ling111:

> Is there a way to compile libmisc I added the .h file but i didn't see it compile when i ran ./waf is there an option to compile libmisc?
>
> libmisc is built all the time. Nothing special. Post the patch once you compile and run the tests.

Author: Trac Migrate 2023-08-15T14:09:09.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"7b33aa26759e2431ecc8d0cf3254775d1fba0313/rtems" 7b33aa26/rtems]:

```
Address Regulator warning for no prototype for memset()

Closes #4942.
```

3.9.1.464 4943 - ARM unwind register is not being hooked

Id	4943
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-08-12T01:53:26.000Z
Updated	2023-08-14T01:05:25.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4943
Merges	0

The ARM unwind support is not working and `dl05` is failing on `aarch64`.

The support uses `__gnu_Unwind_Find_exidx` and it is not being called.

I have not tested `arm` but the support is shared between `arm` and `aarch64`.

Author: Chris Johns 2023-08-12T05:59:41.000Z

The `aarch64` architecture can use the DWARF 2 exception support. This is an improvement over the specific ARM support. Switching the unwind support to `rtems_rtl_elf_unwind_dw2_.*` functions results in `dl05` passing.

Author: Chris Johns 2023-08-12T06:30:02.000Z

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-08-14T01:05:25.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"663e0dae8af6217f0273176ea6d92e7ab3fd307c/rtems" 663e0dae/rtems]:

```
cpukit/libdl: AARCH64 unwind uses DWARF 2 tables

Closes #4943
```

3.9.1.465 4934 - Update STM32 H7 HAL/LL drivers code

Id	4934
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-07-27T18:32:22.000Z
Updated	2023-08-02T08:26:14.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::task
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4934
Merges	0

Original author: kgardas

Hello,

patch series for updating STM32 H7 HAL/LL drivers code is ready for review already here: https://github.com/karelfv/rtems/tree/stm32h7-hal-update-2023-07.

The code was tested on both M7 and M4 cores on stm32h747i-disco board and shows that update does not cause any new failures/regressions.

The patch series was already submitted for review on devel@ here: https://lists.rtems.org/pipermail/devel/2023-July/075880.html

Author: Trac Migrate	2023-08-02T08:26:14.000Z

Original author: kgardas

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

New HAL code was merged into the tree on July 31 2023. Hence closing.

3.9.1.466 4803 - Revert or Mark CAN API as experimental

Id	4803
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Created	2023-01-20T22:37:10.000Z
Updated	2023-07-27T18:27:24.000Z
Milestone	6.1
Labels	device, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4803
Merges	0

The CAN API done in GSoC 2022 is not stable. There are some key deficiencies that need to be

fixed, and they may cause the API to change. The API needs to be marked as experimental or reverted before it appears in a release.

Author: Trac Migrate 2023-01-21T07:46:52.000Z

- **Cc** added @karel@functional.vision

Author: Trac Migrate 2023-07-27T18:27:24.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"c1cad595af965e36de90ed19b5118fb23faedef6/rtems" c1cad59/rtems]:

```
Revert "cpukit/dev/can: Added CAN support"

This reverts commit cd91b37dce728b372f164355719a4e601e12e7b3.

Closes #4803.
```

3.9.1.467 4867 - Clean up rtems-lwip uLan directory

Id	4867
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Created	2023-03-03T14:35:49.000Z
Updated	2023-07-03T14:52:57.000Z
Milestone	6.1
Labels	network::lwip, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4867
Merges	0

The uLan directory in rtems-lwip was originally sourced from another project as documented in its ORIGIN.uLan file. This directory contains both some BSP-specific drivers as well as some of the core RTEMS/lwIP integration code in the form of sys_arch.c/h.

Permission has been given by the authors of this upstream repository to relicense the code under the terms of the rtemslwip directory so as to remove references to “uLan” since this term is relatively unrelated to either project and just so happened to be the location of the source. https://lists.rtems.org/pipermail/devel/2023-March/074525.html

Core integration components should be rehomed under rtemslwip/common and BSP-specific code should be rehomed under rtemslwip in a BSP-specific directory or in a new root directory with appropriate LICENSE and ORIGIN files depending on its provenance.

Author: Joel Sherrill 2023-06-22T20:53:40.000Z

- **Owner** set to @kinsey
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-07-03T14:52:57.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"d0cb3185afd962a034f0818c73f2becf6fe05bfc/rtems-lwip" d0cb318/rtems-lwip]:

```
Alter ownership of components in uLan

This commit breaks up the uLan directory and removes its ORIGIN and
COPYING metadata in favor of this repository being the authoritative
source of these sources as per the wishes of the originator of these
files. More information can be found here:
https://lists.rtems.org/pipermail/devel/2023-March/074525.html

Closes #4867
```

3.9.1.468 4869 - Add QSPI Flash Device API

Id	4869
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-03-06T02:27:09.000Z
Updated	2023-06-30T00:13:22.000Z
Milestone	6.1
Labels	device::spi, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4869
Merges	0

Original author: Eagleirony

Add an API for qspi flash to create device node.

- 0003-cpukit-flash-Add-API-for-Flash-devices.patch
- 0003-cpukit-spi-Add-API-for-QSPI-Flash.patch
- 0003-cpukit-spi-Add-API-for-SPI-Flash.patch
- 0006-dev-spi-Fixed-write-behaviour-for-qspi_flash.patch
- 0006-libmisc-shell-Add-flashdev-command.patch
- 0006-libmisc-shell-Add-spiflash-command.patch

Author: Trac Migrate 2023-03-06T02:31:48.000Z

Original author: Eagleirony

- **Attachment** 0003-cpukit-spi-Add-API-for-QSPI-Flash.patch added

Author: Chris Johns 2023-03-06T02:41:29.000Z

Original author: Eagleirony

Thanks for this.

Should this be **SPI Flash** or SPIFLASH? QSPI is quad SPI and there also exists octal and it would be good to have both supported?

Author: Trac Migrate 2023-03-06T04:40:12.000Z

Original author: Eagleirony

- **Attachment** 0006-dev-spi-Fixed-write-behaviour-for-qspi_flash.patch added

Author: Chris Johns 2023-03-08T00:30:06.000Z

Original author: Eagleirony

Can we please have an `ioctl` command that lets a user can set a region in the flash device access is limited to? It may be nice to make the `read` and `write` calls relative to a region's base address. By default a device open maps to the entire flash.

The use case is allowed shared access to the flash device. For example JFFS on a region and the ability to modified a boot area.

Author: Trac Migrate 2023-03-09T00:31:19.000Z

Original author: Eagleirony

Renamed the API to spiflash to reflect it's use for more then QSPI flash. I have also added region set and unset to define a base and length for limited access. Offsets are relative to the base set.

Author: Trac Migrate 2023-03-09T00:33:35.000Z

Original author: Eagleirony

- **Attachment** 0006-libmisc-shell-Add-spiflash-command.patch added

Author: Trac Migrate 2023-03-09T03:13:33.000Z

Original author: Eagleirony

- **Attachment** 0003-cpukit-spi-Add-API-for-SPI-Flash.patch added

Author: Trac Migrate 2023-03-15T23:25:11.000Z

Original author: Eagleirony

- **Attachment** 0003-cpukit-flash-Add-API-for-Flash-devices.patch added

Author: Trac Migrate 2023-03-15T23:25:29.000Z

Original author: Eagleirony

- **Attachment** 0006-libmisc-shell-Add-flashdev-command.patch added

Author: Trac Migrate 2023-03-15T23:26:56.000Z

Original author: Eagleirony

Renamed to flashdev for wider compatibility and added type IOCTL.

Author: Joel Sherrill 2023-06-22T21:20:13.000Z

Original author: Eagleirony

Can this be closed now?

Author: Chris Johns 2023-06-22T21:22:37.000Z

Original author: Eagleirony

No, it is being worked on.

Author: Chris Johns 2023-06-30T00:13:22.000Z

Original author: Eagleirony

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

3.9.1.469 4857 - RSB Recipe Missing %hash Does Not Fail

Id	4857
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Chris Johns
Created	2023-02-16T22:34:10.000Z
Updated	2023-06-30T00:11:25.000Z
Milestone	6.1
Labels	priority::normal, resolution::duplicate, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4857
Merges	0

If a recipe is missing a %hash command, it is reported as a warning. It would be preferable to have an error.

```
warning: gdb-readline8.2.patch: no hash found
```

From #4760 and copied as part of merging these tickets:

The time has come to raise a fatal error if a hash is missing rather than a warning. This will stop missing checksums being present when releasing. It also makes it simpler to test releases for no missing checksums.

Author: Joel Sherrill 2023-06-22T21:15:04.000Z

- **Description** changed

```
If a recipe is missing a %hash command, it is reported as a warning. It would be preferable to have an error.

{{{
warning: gdb-readline8.2.patch: no hash found
}}}
+
+ From #4760 and copied as part of merging these tickets:
+
+ The time has come to raise a fatal error if a hash is missing rather than a warning. This will stop missing checksums being present when releasing.
+ It also makes it simpler to test releases for no missing checksums.
```

Author: Joel Sherrill 2023-06-22T22:32:07.000Z

Please check and then confirm before closing

Author: Chris Johns 2023-06-30T00:11:15.000Z

This is being closed because #4760 makes any missing `%hash` cause a fatal error.

Author: Chris Johns 2023-06-30T00:11:25.000Z

- **Resolution** set to ~"duplicate"
- **Status** changed from *assigned* to *closed*

3.9.1.470 4887 - RTEMS Net Legacy does not build as a package in the RSB

Id	4887
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-03-23T02:24:52.000Z
Updated	2023-06-22T22:35:02.000Z
Milestone	6.1
Labels	network::legacy, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4887
Merges	0

The `waf` support does not handle staged builds or the options `--rtems-tools` and `--rtems` at the same time. The build fails when reading the `rtemsbsp` static library because it will not be in the `PREFIX`.

Also the build script scans for `.c` and `.h` files. This is fragile. If someone copies in a C file for some reason it is picked up. The sources and headers need to be explicit in build script.

- r

Author: Chris Johns 2023-03-23T21:20:31.000Z

I do not understand what the `bsp_drivers.py` use of `os.path.expanduser` is for? A build should not reference files outside the source tree unless there are options a user uses.

I am not following the `bsp_driver` code. Testing it I am seeing for `atsamv`:

```
arm/atsamv:
({'arm/atsamv': ['bsps/arm/atsamv/arm/atsamv/net', 'bsps/arm/atsamv/arm/
↪atsamv/include']}, {'arm/atsamv': []})
```

There is `` bsps/arm/atsam`` but no `bsps/arm/atsamv` and `bsps/arm/atsamv/arm/atsamv/net` looks to be repeated. I am confused.

Author: Chris Johns 2023-03-24T02:13:23.000Z

The BSP list does not handle aliases, for example the `powerpc/beatnik` has a number of aliased BSPs such as `powerpc/mvme2703`.

Author: Chris Johns 2023-03-27T03:40:31.000Z

- **Attachment** r added

List of headers in rtems-net-legacy against those install by an RTEMS 5.3 networking build

Author: Chris Johns 2023-03-27T03:42:36.000Z

The attached file `r` is a list of headers that matched headers found in an installed `powerpc/mvme2307` build of RTEMS 5.3 with networking enabled.

The list is what needs to be installed. The existing build scans for files and installs them.

Author: Joel Sherrill 2023-06-22T21:15:45.000Z

Can this be closed now?

Author: Joel Sherrill 2023-06-22T22:35:02.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Chris says this is fixed.

3.9.1.471 4778 - Deployed RSB does not find release version config

Id	4778
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2022-12-18T04:13:30.000Z
Updated	2023-06-22T22:05:43.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4778
Merges	0

Cloned from #4777:

The RSB does not find the `VERSION` file when released.

Author: Chris Johns 2022-12-18T04:13:42.000Z

- **Summary** changed from *Deployed RSB does not find release version config (cloned)* to *Deployed RSB does not find release version config*

Author: Chris Johns 2023-06-22T22:05:43.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

3.9.1.472 4882 - mvme2703 legacy network build failure

Id	4882
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2023-03-21T04:56:36.000Z
Updated	2023-06-22T22:05:14.000Z
Milestone	6.1
Labels	network::legacy, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4882
Merges	0

Building `powerpc/mvme2703` BSP with the legacy networking fails with:

```
../../netinet/in.c: In function 'in_canforward':
../../netinet/in.c:117:13: warning: implicit declaration of function 'IN_CLASSA'; did you mean 'IN_BADCLASS'? [-Wimplicit-function-declaration]
117 |         if (IN_CLASSA(i)) {
|             ^~~~~~~~~
|             IN_BADCLASS
../../netinet/in.c:118:27: error: 'IN_CLASSA_NET' undeclared (first use in this function)
118 |                 net = i & IN_CLASSA_NET;
|                           ^~~~~~~~~~~~~
../../netinet/in.c:118:27: note: each undeclared identifier is reported only once for each function it appears in
../../netinet/in.c:119:41: error: 'IN_LOOPBACKNET' undeclared (first use in this function); did you mean 'IN_LOOPBACK'?
119 |                 if (net == 0 || net == (IN_LOOPBACKNET << IN_CLASSA_NSHIFT))
|                                         ^~~~~~~~~~~~~~
|                                         IN_LOOPBACK
../../netinet/in.c:119:59: error: 'IN_CLASSA_NSHIFT' undeclared (first use in this function)
119 |                 if (net == 0 || net == (IN_LOOPBACKNET << IN_CLASSA_NSHIFT))
|                                                           ^~~~~~~~~~~~~~~~
../../netinet/in.c: In function 'in_ifinit':
../../netinet/in.c:495:34: error: 'IN_CLASSA_NET' undeclared (first use in this function)
```

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```
495 |                 ia->ia_netmask = IN_CLASSA_NET;
|                                  ^~~~~~~~~~~~
../../netinet/in.c:496:18: warning: implicit declaration of function 'IN_CLASSB'; did you mean 'IN_BADCLASS'? [-Wimplicit-function-declaration]
496 |         else if (IN_CLASSB(i))
|                  ^~~~~~~~
|                  IN_BADCLASS
../../netinet/in.c:497:34: error: 'IN_CLASSB_NET' undeclared (first use in this function)
497 |                 ia->ia_netmask = IN_CLASSB_NET;
|                                  ^~~~~~~~~~~~
../../netinet/in.c:499:34: error: 'IN_CLASSC_NET' undeclared (first use in this function)
499 |                 ia->ia_netmask = IN_CLASSC_NET;
|                                  ^~~~~~~~~~~~
```

Author: Chris Johns 2023-03-21T05:49:58.000Z

Also have:

```
[ 29/223] Compiling libtest/testbusy.c
../../libtest/testbusy.c: In function 'rtems_test_busy_cpu_usage':
../../libtest/testbusy.c:31:3: error: too many arguments to function '_Thread_Get_CPU_time_used'
31 |   _Thread_Get_CPU_time_used( executing, &start );
|   ^~~~~~~~~~~~~~~~~~~~~~~~~
In file included from ../../libtest/testbusy.c:21:
/opt/work/rtems/6-bsp/powerpc-rtems6/mvme2307/lib/include/rtems/score/threadimpl.h:1306:19: note: declared here
1306 | Timestamp_Control _Thread_Get_CPU_time_used( Thread_Control *the_thread );
|                   ^~~~~~~~~~~~~~~~~~~~~~~~~
../../libtest/testbusy.c:35:5: error: too many arguments to function '_Thread_Get_CPU_time_used'
35 |     _Thread_Get_CPU_time_used( executing, &now );
|     ^~~~~~~~~~~~~~~~~~~~~~~~~
/opt/work/rtems/6-bsp/powerpc-rtems6/mvme2307/lib/include/rtems/score/threadimpl.h:1306:19: note: declared here
1306 | Timestamp_Control _Thread_Get_CPU_time_used( Thread_Control *the_thread );
|                   ^~~~~~~~~~~~~~~~~~~~~~~~~
```

Author: Chris Johns 2023-03-21T05:57:40.000Z

There are a couple of issues. The headers installed with the tools requires `-DIN_HISTORICAL_NETS=1` on the command line and the `score` API for the CPU usage has changed.

Author: Chris Johns 2023-06-22T22:05:14.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

3.9.1.473 4899 - BSP powerpc/qoriq_e6500_64 and powerpc/qoriq_e6500_32 fail to build

Id	4899
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2023-04-23T22:29:25.000Z
Updated	2023-06-22T21:45:21.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4899
Merges	0

```
[  87/1471] Compiling bsps/powerpc/shared/vme/vmeTsi148.c
/tmp//cccfu9l8.s: Assembler messages:
/tmp//cccfu9l8.s:353: Error: unrecognized opcode: `eieio'
/tmp//cccfu9l8.s:386: Error: unrecognized opcode: `eieio'
/tmp//cccfu9l8.s:419: Error: unrecognized opcode: `eieio'
/tmp//cccfu9l8.s:444: Error: unrecognized opcode: `eieio'
/tmp//cccfu9l8.s:477: Error: unrecognized opcode: `eieio'
/tmp//cccfu9l8.s:503: Error: unrecognized opcode: `eieio'
...
```

Author: Trac Migrate 2023-04-24T08:40:54.000Z

I can't reproduce this issue:

```
Waf: Entering directory `/tmp/sh/b-rtems/powerpc/qoriq_core_0'
[  87/1471] Compiling bsps/powerpc/shared/vme/vmeTsi148.c
Waf: Leaving directory `/tmp/sh/b-rtems/powerpc/qoriq_core_0'
'build_powerpc/qoriq_core_0' finished successfully (0.626s)
Waf: Entering directory `/tmp/sh/b-rtems/powerpc/qoriq_core_1'
[  87/1471] Compiling bsps/powerpc/shared/vme/vmeTsi148.c
Waf: Leaving directory `/tmp/sh/b-rtems/powerpc/qoriq_core_1'
'build_powerpc/qoriq_core_1' finished successfully (0.598s)
Waf: Entering directory `/tmp/sh/b-rtems/powerpc/qoriq_e500'
[  87/1471] Compiling bsps/powerpc/shared/vme/vmeTsi148.c
Waf: Leaving directory `/tmp/sh/b-rtems/powerpc/qoriq_e500'
'build_powerpc/qoriq_e500' finished successfully (0.600s)
Waf: Entering directory `/tmp/sh/b-rtems/powerpc/qoriq_e6500_32'
[  87/1471] Compiling bsps/powerpc/shared/vme/vmeTsi148.c
```

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```
Waf: Leaving directory `/tmp/sh/b-rtems/powerpc/qoriq_e6500_32'
'build_powerpc/qoriq_e6500_32' finished successfully (0.643s)
Waf: Entering directory `/tmp/sh/b-rtems/powerpc/qoriq_e6500_64'
[  76/2031] Compiling bsps/powerpc/shared/vme/vmeTsi148.c
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c: In␣
↪function 'vmeTsi148FindPciBase':
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:466:16: warning: cast to pointer from integer of different size [-
↪Wint-to-pointer-cast]
466 |         *pbase=(BERegister*)(((pci_ulong)BSP_PCI2LOCAL_
↪ADDR(busaddr)) & ~0xff);
|                ^
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c: In␣
↪function 'vmeTsi148InitInstance':
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:493:33: warning: cast from pointer to integer of different size [-
↪Wpointer-to-int-cast]
493 |                                 (unsigned int)base, irq);
|                                 ^
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c: In␣
↪function 'vmeTsi148ResetBusXX':
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:553:9: warning: implicit declaration of function 'rtems_interrupt_
↪disable'; did you mean 'rtems_interrupt_raise'? [-Wimplicit-function-
↪declaration]
553 |         rtems_interrupt_disable(flags);
|         ^~~~~~~~~~~~~~~~~~~~~~
|         rtems_interrupt_raise
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:553:9: warning: nested extern declaration of 'rtems_interrupt_
↪disable' [-Wnested-externs]
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:556:9: warning: implicit declaration of function 'rtems_interrupt_
↪enable'; did you mean 'rtems_interrupt_raise'? [-Wimplicit-function-
↪declaration]
556 |         rtems_interrupt_enable(flags);
|         ^~~~~~~~~~~~~~~~~~~~~~
|         rtems_interrupt_raise
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:556:9: warning: nested extern declaration of 'rtems_interrupt_enable
↪' [-Wnested-externs]
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c: In␣
↪function 'tsiVMEISR':
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:1487:47: warning: cast from pointer to integer of different size [-
↪Wpointer-to-int-cast]
1487 | int                                     pin = (int)arg;
|                                                 ^
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c: In␣
```

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```
↪function 'connectIsr':
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:1598:21: warning: cast to pointer from integer of different size [-
↪Wint-to-pointer-cast]
1598 |         xx.handle = (rtems_irq_hdl_param)slot;
|                     ^
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c: In␣
↪function 'tsi_desc_setnxt':
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:2401:56: warning: cast from pointer to integer of different size [-
↪Wpointer-to-int-cast]
2401 |                 st_be32( &d->dnlal, BSP_LOCAL2PCI_ADDR((uint32_
↪t)n) );
|                                                        ^
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:381:45: note: in definition of macro 'BSP_LOCAL2PCI_ADDR'
381 | #define BSP_LOCAL2PCI_ADDR(l)   (((uint32_t)l)+PCI_DRAM_OFFSET)
|                                             ^
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c: In␣
↪function 'vmeTsi148DmaListStartXX':
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:381:35: warning: cast from pointer to integer of different size [-
↪Wpointer-to-int-cast]
381 | #define BSP_LOCAL2PCI_ADDR(l)   (((uint32_t)l)+PCI_DRAM_OFFSET)
|                                   ^
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:337:111: note: in definition of macro 'TSI_WR'
337 | #define TSI_WR(base, reg, val)                  out_
↪be32((volatile uint32_t *)((base) + (reg)/sizeof(*base)), val)
|
↪                                         ^~~
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:2495:64: note: in expansion of macro 'BSP_LOCAL2PCI_ADDR'
2495 |                 TSI_WR(base, TSI_DNLAL_REG(channel), (uint32_
↪t)BSP_LOCAL2PCI_ADDR(d));
|                                                                ^~~~~~
↪~~~~~~~~~~
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c: In␣
↪function 'vmeTsi148ResetBusXX':
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:553:9: warning: 'flags' is used uninitialized [-Wuninitialized]
553 |         rtems_interrupt_disable(flags);
|         ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:550:15: note: 'flags' was declared here
550 | unsigned long flags;
|               ^~~~~
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c: In␣
↪function 'intDoEnDis':
```

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```
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c:1862:9: warning: 'flags' may be used uninitialized [-Wmaybe-uninitialized]
1862 |         rtems_interrupt_disable(flags);
|         ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c:1851:17: note: 'flags' was declared here
1851 | unsigned long   flags, v;
|                 ^~~~~
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c: In function 'vmeTsi148IntRoute':
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c:1444:1: warning: 'flags' may be used uninitialized [-Wmaybe-uninitialized]
1444 | rtems_interrupt_disable(flags);
| ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c:1412:38: note: 'flags' was declared here
1412 | unsigned long   mask, shift, mapreg, flags, wire;
|                                      ^~~~~
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c: In function 'vmeTsi148ISRGet':
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c:1473:9: warning: 'flags' may be used uninitialized [-Wmaybe-uninitialized]
1473 |         rtems_interrupt_disable(flags);
|         ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c:1463:19: note: 'flags' was declared here
1463 | unsigned long     flags;
|                   ^~~~~
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c: In function 'vmeTsi148InstallISR':
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c:1810:17: warning: 'flags' may be used uninitialized [-Wmaybe-uninitialized]
1810 |                 rtems_interrupt_disable(flags);
|                 ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c:1796:19: note: 'flags' was declared here
1796 | unsigned long     flags;
|                   ^~~~~
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c: In function 'vmeTsi148RemoveISR':
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.c:1834:17: warning: 'flags' may be used uninitialized [-Wmaybe-uninitialized]
1834 |                 rtems_interrupt_disable(flags);
|                 ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
```

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```
/home/EB/sebastian_h/src/rtems/bsps/powerpc/shared/vme/vmeTsi148.
↪c:1826:19: note: 'flags' was declared here
1826 | unsigned long     flags;
|                   ^~~~~

Waf: Leaving directory `/tmp/sh/b-rtems/powerpc/qoriq_e6500_64'
```

Author: Chris Johns 2023-04-24T09:13:31.000Z

I just tried and I am still see the error. I am using:

```
[DEFAULT]
BUILD_TESTS = False
RTEMS_DEBUG = True

[powerpc/qoriq_e6500_32]

[powerpc/qoriq_e6500_64]
```

```
ruru rtems.git $ /opt/work/rtems/6/bin/powerpc-rtems6-gcc --version
powerpc-rtems6-gcc (GCC) 12.2.1 20220908 (RTEMS 6, RSB␣
↪c0edd80bcd27b3dad7ee7acf5ea129e81e6a6f64, Newlib 783133b)
Copyright (C) 2022 Free Software Foundation, Inc.
This is free software; see the source for copying conditions.  There is␣
↪NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR␣
↪PURPOSE.
```

Author: Trac Migrate 2023-04-24T09:19:40.000Z

Very strange, I don't get this error with:

```
/opt/rtems/6/bin/powerpc-rtems6-gcc --version
powerpc-rtems6-gcc (GCC) 12.2.1 20230421 (RTEMS 6, RSB␣
↪21bf2f3d73e49006cb6fd45f064d6b045bc4ed07, Newlib da40bd6)
Copyright (C) 2022 Free Software Foundation, Inc.
This is free software; see the source for copying conditions.  There is␣
↪NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR␣
↪PURPOSE.
```

Author: Joel Sherrill 2023-06-22T21:03:58.000Z

Chris.. I thought this was resolved. Can we close?

Author: Chris Johns 2023-06-22T21:45:21.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Building now

3.9.1.474 4906 - libbsd not working on nucleo-h743ZI

Id	4906
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-05-15T17:42:30.000Z
Updated	2023-06-22T20:47:49.000Z
Milestone	6.1
Labels	arch:arm, libbsd, priority::normal, resolution::invalid, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4906
Merges	0

Original author: yangn0

libbsd not working on nucleo-h743ZI.

I run the libbsd testsuit selectpollkqueue01,get a fatal.

The same fatal happened in my project.

* **FATAL** * fatal source: 0 (INTERNAL_ERROR_CORE) fatal code: 2 (INTERNAL_ERROR_TOO_LITTLE_WORKSPACE) RTEMS version: 6.0.0.020163e5b7bb0b4363b57f37729b99becae9c629 RTEMS tools: 12.2.1 20230224 (RTEMS 6, RSB f0e34eab8bf33b833a7d9d0b2bddd3b89f6d83cb, Newlib 17ac400) executing

i used a sh to build libbsd

```
cd /home/yangn0/devel/rtems-arm/rtems-libbsd
./waf distclean
./waf configure --prefix=$HOME/devel/rtems-arm/tools/rtems/6 \\
--rtems-bsps=arm/nucleo-h743zi \\
--buildset=buildset/default.ini
./waf
./waf install
```

Author: Joel Sherrill 2023-06-22T20:47:17.000Z

Original author: yangn0

The nucleo-h743ZI only has 1MB RAM. Although we don't have a hard line for the minimum RAM required for libbsd, this is well below the normal for use. We would recommend using lwip instead in such a low RAM environment. Please feel free to ask on devel@ or Discord for help with that.

Author: Joel Sherrill 2023-06-22T20:47:49.000Z

Original author: yangn0

- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*

There is nothing to fix in this situation. Closing.

3.9.1.475 4912 - Collect Compression Library Source in Single Place

Id	4912
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Created	2023-05-26T14:55:25.000Z
Updated	2023-06-06T13:49:01.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4912
Merges	0

Currently zlib is in cpukit/ while xz is in cpukit/libmisc. The purpose of this ticket is to create cpukit/compression and move both to it.

This ticket does not add, remove, or upgrade the existing source. It is intended to just document improving the organization.

Author: Joel Sherrill 2023-05-26T14:55:32.000Z

- **Owner** set to @joel
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-06-06T13:49:01.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"bb5dbff74a135957f3774e0ee1175bf7cf06edce/rtems" bb5dbff7/rtems]:

```
Move various compression libraries into single subdirectory

This improves the organization of the cpukit.

Closes #4912.
```

3.9.1.476 4901 - rtems_task_construct Documentation Missing Some Details

Id	4901
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2023-04-26T14:31:48.000Z
Updated	2023-05-19T05:21:42.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4901
Merges	0

The rtems_task_construct directive description has a couple of deficiencies:

- does not mention or link to RTEMS_TASK_STORAGE_SIZE
- does not provide rtems_task_config and discuss the fields

It would be nice to discuss how each of the parameters to rtems_task_create is set/computed when using rtems_task_config.

I did not look but rtems_message_queue_construct may have similar issues.

Author: Joel Sherrill 2023-04-26T14:32:05.000Z

- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-04-27T05:57:24.000Z

Yes, this is definitely missing. One issue is that we have no documentation of the data structures in the Classic API Guide. They are only present in the Doxygen documentation. My plan is to improve the documentation generator in rtems-central to produce documentation for the data structures.

Author: Joel Sherrill 2023-04-27T11:43:15.000Z

It isn't just the data structure. That could be largely accounted for with a quick mention that rtems_task_config maps to the arguments to rtems_task_create. The problem is specifically stack_size in create becomes storage_size in construct and you have to use a macro on your desired stack_size to fill in the structure. The dtor field is also missing info. You could get by with a bullet list on the structure parameters showing how they map or are used.

There is also nothing in rtems-examples which uses this.

Author: Trac Migrate 2023-04-27T13:38:13.000Z

Most of the stuff is already covered in the Doxygen output:

https://github.com/RTEMS/rtems/blob/master/cpukit/include/rtems/rtems/tasks.h#L107

Author: Trac Migrate 2023-05-19T05:21:42.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"e33eae15a79e9b58c381554a674905f371d9e1ec/rtems-docs" e33eae1/rtems-docs]:

```
c-user: Generate API type documentation

Close #4901.
```

3.9.1.477 4771 - Versal UART issues

Id	4771
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2022-12-05T04:57:52.000Z
Updated	2023-05-17T04:23:43.000Z
Milestone	6.1
Labels	arch:aarch64, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4771
Merges	0

The Versal polled mode it broken when building. The disable all interrupt call is not built in polled mode.

The UART interrupt mode behaves differently with a small stand alone app than a full app with libbsd. A full application with libbsd seems to behave while the small app exhibit the "not tx interrupt on FIFO load" issue.

- 0001-aarch64-versal-Fix-uart-interrupt-issues.patch

Author: Trac Migrate 2022-12-05T22:28:42.000Z

- **Attachment** 0001-aarch64-versal-Fix-uart-interrupt-issues.patch added

Author: Chris Johns 2023-02-09T02:27:13.000Z

The UART IP is based on the standard ARM IP however Xilinx have finally reported to me the interrupts are not the same as the ARM IP. There is weird issue around needing to prime the FIFO to half plus one to generate the first TX interrupt.

Xilinx has confirmed this will not change across the range of ACAP devices.

The main issue this raises is using the UART for a specialized protocol and not a terminal where sending a number of carriage returns is harmless.

Author: Trac Migrate 2023-05-17T04:23:43.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

3.9.1.478 4905 - SuperCore _TOD_Adjust No Longer Referenced and Should be Removed

Id	4905
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Created	2023-05-15T13:39:34.000Z
Updated	2023-05-16T13:21:09.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::score, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4905
Merges	0

Apparently with the rework of time handling, this method has become unused and should be removed.

Author: Joel Sherrill 2023-05-15T13:39:44.000Z

- **Owner** set to @joel
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-05-16T13:21:09.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"3f4454b6863443f68bc16814f5cfe1fe4002461a/rtems" 3f4454b/rtems]:

```
_TOD_Adjust method is unused. Remove it.

Use of this method was likely eliminated during the rework to use
FreeBSD bintime/sbintime.

Close #4905.
```

3.9.1.479 4902 - Update zlib to version 1.2.13

Id	4902
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-05-05T07:47:24.000Z
Updated	2023-05-09T12:56:31.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4902
Merges	1

Original author: sebastian.huber

The last zlib update was more than ten years ago. Update it to the latest version. This includes security fixes.

Author: Trac Migrate 2023-05-05T07:47:49.000Z

Original author: sebastian.huber

- **Summary** changed from *Update zlib to latest version* to *Update zlib to version 1.2.13*

Author: Trac Migrate 2023-05-09T12:56:31.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"1f00afcb5a5b30593543268acbcbcb94f60d24a2/rtems" 1f00afc/rtems]:

```
zlib: Update from 1.2.5 to 1.2.13

The updated files were extracted from:

https://www.zlib.net/zlib-1.2.13.tar.xz

The archive had an SHA-256 hash value of:

d14c38e313afc35a9a8760dadf26042f51ea0f5d154b0630a31da0540107fb98

Close #4902.
```

3.9.1.480 4896 - Makefile.inc exported BSP include path not a system include path

Id	4896
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-04-12T21:55:08.000Z
Updated	2023-04-14T20:07:10.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::build, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4896
Merges	0

The BSP include path exported in the `Makefile.inc` set of files uses `-I` and that is not a system include. The RTEMS 5 and earlier `autoconf` build system provided a spec file using the `-B` option and that either added a system path or the spec file included a system path. Either way the BSP include path was added as a system include path and so the compiler placed it at the end of the include list.

The `CPU_DEFINES` macro is part of `CPPFLAGS` exported by `Makefile.inc` and we cannot control how applications uses that variable so we need to make sure the BSP include path is exported as a system include path.

The issue was found with EPICS. EPICS installs a header file called `link.h` under its include path. RTEMS now provides a header file called `link.h`. The `CPPFLAGS` are before the EPICS include path so our `link.h` was seen before the EPICS one and that broken the build.

Author: Trac Migrate 2023-04-14T20:07:10.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"5a37722b066f5792aad80fb5b32fb3c056cf1607/rtems" 5a37722b/rtems]:

```
spec/pkgconfig: Allow builds to override headers

This allows any builds targeting an installed RTEMS BSP to override
headers in the installed BSP reliably, including headers previously
installed by that or other builds. This includes applications, network
stacks, libraries, and any other builds.

Closes #4896
```

3.9.1.481 4892 - MacOS tools build failures on Ventura and M series processors

Id	4892
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-03-26T01:09:44.000Z
Updated	2023-04-11T22:09:58.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4892
Merges	0

Building the tools with a recent MacOS such as Ventura failed because Apple has removed support for embedded python in programs. This means GDB does not build. The solution is to teach the RSB GDB support to use a build of Python from https://www.python.org/.

The RSB failed to build gcc on the M series processors on Ventura using Xcode 14.2. The build gcc crosscompiler (`xgcc`) crashes with sig faults. GCC does not bootstrap on ARM systems:

```
*** Configuration aarch64-apple-darwin22.3.0 not supported
```

Look at supporting Homebrew built `gcc`.

- 0001-darwin-Add-support-to-build-with-homebrew-is-present.patch
- 0002-dtc-Disable-warnings.patch
- 0003-gdb-Use-a-virtual-environment-if-present.patch
- 0004-gcc-12-Fix-libgcc-on-MacOS.patch
- gcc-no-sig.diff

Author: Chris Johns 2023-03-26T01:15:45.000Z

Fix building `libgcc` on MacOS:

https://gcc.gnu.org/bugzilla/show_bug.cgi?id=109282

Author: Chris Johns 2023-03-27T04:07:36.000Z

- **Attachment** 0001-darwin-Add-support-to-build-with-homebrew-is-present.patch added

Patch 1 of 4

Author: Chris Johns 2023-03-27T04:07:53.000Z

- **Attachment** 0002-dtc-Disable-warnings.patch added

Patch 2 of 4

Author: Chris Johns 2023-03-27T04:08:07.000Z

- **Attachment** 0003-gdb-Use-a-virtual-environment-if-present.patch added

Patch 3 of 4

Author: Chris Johns 2023-03-27T04:08:24.000Z

- **Attachment** 0004-gcc-12-Fix-libgcc-on-MacOS.patch added

Patch 4 of 4

Author: Chris Johns 2023-03-27T04:20:26.000Z

I have attached the 4 patches I have for building on a recent MacOS.

You need:

1. Recent Xcode installed with the command line tools package. To install the package start Xcode and then click on the Xcode menu item followed by "Open Developer Tools", "More Developer Tools...". Find the command line tools package for the version of Xcode you are running and install.
2. Install a recent Python 3 from https://www.python.org/downloads/macos/ and install. From a terminal shell run:

```
% /Applications/Python\\ 3.11/Update\\ Shell\\ Profile.command
```

To install the paths in your environment

3. Create a virtual environment and activate it:

```
% python3 -m venv rpy
% . ./rpy/bin/activate
```

4. Optionally install Homebrew and set up the environment. Make sure one of gcc-12 through to gcc-9 packages is installed.
5. Run a normal RSB build

Note: Currently M2 Pro builds are failing with a segment fault. I have only one machine to test this on.

Author: Trac Migrate 2023-03-28T10:26:27.000Z

Somethings's fishy here. If we'are talking about tools build by RSB as presented in HEAD, then I'm able to build those on Ventura. The point is to:

- use hand build python3
- use either more RAM or limit jobs

The common issue of segfaulting GCC seems to be caused by Ventura reworked memory management which seems to be very sensitive to available amount of RAM.

Using Ventura 13.2 here.

Author: Trac Migrate 2023-03-28T10:52:36.000Z

OK, so sorry for noise here. What I wrote was applicable in the past. Now, while looking into the internal documentation for MacOS-based customer (which may become part of rtems doc, just don't know where to put it nor had a time to submit/merge) I see these asciidoc paragraphs:

```
#### Install RTEMS build requirements
Please note that this paragraph is written for macOS 13.2.1 (Ventura) and is
not directly applicable to Linux distributions and/or various BSDs.

We are using homebrew to install basic packages required to compile
RTEMS tools and packages. Let's start with the Homebrew installation first.
Open the shell window and run following command inside it.
----
% /bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
----
The command will ask for root access and will then also download not
only brew package manager, but also Apple's Xcode command line tools.

When this is done, you may choose to configure brew to be available on
your PATH by following 'Next steps' printed to the terminal by the
installation process.

When this is done, you may continue with using brew package manager to
install required packages for us. Please use following command in
order to do it.
----
% brew install xz python3 texinfo
----
In order to use python3 installed above with just a 'python' command
which is required by the RTEMS source builder (due to required support
for python2 on tools side) you will also need to create a symbolic
link python3 -> python like below:
----
% cd /opt/homebrew/bin
% ln -s python3 python
----
```

Author: Trac Migrate 2023-03-28T12:59:14.000Z

I can confirm that I've built tools using RSB with last patch being:

```
commit f0e34eab8bf33b833a7d9d0b2bddd3b89f6d83cb (origin/master, origin/
↪HEAD)
Author: Chris Johns <chrisj@rtems.org>
Date:   Tue Mar 21 22:05:41 2023 +1100

binutils: Disable stack exec and RWX section warnings

Binutils 2.39 and later enable by default warnings for executables
with executable stack and RWX sections. Disable them.

Closes #4881
```

hour ago on my Ventura Mac Mini M1 software versions:

```
karel@mini rtems % sw_vers
ProductName:            macOS
ProductVersion:         13.2.1
BuildVersion:           22D68
```

just *FINE* and without any of your proposed patches!

So please do not destabilize stuff. macOS is enough PITA :-)

Author: Chris Johns 2023-03-28T21:10:46.000Z

Replying to kgardas:

> OK, so sorry for noise here.
>
> No problem.
>
> > What I wrote was applicable in the past. Now, while looking into the internal documentation for MacOS-based customer (which may become part of rtems doc, just don't know where to put it nor had a time to submit/merge) I see these asciidoc paragraphs:
> >
> > I will update the User Manual once we have the patches attached to this ticket.
> >
> > > {{{ ==== Install RTEMS build requirements Please note that this paragraph is written for macOS 13.2.1 (Ventura) and is not directly applicable to Linux distributions and/or various BSDs. We are using homebrew to install basic packages required to compile RTEMS tools and packages. Let's start with the Homebrew installation first. Open the shell window and run following command inside it.
> > >
> > > % /bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)" }}}

> Homebrew is optional in my view and not mandatory.
>
> > {{{
> >
> > The command will ask for root access and will then also download not only brew package manager, but also Apple's Xcode command line tools. When this is done, you may choose to configure brew to be available on your PATH by following 'Next steps' printed to the terminal by the installation process. When this is done, you may continue with using brew package manager to install required packages for us. Please use following command in order to do it.
> >
> > % brew install xz python3 texinfo }}}
> >
> > Python from Homebrew is an option for python but that will be a per user choice. The end goal is building with Xcode and python.org. The `texinfo` package may be added like `gsed` has been. I am not sure we even need `makeinfo` any more.
> >
> > > {{{
> > >
> > > In order to use python3 installed above with just a 'python' command which is required by the RTEMS source builder (due to required support for python2 on tools side) you will also need to create a symbolic link python3 -> python like below:
> > >
> > > % cd /opt/homebrew/bin % ln -s python3 python }}}
> > >
> > > Adding a link is personal choice. I prefer we document using virtual environments.

Author: Chris Johns 2023-03-28T21:13:47.000Z

Replying to kgardas:

> I can confirm that I've built tools using RSB with last patch being: {{{ commit f0e34eab8bf33b833a7d9d0b2bddd3b89f6d83cb (origin/master, origin/HEAD) Author: Chris Johns <chrisj@rtems.org> Date: Tue Mar 21 22:05:41 2023 +1100 binutils: Disable stack exec and RWX section warnings Binutils 2.39 and later enable by default warnings for executables with executable stack and RWX sections. Disable

> them. Closes #4881 }}} hour ago on my Ventura Mac Mini M1 software versions: {{{ karel@mini rtems % sw_vers ProductName: macOS ProductVersion: 13.2.1 BuildVersion: 22D68 }}} just *FINE* and without any of your proposed patches! So please do not destabilize stuff. macOS is enough PITA :-)
>
> The patches are needed so I encourage you try them and comment before they are pushed. The RSB is active and it changes.

Author: Trac Migrate 2023-03-28T21:28:04.000Z

Hold on! You added patches. I described two ways how is it possible to build tool and yet you claim patches are needed when half of the patches try to deal with crashing of gcc on your Ventura.

Also you claim homebrew is optional yet you like to use it's gcc/g++ to build tools.

A bit contradicting.

Anyway, please make sure you are on the *LATEST* Ventura and not on the .0 release. If you update, you will see your gcc crashes may be gone for good. I reported that on devel@ few times already.

Yes, makeinfo is still required by RSB otherwise I would not install it.

Yes, if RSB build its own xz and python and whatever, it would be good.

Author: Chris Johns 2023-03-29T05:57:47.000Z

Replying to kgardas:

> Hold on! You added patches.
>
> Indeed I did, please read the ticket. I clearly said this at the start of comment:2.
>
> > I described two ways how is it possible to build tool and yet you claim patches are needed when half of the patches try to deal with crashing of gcc on your Ventura.
> >
> > The patches are not attempting to address the crashing. I have no idea what causes those. The patches address other issues. They are:
> >
> > 1. Using Python virtual env and cleaning up python support for MacOS. This lets a user install python from python.org.
> > 2. DTC did not build because of warnings treated as errors. No idea how you missed this is you are at the same level of updates as me.
> > 3. Libgcc uses `sh` and not `$(SHELL)` in it's `Makefile.in`. I have not looked into why I got it but something is different in the set up or environment to trigger it.

4. Add homebrew as a I wanted to try building xgcc with gcc rather than Xcode. It did not help so I am currently considering dropping that patch.

   Also you claim homebrew is optional yet you like to use it's gcc/g++ to build tools.

   I have not yet added Homebrew support. It is sitting in a patch. I would prefer not to have it part of the build. I have explained this on the devel list in the past.

   > A bit contradicting.
   >
   > I did not and have not and I cannot understand why you need to talk to me like this. Can you please not?
   >
   > > Anyway, please make sure you are on the *LATEST* Ventura and not on the .0 release.
   > >
   > > I am on the latest.
   > >
   > > > If you update, you will see your gcc crashes may be gone for good. I reported that on devel@ few times already.
   > > >
   > > > They have not gone for me. I am on an M2 Pro and I think you are on an M1.
   > > >
   > > > > Yes, makeinfo is still required by RSB otherwise I would not install it.
   > > > >
   > > > > The RSB checks but is it needed in any packages these days? It was added long ago when all projects built the docs by default using it. We do not build doc. If needed support should be added like gsed.
   > > > >
   > > > > > Yes, if RSB build its own xz and python and whatever, it would be good.
   > > > > >
   > > > > > The RSB is written in python so building python would be difficult without

it already being installed. Ah yes xz is another. I built that by hand and had forgotten.

Author: Chris Johns 2023-04-02T23:29:15.000Z

Building on M2 Pro with Ventura 13.3 and Xcode Version 14.3 (14E222b) results in segmentation faults in `cc1` and `cc1plus`. Inspecting the MacOS crash reports showed invalid accesses to the stack guard area of memory. A typical crash report is:

```
Exception Type:        EXC_BAD_ACCESS (SIGSEGV)
Exception Codes:       KERN_PROTECTION_FAILURE at 0x00000001699dbff0
Exception Codes:       0x0000000000000002, 0x00000001699dbff0

Termination Reason:    Namespace SIGNAL, Code 11 Segmentation fault: 11
Terminating Process:   exc handler [30551]

VM Region Info: 0x1699dbff0 is in 0x1699d8000-0x1699dc000;  bytes after␣
↪start: 16368  bytes before end: 15
REGION TYPE                    START - END         [ VSIZE] PRT/MAX␣
↪SHRMOD  REGION DETAIL
MALLOC_MEDIUM (reserved)    147800000-148000000    [ 8192K] rw-/rwx␣
↪SM=NUL  ...(unallocated)
GAP OF 0x219d8000 BYTES
--->  STACK GUARD                 1699d8000-1699dc000    [   16K] ---/
↪rwx SM=NUL  ... for thread 0
Stack                         1699dc000-16d9d8000    [ 64.0M] rw-/rwx␣
↪SM=PRV  thread 0

Thread 0 Crashed::  Dispatch queue: com.apple.main-thread
0   cc1                                         0x10335d630 __gmpn_
↪lshift + 208
1   cc1                                         0x1033438c8 mpfr_mpn_exp␣
↪+ 684 (mpn_exp.c:151)
2   ???                                         0x2db39f030 ???


Thread 0 crashed with ARM Thread State (64-bit):
x0: 0x0000000000000000   x1: 0x00000001699dc010   x2:␣
↪0x0000000000000000   x3: 0x0000000000000001
x4: 0x0000000000000000   x5: 0x0000000000000000   x6:␣
↪0x0000000000000000   x7: 0x0000000000000000
x8: 0xffffffffffffffff   x9: 0x0000000000000007  x10:␣
↪0x0000000000000000  x11: 0x0000000000000000
x12: 0x0000000000000000  x13: 0x0000000000000000  x14:␣
↪0x0000000000000001  x15: 0x00000000ffffffd0
x16: 0x00000001699dc170  x17: 0x0000000082eff7fb  x18:␣
↪0xfffffffffffffe00  x19: 0xffffffffffffff04
```

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```
x20: 0x0000000000000003  x21: 0x0000000000000003  x22: 0x000000016d9cf818  x23: 0x0000000000000005
x24: 0xfffffffffffffff08  x25: 0x0000000000000004  x26: 0x0000000000000012  x27: 0x000000016d9cf6c8
x28: 0x000000016d9cf6e0   fp: 0x000000016d9cf7c0   lr: 0x00000001033438c8
sp: 0x000000016d9cf6b0   pc: 0x000000010335d630 cpsr: 0x20001000
far: 0x00000001699dbff0  esr: 0x92000007 (Data Abort) byte read Translation fault

Binary Images:
0x102428000 -        0x10359bfff cc1 (*) <72d6a4cf-055f-369c-89cb-4cbf48bff6cf> /Users/USER/*/cc1
0x0 - 0xffffffffffffffff ??? (*) <00000000-0000-0000-0000-000000000000> ???
```

The FAR is in the stack guard area. The crashes are always in the MPFR library and relate to calls to GMP. The GMP tests pass. The MPFR built by gcc tests fail and a hand built MPFR tests pass.

The crash leaves the build so changing to the MPFR build directory lets you run the tests:

```
cd build/arm-rtems6-gcc-cf59d86-newlib-17ac400-arm64-apple-darwin22.4.0-1/build/mpfr
make check
```

The results are:

```
============================================================================
Testsuite summary for MPFR 4.2.0
============================================================================
# TOTAL: 197
# PASS:  97
# SKIP:  3
# XFAIL: 0
# FAIL:  97
# XPASS: 0
# ERROR: 0
```

The failures are all seg faults.

I upgraded to MPFR 4.2.0 as it does not need the `fix-mac-arm64-mpfr-config.patch` patch. Building by hand and referencing the gcc build GMP has the following results:

```
============================================================================
Testsuite summary for MPFR 4.2.0
============================================================================
# TOTAL: 197
# PASS:  194
```

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```
# SKIP:  3
# XFAIL: 0
# FAIL:  0
# XPASS: 0
# ERROR: 0
```

I provided the same `configure` command line used by gcc when it builds the library internally. There are no sig faults.

I ran the tests for GMP and there were no errors.

Close inspection of the build and the `config.log` reveals a difference. The gcc build has:

```
-DHAVE___GMPN_INVERT_LIMB=1 -DHAVE___GMPN_RSBLSH1_N=1
```

and they are not present when building by hand. The `config.log` shows:

```
configure:19315: checking for __gmpn_invert_limb
[..]
configure:19315: result: yes
```

The hand built MPFR has:

```
configure:19315: checking for __gmpn_invert_limb
[..]
configure:19315: result: no
```

This is the only difference I could see.

Author: Chris Johns 2023-04-04T23:12:27.000Z

- **Attachment** gcc-no-sig.diff added

Disable GCC catch sign fauls and cleaning up with a error message.

Author: Chris Johns 2023-04-04T23:16:43.000Z

I have found a suitable work around for MacOS `arm64` that stops the crashes. I tracked issue to GMP and the assembler accelerators it has for `aarch64`. That code seems to access memory outside the area allocated and MacOS 13.2/13.3 detects this on `arm64`. The crash depends on where the `alloc` call allocates memory in relation to the stack guard.

I ised the simple patch attached to `toplev.cc` to stop GCC catching the seg fault signal. This lets MacOS capture the fault and generate a useful crash report.

After a crash I changed directory to the GCC build of MPFR and ran `make check`. The results failed as shown in comment:10.

Testing of builds of MPFR showed the issue in GMP and inspecting GMP `configure --help` showed `--disable-assemble`. Using this option results in the MPFR tests passing. I updated the GMP build to add this option on MacOS `arm64`.

This exposed a second issue. GCC was building GMP internally as the source was linked into the top level of GCC's sources. GMP is now built as a package because GDB also requires GMP. There is no point building it twice. Removing the GMP sources from the GCC build let GCC pick up the GMP package built and staged earlier in the build set with the work around configure option.

No bug report has been raised with the GMP or MPFR projects. If someone feels like doing that please do.

Author: Trac Migrate 2023-04-05T22:33:27.000Z

In [changeset:"344981a8f8202cf4b83cec179a15850eef9aeadb/rtems-source-builder" 344981a/rtems-source-builder]:

```
dtc: Disable warnings

Updates #4892
```

Author: Trac Migrate 2023-04-05T22:33:29.000Z

In [changeset:"9919f1217c66dad5e721802a265cdbdcf6070069/rtems-source-builder" 9919f12/rtems-source-builder]:

```
gdb: Use a virtual environment if present

- Detect and use a virtual environment if present

- Supports MacOS with python.org in a venv

Updates #4892
```

Author: Trac Migrate 2023-04-05T22:33:30.000Z

In [changeset:"f3c5dbdce6472da91c3c3a26c44d78c10474498f/rtems-source-builder" f3c5dbd/rtems-source-builder]:

```
rtems/gcc: Do not build GMP in GCC, use the staged build

- Do not build GMP when building GCC. GMP is now built
as a package for GDB. Building as a separate package
lets use control how it is built.

Updates #4892
```

Author: Trac Migrate 2023-04-05T22:33:32.000Z

In [changeset:"4358a038c62a21a59ce712b08c003b56c8ae2ab0/rtems-source-builder" 4358a03/rtems-source-builder]:

```
devel/gmp: Disable assemble builds on MacOS AARCH64

Updates #4892
```

Author: Trac Migrate 2023-04-05T22:33:33.000Z

In [changeset:"235c12feebc3df70e10b56d41573013729bd2a96/rtems-source-builder" 235c12f/rtems-source-builder]:

```
devel/mpfr: Update to 4.2.0 to support MacOS AARCH64

- Use base64 checksums

- Change MPFR URL

Updates #4892
```

Author: Trac Migrate 2023-04-05T22:33:35.000Z

In [changeset:"05f6bef0934f45fd9da1723824d0c710cd292c6c/rtems-source-builder" 05f6bef/rtems-source-builder]:

```
devel/mpfr: Add MPFR as a package

- This is a place holder incase we stop building MPFR in
GCC.

Updates #4892
```

Author: Trac Migrate 2023-04-05T22:33:37.000Z

In [changeset:"cf447af6ea33f009bdd1b74725f2faed6257d3dc/rtems-source-builder" cf447af/rtems-source-builder]:

```
rtems/mipsstx39: Update to GDB 13.1 and stage build GMP

- Use a build set file to stage GMP as recent GDB
versions require GMP.

Update #4892
```

Author: Trac Migrate 2023-04-05T22:33:38.000Z

In [changeset:"024db7d14300cb1650d7368587875e71082e0822/rtems-source-builder" 024db7d/rtems-source-builder]:

```
rtems/microblaze: Update to GDB 13.1

Note:
GCC does not build on MacOS 13.3 due to the specific version
of GCC the Microblaze is using.

Updates #4892
```

Author: Chris Johns 2023-04-11T22:09:58.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Karel has confirmed builds are working cleanly.

3.9.1.482 4889 - Remove file scanning from rtems-lwip

Id	4889
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Created	2023-03-24T00:07:56.000Z
Updated	2023-03-29T16:26:35.000Z
Milestone	6.1
Labels	network::lwip, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4889
Merges	0

rtems-lwip currently scans a subset of directories for files. Since it already supports includes in its definition format, it should instead explicitly list all files to be compiled and support for directory scanning should be removed.

Author: Trac Migrate 2023-03-29T16:26:35.000Z

- **Owner** set to Kinsey Moore <kinsey.moore@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"80197c5a4236eedb9270dd70f300f0cc1fc66adb/rtems-lwip" 80197c5/rtems-lwip]:

```
lwip.py: Remove directory scanning

This removes directory scanning from rtems-lwip for a more robust build
system.
```

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```
5
6 Closes #4889
```

3.9.1.483 4884 - I2C default ioctl handler does not handle set clock

Id	4884
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-03-22T04:53:13.000Z
Updated	2023-03-22T05:26:40.000Z
Milestone	6.1
Labels	device::i2c, priority::normal, resolution::invalid, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4884
Merges	0

The base struct for an I2C driver can set `set_clock` handler so a user can change the I2C clock speed. The default `ioctl` handler does not check for the `I2C_BUS_SET_CLOCK` command and if the `set_clock` handler is set calling it.

Author: Chris Johns		2023-03-22T05:26:40.000Z

- **Resolution** set to ~"invalid"
- **Status** changed from *assigned* to *closed*

Ah sorry I was looking at a device and not the bus.

3.9.1.484 4881 - powerpc gas and ld warnings

Id	4881
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-03-21T04:51:55.000Z
Updated	2023-03-21T21:55:03.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::binutils, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4881
Merges	0

The upgraded `binutils` generates new warnings when linking executables:

```
/opt/work/6/lib/gcc/powerpc-rtems6/12.2.1/../../../../powerpc-rtems6/bin/ld: warning: /opt/work/rtems/6-bsp/powerpc-rtems6/mvme2307/lib/vectors_entry.o: missing .note.GNU-stack section implies executable stack
/opt/work/6/lib/gcc/powerpc-rtems6/12.2.1/../../../../powerpc-rtems6/bin/ld: NOTE: This behaviour is deprecated and will be removed in a future version of the linker
/opt/work/6/lib/gcc/powerpc-rtems6/12.2.1/../../../../powerpc-rtems6/bin/ld: warning: /opt/work/chris/rtems/libbsd/rtems-libbsd.git/build/powerpc-rtems6-mvme2307-default/termios05.exe has a LOAD segment with RWX permissions
/opt/work/6/lib/gcc/powerpc-rtems6/12.2.1/../../../../powerpc-rtems6/bin/ld: warning: /opt/work/chris/rtems/libbsd/rtems-libbsd.git/build/powerpc-rtems6-mvme2307-default/termios05.exe has a LOAD segment with RWX permissions
```

Author: Chris Johns 2023-03-21T06:23:45.000Z

This article by Nick Clifton explains the changes in `binutils-2.39`:

https://www.redhat.com/en/blog/linkers-warnings-about-executable-stacks-and-segments

Author: Chris Johns 2023-03-21T06:57:19.000Z

This diff removes the warning:

```
diff --git a/bsps/powerpc/shared/start/vectors_entry.S b/bsps/powerpc/shared/start/vectors_entry.S
index 07b17a48af..9140c55121 100644
--- a/bsps/powerpc/shared/start/vectors_entry.S
+++ b/bsps/powerpc/shared/start/vectors_entry.S
@@ -10,6 +10,7 @@
#include <rtems/score/cpu.h>

PUBLIC_VAR (__rtems_start)
+       .section .note.GNU-stack,"",@progbits
.section .entry_point_section,"awx",@progbits
/*
* Entry point information used by bootloader code
```

however it moves to another object file:

```
/opt/work/6/lib/gcc/powerpc-rtems6/12.2.1/../../../../powerpc-rtems6/bin/ld: warning: /opt/work/6/lib/gcc/powerpc-rtems6/12.2.1/m604/ecrtn.o: missing .note.GNU-stack section implies executable stack
/opt/work/6/lib/gcc/powerpc-rtems6/12.2.1/../../../../powerpc-rtems6/bin/ld: NOTE: This behaviour is deprecated and will be removed in a future version of the linker
```

This time it is in the gcc build object files.

Author: Chris Johns 2023-03-21T09:26:15.000Z

The following removes the warnings:

```
[powerpc/mvme2307]
LINKFLAGS = -Wl,--no-warn-execstack -Wl,--no-warn-rwx-segments
```

I do not know how to add these options to the `LINKFLAGS` in the spec files.

Author: Chris Johns 2023-03-21T09:51:24.000Z

I will get the RSB to disable these warnings for RTEMS. This will mean we will not have to change anything and users will not see these warnings and be confused.

Author: Chris Johns 2023-03-21T10:50:55.000Z

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2023-03-21T21:55:03.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"f0e34eab8bf33b833a7d9d0b2bddd3b89f6d83cb/rtems-source-builder" f0e34ea/rtems-source-builder]:

```
binutils: Disable stack exec and RWX section warnings

Binutils 2.39 and later enable by default warnings for executables
with executable stack and RWX sections. Disable them.

Closes #4881
```

3.9.1.485 4878 - sptests/spsysinit01 sem_open call only has 3 parameters with O_CREAT flag (cloned)

Id	4878
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2023-03-13T14:29:44.000Z
Updated	2023-03-14T06:43:33.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4878
Merges	0

Original author: lsilistr

Cloned from #4877:

When calling sem_open with the O_CREAT flag the sem_open function requires 4 parameters. It will: value = va_arg(args, unsigned int); so the “value” argument will be randomly chosen.

sem_open can fail if the random value is not a valid semaphore value, failing the test.

Author: Trac Migrate 2023-03-14T06:43:33.000Z

Original author: lsilistr

- **Resolution** set to ~”fixed”
- **Status** changed from *assigned* to *closed*

In [changeset:”377eae4165d52d247bdeaac99c735fdb02edae65/rtems” 377eae4/rtems]:

```
spsysinit01: Fix sem_open() call

The O_CREAT flag requires a mode and initial value as third and fourth
argument.

Close #4878.
```

3.9.1.486 4872 - GDB 13.1 does not build on FreeBSD 13.1

Id	4872
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2023-03-09T03:10:07.000Z
Updated	2023-03-09T23:38:51.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::gdb, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4872
Merges	0

If the binutils package is installed GDB does not build.

See https://sourceware.org/bugzilla/show_bug.cgi?id=30214

Author: Trac Migrate 2023-03-09T23:38:51.000Z

- **Resolution** set to ~”fixed”
- **Status** changed from *assigned* to *closed*

In [changeset:”e5abdec8534849c9362674e867154121e917aead/rtems-source-builder” e5abdec/rtems-source-builder]:

```
6/gdb: fix building on FreeBSD 13.1

See https://sourceware.org/bugzilla/show_bug.cgi?id=30214

Closes #4872
```

3.9.1.487 4775 - RISC-V: Default RV64 BSPs to medany

Id	4775
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-12-17T16:43:37.000Z
Updated	2023-03-02T13:51:34.000Z
Milestone	6.1
Labels	arch:riscv, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4775
Merges	0

Original author: heshamelmatary

Currently generic RISC-V BSPs (riscv/riscv) that start with rv64 and not rv64_medany will start at 0x70000000. This adds high maintenance overhead and deviates from almost all other RISC-V-based OSes and baremetal program that start at 0x80000000. Further, testing now has to account for an extra parameter (medany or not) that doubles the number of BSPs need to be tested.

It would be ideal to reduce maintenance efforts by defaulting all RV64 BSPs to medany and make them start at 0x80000000 to run on both QEMU and Spike. Those that need other cmodels or start addresses could be customised (e.g., rv64imac would default to medany but rv64imac_medlow won't).

- 0001-Add-RTEMS-rv32-medany-support.patch

Author: Trac Migrate 2022-12-17T16:44:20.000Z

Original author: heshamelmatary

- **Attachment** 0001-Add-RTEMS-rv32-medany-support.patch added

gcc: Build medany rv32 multilibs

Author: Chris Johns 2022-12-17T21:36:18.000Z

Original author: heshamelmatary

- **Milestone** set to %"6.1"
- **Version** set to ~"6"

I have assigned this ticket to 6. Please move if not for 6.1.

Author: Trac Migrate 2022-12-21T12:35:09.000Z

Original author: heshamelmatary

Original author: heshamelmatary

- **Description** changed

```
- Currently generic RISC-V BSPs (riscv/riscv) that start with rv* and not rv*_medany will start at 0x70000000. This adds high maintenace overhead and deviates from almost all other RISC-V-based OSes and baremetal program that start at 0x80000000. Further, testing now has to account for an extra parameter (medany or not) that doubles the number of BSPs need to be tested. RV32* currently don't have medany support as gcc/newlib doesn't build this. Thus, rv32 only currently runs on Spike as QEMU starts at 0x80000000.
+ Currently generic RISC-V BSPs (riscv/riscv) that start with rv64 and not rv64_medany will start at 0x70000000. This adds high maintenance overhead and deviates from almost all other RISC-V-based OSes and baremetal program that start at 0x80000000. Further, testing now has to account for an extra parameter (medany or not) that doubles the number of BSPs need to be tested.

- It would be ideal to reduce maintenance efforts by defaulting all BSPs to medany and make them start at 0x80000000 to run on both QEMU and Spike. Those that need other cmodels or start addresses could be customised (e.g., rv64imac would default to medany but rv64imac_medlow won't).
+ It would be ideal to reduce maintenance efforts by defaulting all RV64 BSPs to medany and make them start at 0x80000000 to run on both QEMU and Spike. Those that need other cmodels or start addresses could be customised (e.g., rv64imac would default to medany but rv64imac_medlow won't).
?                                                
```

(continued from previous page)

```
↪overhead
and deviates from almost all other RISC-V-based OSes and baremetal␣
↪programs
that start at 0x80000000. Further, testing now has to account for an␣
↪extra
parameter (medany or not) that doubles the number of BSPs need to be
tested.

This commit defaults all RV64 BSPs to use medany code model to allow␣
↪starting
all BSPs at 0x80000000. BSPs that require different code models and/or
start addresses are custom and need to add their own entries.

Updates #4775
```

Author: Trac Migrate 2022-12-23T09:07:54.000Z

Original author: heshamelmatary

In [changeset:"a430dd43d9130f632aeba13663af53b152597399/rtems" a430dd4/rtems]:

```
spec/build/riscv: Start all riscv/riscv BSPs at 0x80000000

To follow other RISC-V-based OSes conventions. Delete generic
BSPs that start at 0x70000000 as BSPs are now medany by default.

Updates #4775
```

Author: Trac Migrate 2023-01-09T18:11:06.000Z

Original author: heshamelmatary

- **Owner** set to Hesham Almatary <hesham.almatary@cl.cam.ac.uk>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"6794f0166c231ca5c95bec9ab005eda496d5833d/rtems-docs" 6794f01/rtems-docs]:

```
Docs: RISC-V Update rv64* BSPs to medany and 0x80000000 start address

Closes #4775
```

Author: Trac Migrate 2023-02-08T07:13:22.000Z

Original author: heshamelmatary

In [changeset:"a735d42b3784af88994eb52b982a509c106cb2d4/rtems-tools" a735d42/rtems-tools]:

```
RISC-V Default rv64* BSPs to medany and 0x80000000 start address

To run on both QEMU and Spike

Updates #4775
```

Author: Trac Migrate 2023-02-08T07:13:23.000Z

Original author: heshamelmatary

In [changeset:"7ee62e96984bd2f05a4be7af9c01939124c72bcc/rtems-tools" 7ee62e9/rtems-tools]:

```
RISC-V: Test rv32i and rv32imafdc on QEMU

Updates #4775
```

Author: Trac Migrate 2023-03-02T13:51:34.000Z

Original author: heshamelmatary

In [changeset:"269562cfd253c10caf81e665d6304346abb33d1e/rtems" 269562cf/rtems]:

```
bsps/riscv: Use medany cmodel for 64-bit variants

Updates #4775.
```

3.9.1.488 4859 - Update gdb to 12.1

Id	4859
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2023-02-16T22:39:01.000Z
Updated	2023-02-17T20:12:45.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::gdb
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4859
Merges	0

While investigating the build issue tracked as #4858, I tried bumping the gdb to 12.1 hoping it included the fix. But it did not. This bumps the default gdb to 12.1 with the same patch.

Author: Trac Migrate 2023-02-17T20:12:45.000Z

- **Owner** set to Joel Sherrill <joel@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"e3f4060df4f4bb31adc679e92a471c03b1d1b30b/rtems-source-builder" e3f4060/rtems-source-builder]:

```
Update gdb to 12.1 including patch for hosts with readline 8.2

Issue for hosts with readline 8.2 also exists with gdb 12.1.

Closes #4859.
```

3.9.1.489 4858 - GDB fails to build on any host with readline 8.2 or newer

Id	4858
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Created	2023-02-16T22:36:08.000Z
Updated	2023-02-17T20:12:44.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::gdb
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4858
Merges	0

This showed up with gdb 11.2 building on Cygwin. The fix is already in the gdb git repository on the master but not gdb 12.x. This ticket tracks adding that to the RSB.

Author: Trac Migrate 2023-02-17T20:12:44.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"e1d5d93296a9bb6267f349974e044dbb5db27927/rtems-source-builder" e1d5d93/rtems-source-builder]:

```
rtems-gdb-11.2.cfg: Add patch for hosts with readline 8.2

Get the fix from gdb git repo to fix build issue which showed
up on Cygwin but was cross platform.

Closes #4858.
```

3.9.1.490 4331 - main_pci.c: Dereference after null check error spotted by Coverity

Id	4331
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-10T19:06:50.000Z
Updated	2023-02-10T15:01:17.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4331
Merges	0

Original author: rlong

CID 1399716: Dereference after null check in shell_pci_infodev().

```
10. var_compare_op: Comparing bus to null implies that bus might be null.
358  if (!bus) {
CID 1399716 (#1 of 1): Dereference after null check (FORWARD_NULL)11. var_deref_
↪op: Dereferencing null pointer bus.
359    printf(" AT BUS:        0x%x via Host Bridge\\n", bus->num);
360  } else {
```

Author: Trac Migrate 2021-03-10T19:27:59.000Z

Original author: rlong

- **Owner** set to daniel
- **Status** changed from *new* to *assigned*

Author: Joel Sherrill 2023-02-10T15:01:17.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Commit had typo and closed the wrong ticket.

In [changeset:"26e1610833a9f7c77409bbed99bf5015387438c6/rtems" 26e1610/rtems]:

```
shell/main_pci.c: Address Dereference after null error check

Coverity CID 1399716

Closes #4331.
```

3.9.1.491 2828 - Remove libmisc/serdbg

Id	2828
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2016-11-30T21:45:43.000Z
Updated	2023-02-10T13:38:24.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, rtems::score, ticket-type::defect, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2828
Merges	0

This is old code which should be replaced by the new debug server. Any hints or reusable in this for termios/serial port support can be retrieved from an old branch.

Author: Trac Migrate 2017-02-15T14:20:42.000Z

- **Milestone** changed from %"4.12" to %"Indefinite"
- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*

Author: Joel Sherrill 2023-01-10T15:04:57.000Z

- **Cc** added @thomas.doerfler, @sebastian.huber
- **Milestone** changed from %"Indefinite" to %"6.1"
- **Version** changed from ~"5" to ~"6"

This ticket is simple to implement but another person needs to confirm that it is time to remove the libmisc/serdbg code (https://git.rtems.org/rtems/tree/cpukit/libmisc/serdbg)

Author: Trac Migrate 2023-02-10T13:38:24.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"77e7bd97dce29bc36d9e0ad0bcb855a175e4cedd/rtems" 77e7bd9/rtems]:

```
libmisc/serdbg: Remove obsolete serial debug

Closes #2828.
```

3.9.1.492 4615 - Deprecate v850 port in rtems6 and remove in rtems7

Id	4615
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Created	2022-02-16T20:19:06.000Z
Updated	2023-02-09T15:59:20.000Z
Milestone	6.1
Labels	arch:v850, priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4615
Merges	0

This port is no longer maintained. No one has been testing it and it does not appear to have any users.

Deprecate for RTEMS 6.x Remove in RTEMS 7.x

Author: Chris Johns 2022-11-29T22:42:43.000Z

Please update https://git.rtems.org/rtems-release/tree/rtems-notes-6.md then close this ticket. please make a new ticket for the actual removal.

Author: Joel Sherrill 2023-02-09T15:59:20.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

https://git.rtems.org/rtems-release/commit/?id=d35d32f82182fd71bade181a09fbc9576d60116e

3.9.1.493 4613 - Deprecate sparc64 port in rtems6 and remove in rtems7

Id	4613
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Created	2022-02-16T20:17:36.000Z
Updated	2023-02-09T15:58:51.000Z
Milestone	6.1
Labels	arch:sparc64, priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4613
Merges	0

This port is no longer maintained. No one has been testing it and it does not appear to have any users.

Deprecate for RTEMS 6.x Remove in RTEMS 7.x

Author: Chris Johns 2022-11-29T22:41:24.000Z

Please update https://git.rtems.org/rtems-release/tree/rtems-notes-6.md then close this ticket. please make a new ticket for the actual removal.

Author: Joel Sherrill 2023-02-09T15:58:51.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

https://git.rtems.org/rtems-release/commit/?id=11aa44e068fe133ce088070cb1f5882b775a3e56

3.9.1.494 4614 - Deprecate sh port in rtems6 and remove in rtems7

Id	4614
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Created	2022-02-16T20:18:11.000Z
Updated	2023-02-09T15:58:28.000Z
Milestone	6.1
Labels	arch:sh, priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4614
Merges	0

This port is no longer maintained. No one has been testing it and it does not appear to have any users.

Deprecate for RTEMS 6.x Remove in RTEMS 7.x

Author: Chris Johns 2022-11-29T22:42:33.000Z

Please update https://git.rtems.org/rtems-release/tree/rtems-notes-6.md then close this ticket. please make a new ticket for the actual removal.

Author: Joel Sherrill 2023-02-09T15:58:28.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

https://git.rtems.org/rtems-release/commit/?id=dffcad2c38d8328a66efda6a421aa7e39226afa3

3.9.1.495 4838 - Fix for UART interrupt on aarch64 Versal

Id	4838
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2023-02-05T22:27:50.000Z
Updated	2023-02-09T13:13:15.000Z
Milestone	6.1
Labels	arch:aarch64, priority::normal, resolution::duplicate, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4838
Merges	0

Original author: Eagleirony

Fixed UART interrupts for Versal. Tested on VCK190.

- 0001-aarch64-versal-Fix-uart-interrupt-issues-1.patch

Author: Trac Migrate 2023-02-05T22:28:08.000Z

Original author: Eagleirony

- **Attachment** 0001-aarch64-versal-Fix-uart-interrupt-issues-1.patch added

Author: Joel Sherrill 2023-02-06T00:30:59.000Z

Original author: Eagleirony

- **Milestone** set to %"6.1"
- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Assigning to Chris since this is his BSP

Author: Kinsey Moore 2023-02-08T20:35:42.000Z

Original author: Eagleirony

Is this a duplicate of #4771?

Author: Chris Johns 2023-02-09T02:24:00.000Z

Original author: Eagleirony

Replying to Kinsey Moore:

> Is this a duplicate of #4771?
>
> Yes I think it is. Aaron will know so lets see what he says?

Author: Trac Migrate 2023-02-09T10:16:02.000Z

Original author: Eagleirony

Yeah it is a duplicate.

Author: Kinsey Moore 2023-02-09T13:13:15.000Z

Original author: Eagleirony

- **Resolution** set to ~"duplicate"
- **Status** changed from *assigned* to *closed*

3.9.1.496 4821 - Ubuntu Host Instructions Wrong

Id	4821
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2023-01-23T23:41:33.000Z
Updated	2023-01-25T14:15:35.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4821
Merges	0

The current instructions were reported to be as being broken in email. Filing a ticket to track.

So here is the quick start command line which is missing the work 'install' and some of the packages listed don't exist: https://docs.rtems.org/branches/master/user/hosts/posix.html#xubuntu

Here is the correct command line:

$ sudo apt install build-essential g++ gdb unzip pax bison flex texinfo python3-dev python-is-python3 libpython2-dev libncurses5-dev zlib1g-dev ninja-build pkg-config

Author: Trac Migrate 2023-01-25T14:15:35.000Z

- **Owner** set to Joel Sherrill <joel@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"68a44b2524e6ccee3a581e41d44c9b27ed1e0439/rtems-docs" 68a44b2/rtems-docs]:

```
user/hosts/posix.rst: Update Ubuntu instructions to 22.x

Closes #4821.
```

3.9.1.497 4634 - Fix hash for glib-2.48

Id	4634
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-03-24T15:15:31.000Z
Updated	2023-01-23T20:49:08.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4634
Merges	0

Original author: rlong

The hash needs updated in order for glib to be built. This is currently preventing

- 0001-devel-glib-2.48-Update-hash.patch
- 566e1d61a500267c7849ad0b2552feec9c9a29a6.patch

Author: Trac Migrate	2022-03-24T15:16:13.000Z

Original author: rlong

- **Attachment** 0001-devel-glib-2.48-Update-hash.patch added

Author: Trac Migrate	2022-03-24T20:49:58.000Z

Original author: rlong

This is currently preventing QEMU from being built. The hash of the patch changed for some unknown reason. Therefore, we are going to store a copy of that patch here so that it doesn't change. This patch will then be pulled down and applied in place of where it was originally done. The hash of the patch will still have to be updated, but hopefully this will prevent it from happening again.

Author: Trac Migrate	2022-03-24T20:51:50.000Z

Original author: rlong

- **Attachment** 566e1d61a500267c7849ad0b2552feec9c9a29a6.patch added

Author: Trac Migrate 2022-03-25T19:01:59.000Z

Original author: rlong

In [changeset:"49e3dac17765fa82ce2f754da839638ee352f95c/rtems-source-builder" 49e3dac/rtems-source-builder]:

```
devel/glib-2.48: Update hash and patch

Changes patch to be pulled from an RTEMS ticket and updated the hash of
↪the
patch.

Updates #4634
```

Author: Chris Johns 2022-11-29T23:53:25.000Z

Original author: rlong

Status update?

Author: Joel Sherrill 2022-12-28T17:45:56.000Z

Original author: rlong

Looks like it got committed with "updates" not "closes"

Author: Gedare Bloom 2023-01-23T20:49:08.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

3.9.1.498 4782 - Correct Issues in Rate Monotonic Manager Background Section

Id	4782
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2023-01-10T15:10:34.000Z
Updated	2023-01-17T19:35:43.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4782
Merges	0

Fix these issues:

- 11.2.5.1 last bullet is inverted logically. Non-periodic tasks must NOT displace periodic ones and should run in background at a logically lower priority.
- 11.2.5.4 - emphasis box needed on the second paragraph (after lead-in that ends with a colon)

Author: Joel Sherrill 2023-01-17T19:35:28.000Z

In f48f79d/rtems-docs:

c-user/rate-monotonic/background.rst: Correct logically inverted statement Also corrected a spot of formatting.

Closes #4782.

Author: Joel Sherrill 2023-01-17T19:35:43.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

3.9.1.499 4724 - Git commit message format instructions

Id	4724
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Joel Sherrill
Created	2022-09-26T01:48:26.000Z
Updated	2022-12-14T23:26:53.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4724
Merges	0

The Eng docs Creating A Patch references the Wiki. The content should be in the manual.

Note lots of git related bits are in the Eng manual and still on the Wiki so which is correct?

Author: Chris Johns 2022-11-29T22:58:51.000Z

Add the how to make a commit to the `Making Changes` section of the Eng manual.

Author: Joel Sherrill 2022-12-13T22:43:41.000Z

- **Summary** changed from *Git commit message format instrunctions* to *Git commit message format instructions*

Author: Joel Sherrill 2022-12-14T23:26:53.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"a3d7dd1b88b529c24013758748a78ddd71aa3b37/rtems-docs" a3d7dd1/rtems-docs]:

```
eng/vc-users.rst: Add commit message guidance

Closes #4274.
```

3.9.1.500 4453 - Global vs Local Attribute Unclear for SMP/Distributed MP

Id	4453
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Created	2021-06-09T18:31:46.000Z
Updated	2022-12-07T18:22:01.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4453
Merges	0

The description for global vs local attributes on objects do not make it clear whether they apply to SMP or distributed multiprocessing configuration. This applies to at least the rtems_task_create description but likely needs to be addressed in the description in every create with global/local and in the SMP section.

Author: Trac Migrate 2021-06-10T13:28:04.000Z

In the rtems_task_create() description we have:

The task has a local or global scope in a multiprocessing network (this attribute does not refer to SMP systems). The scope is selected by the mutually exclusive RTEMS_LOCAL and RTEMS_GLOBAL attributes.

Maybe we should add `local scope` and `global scope` glossary terms. Maybe we should replace `scope` with something more specific.

Author: Chris Johns 2022-11-29T23:43:13.000Z

- **Owner** set to @joel
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2022-12-07T18:22:01.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"32de9ff259f1bf913a816956b1a2c615ea4d5729/rtems-docs" 32de9ff/rtems-docs]:

```
c-user: Add Local vs Global to Key Concepts Chapter

Add multiple new index entries and cite them where RTEMS_LOCAL
and RTEMS_GLOBAL are cited.

Closes #4453.
```

3.9.1.501 4756 - Docs build system does not build singlehtml (cloned)

Id	4756
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2022-11-10T22:05:05.000Z
Updated	2022-12-06T21:20:46.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4756
Merges	0

Cloned from #4755:

The configure logic does not handle the `inliner` detection correctly.

Author: Chris Johns 2022-11-30T00:05:43.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Author: Trac Migrate 2022-12-06T21:20:46.000Z

- **Owner** set to Chris Johns <chrisj@rtems.org>

In [changeset:"8f5f371b3deedd73a9bac58a0aadb889b8e063df/rtems-docs" 8f5f371/rtems-docs]:

```
waf: Handle the enable options for singlehtml and ditaa/puml

Close #4756
```

3.9.1.502 4382 - mingw - add flex to packages needed

Id	4382
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Created	2021-04-07T23:12:00.000Z
Updated	2022-11-30T23:26:28.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4382
Merges	0

New install of msys2 and pacman instructions in manual missed flex.

Author: Chris Johns 2022-11-29T22:37:38.000Z

- **Owner** set to @joel

Author: Trac Migrate 2022-11-30T23:26:28.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"5a548472eac0ad74b192a9103100b3d87138ca8d/rtems-docs" 5a54847/rtems-docs]:

```
user/hosts/windows.rst: flex needs to be installed for msys2

Closes #4382.
```

3.9.1.503 4766 - Classic API User Guide Index has Functions without Parentheses

Id	4766
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Created	2022-11-30T15:45:45.000Z
Updated	2022-11-30T23:26:07.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4766
Merges	0

Some index entries in the Classic API Users Guide has some method names without parentheses like rtems_clock_get instead of rtems_clock_get() which is used most of the time. Fix to improve

consistency.

Author: Trac Migrate 2022-11-30T23:26:07.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"aaba6e582647493ea8416063bf350de8393315c4/rtems-docs" aaba6e5/rtems-docs]:

```
c-user/*: Add trailing parentheses on methods in index which were␣
↪missing it

Closes #4766.
```

3.9.1.504 4714 - Use waf for LwIP walk sources

Id	4714
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2022-09-04T23:00:35.000Z
Updated	2022-11-30T00:06:58.000Z
Milestone	6.1
Labels	network::lwip, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4714
Merges	0

The `lwip.py` support has a call to walk the source tree for source files. Waf supports glob'ing of sources so why not use that?

This ticket is to remove the walk.

Author: Chris Johns 2022-09-04T23:01:12.000Z

- **Description** changed

```
- The `lwip.py` support has a call to walk the source for source files.␣
↪Waf support glob'ing of sources so why no use that?
+ The `lwip.py` support has a call to walk the source tree for source␣
↪files. Waf supports glob'ing of sources so why not use that?
?                                                    +++++           ␣
↪                +                                +


This ticket is to remove the walk.
```

Author: Kinsey Moore 2022-11-30T00:06:58.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

This was resolved with commit e02d02e2ce29379c2d4bfb15fbd5b101e9bd58e8 to rtems-lwip.

3.9.1.505 4658 - Fix build issue with riscv sample test

Id	4658
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-05-16T17:40:10.000Z
Updated	2022-11-29T23:55:04.000Z
Milestone	6.1
Labels	arch:riscv, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4658
Merges	0

Original author: rlong

When trying to build the minimum sample test for any RISC-V BSP, the following error occurs.

```
start.o: in function .L0:

/home/tester/rtems-cron-6/rtems/build/riscv/rv32i/../../../bsps/riscv/shared/
↪start/start.S:84:(.bsp_start_text+0x2c): relocation truncated to fit: R_RISCV_
↪GPREL_I against symbol 'bsp_section_bss_size' defined in *ABS* section in /home/
↪tester/rtems-cron-6/rtems/build/riscv/rv32i/testsuites/samples/minimum.exe

collect2: error: ld returned 1 exit status
```

Author: Trac Migrate 2022-05-18T06:26:58.000Z

Original author: rlong

I cannot reproduce this issue on my development machines. It could be an issue in the linker. I would run the linker in GDB and try to debug it to figure out what is going on.

Author: Trac Migrate 2022-10-28T11:53:25.000Z

Original author: rlong

In [changeset:"89ba2a9838558841c4f38283e84b99173790d61c/rtems" 89ba2a98/rtems]:

```
bsps/riscv: Workaround for sporadic linker issues

Disable the linker relaxation in start.S to work around an issue␣
↪described
here:

https://mail.gnu.org/archive/html/bug-binutils/2021-03/msg00164.html

The real issue is probably in the linker command file or the linker␣
↪itself.

Update #4658.
```

Author: Trac Migrate 2022-11-04T12:50:15.000Z

Original author: rlong

In [changeset:"b4ffaa7cdcce4fedb857f6b8342301f8dde65c78/rtems" b4ffaa7c/rtems]:

```
bsps/riscv: Use start data for object

Maybe this helps to ensure that the object is properly aligned.

Update #4658.
```

Author: Chris Johns 2022-11-29T23:55:04.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

3.9.1.506 4619 - riscv/rv32iac: minimum sample test fails to build

Id	4619
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-02-23T16:53:41.000Z
Updated	2022-11-29T23:52:49.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::worksforme, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4619
Merges	0

Original author: rlong

This issue was found while investigating #4618. The specifics of the error are listed there.

Author: Chris Johns 2022-11-29T23:52:49.000Z

Original author: rlong

- **Resolution** set to ~"worksforme"
- **Status** changed from *new* to *closed*

BSP builder is showing this as working.

3.9.1.507 4489 - waf configure's –rtems-config and build create an error

Id	4489
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2021-08-05T07:30:27.000Z
Updated	2022-11-29T23:47:23.000Z
Milestone	6.1
Labels	priority::normal, resolution::wontfix, rtems::build, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4489
Merges	0

Waf allows `distclean`, `configure`, `build` and `install` on a single command line however adding `--rtems-config` to the configure stage generates this error:

```
The --rtems-config command line option is not allowed in the build command
```

This is error is incorrect.

Author: Chris Johns 2022-11-29T23:47:23.000Z

- **Resolution** set to ~"wontfix"
- **Status** changed from *new* to *closed*

I am closing this as it will not be fixed for now. It is not right in the normal context of `waf` command lines but it is a corner case to fix.

Please reopen if this is important.

3.9.1.508 4517 - Build failures for MacOS

Id	4517
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2021-09-20T00:15:33.000Z
Updated	2022-11-29T23:41:56.000Z
Milestone	6.1
Labels	priority::normal, resolution::wontfix, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4517
Merges	0

This ticket is a collection of the following archs that fail to build:

- `bfin`
- `lm32`
- `mips`
- `or1k`
- `powerpc`
- `v850`

bfin

```
../../../sourceware-mirror-binutils-gdb-7ab567f/sim/bfin/dv-bfin_dma.c:124:35:␣
↪error: implicitly declaring library function 'abs' with type 'int (int)' [-
↪Werror,-Wimplicit-function-declaration]
if (dma->ele_size != (unsigned) abs (dma->x_modify))
```

lm32

```
../../../sourceware-mirror-binutils-gdb-7ab567f/sim/lm32/dv-lm32cpu.c:151:8:␣
↪error: implicit declaration of function 'lm32bf_h_csr_get' is invalid in C99 [-
↪Werror,-Wimplicit-function-declaration]
im = lm32bf_h_csr_get (cpu, LM32_CSR_IM);
```

mip

```
../../../sourceware-mirror-binutils-gdb-7ab567f/sim/mips/cp1.c:495:7: error:␣
↪implicitly declaring library function 'abort' with type 'void (void) __attribute
```

or1k

```
../../../sourceware-mirror-binutils-gdb-7ab567f/sim/or1k/../common/cgen-trace.
↪c:213:6: error: implicitly declaring library function 'abort' with type 'void␣
↪(void) __attribute__((noreturn))' [-Werror,-Wimplicit-function-declaration]
abort ();
```

powerpc

```
semantics.c:42:7: error: implicit declaration of function 'tree_find_property' is␣
↪invalid in C99 [-Werror,-Wimplicit-function-declaration]
if (tree_find_property(root, "/options/mpc860c0"))
```

v850

```
../../../sourceware-mirror-binutils-gdb-7ab567f/sim/v850/simops.c:1651:6: error:␣
↪implicit declaration of function 'free' is invalid in C99 [-Werror,-Wimplicit-
↪function-declaration]
free (path);
```

Author: Chris Johns 2021-09-20T07:54:33.000Z

- **Description** changed

```
This ticket is a collection of the following archs that fail to build:

- `bfin`
- `lm32`
- `mips`

== `bfin`
{{{
../../../sourceware-mirror-binutils-gdb-7ab567f/sim/bfin/dv-bfin_dma.
↪c:124:35: error: implicitly declaring library function 'abs' with␣
↪type 'int (int)' [-Werror,-Wimplicit-function-declaration]
if (dma->ele_size != (unsigned) abs (dma->x_modify))
}}}

== `lm32`
{{{
../../../sourceware-mirror-binutils-gdb-7ab567f/sim/lm32/dv-lm32cpu.
↪c:151:8: error: implicit declaration of function 'lm32bf_h_csr_get'␣
↪is invalid in C99 [-Werror,-Wimplicit-function-declaration]
```

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```
im = lm32bf_h_csr_get (cpu, LM32_CSR_IM);
}}}

== `mip`
{{{
../../../sourceware-mirror-binutils-gdb-7ab567f/sim/mips/cp1.c:495:7: error: implicitly declaring library function 'abort' with type 'void (void) __attribute
}}}
+
+ == `or1k`
+ {{{
+ ../../../sourceware-mirror-binutils-gdb-7ab567f/sim/or1k/../common/cgen-trace.c:213:6: error: implicitly declaring library function 'abort' with type 'void (void) __attribute__((noreturn))' [-Werror,-Wimplicit-function-declaration]
+             abort ();
+ }}}
+
+ == `powerpc`
+ {{{
+ semantics.c:42:7: error: implicit declaration of function 'tree_find_property' is invalid in C99 [-Werror,-Wimplicit-function-declaration]
+   if (tree_find_property(root, "/options/mpc860c0"))
+ }}}
+
+ == `v850`
+ {{{
+ ../../../sourceware-mirror-binutils-gdb-7ab567f/sim/v850/simops.c:1651:6: error: implicit declaration of function 'free' is invalid in C99 [-Werror,-Wimplicit-function-declaration]
+             free (path);
+ }}}
```

Author: Chris Johns 2021-09-20T07:55:01.000Z

- **Description** changed

```
This ticket is a collection of the following archs that fail to build:

- `bfin`
- `lm32`
- `mips`
+ - `or1k`
+ - `powerpc`
+ - `v850`

== `bfin`
```

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```
{{{
../../../sourceware-mirror-binutils-gdb-7ab567f/sim/bfin/dv-bfin_dma.
↪c:124:35: error: implicitly declaring library function 'abs' with␣
↪type 'int (int)' [-Werror,-Wimplicit-function-declaration]
if (dma->ele_size != (unsigned) abs (dma->x_modify))
}}}

== `lm32`
{{{
../../../sourceware-mirror-binutils-gdb-7ab567f/sim/lm32/dv-lm32cpu.
↪c:151:8: error: implicit declaration of function 'lm32bf_h_csr_get'␣
↪is invalid in C99 [-Werror,-Wimplicit-function-declaration]
im = lm32bf_h_csr_get (cpu, LM32_CSR_IM);
}}}

== `mip`
{{{
../../../sourceware-mirror-binutils-gdb-7ab567f/sim/mips/cp1.c:495:7:␣
↪error: implicitly declaring library function 'abort' with type 'void␣
↪(void) __attribute
}}}

== `or1k`
{{{
../../../sourceware-mirror-binutils-gdb-7ab567f/sim/or1k/../common/cgen-
↪trace.c:213:6: error: implicitly declaring library function 'abort'␣
↪with type 'void (void) __attribute__((noreturn))' [-Werror,-Wimplicit-
↪function-declaration]
abort ();
}}}

== `powerpc`
{{{
semantics.c:42:7: error: implicit declaration of function 'tree_find_
↪property' is invalid in C99 [-Werror,-Wimplicit-function-declaration]
if (tree_find_property(root, "/options/mpc860c0"))
}}}

== `v850`
{{{
../../../sourceware-mirror-binutils-gdb-7ab567f/sim/v850/simops.
↪c:1651:6: error: implicit declaration of function 'free' is invalid␣
↪in C99 [-Werror,-Wimplicit-function-declaration]
free (path);
}}}
```

Author: Chris Johns 2022-11-29T23:41:56.000Z

- **Resolution** set to ~"wontfix"

- **Status** changed from *new* to *closed*

There may be issues. Reopen if a specific build is needed.

3.9.1.509 4201 - waf building out of source tree does not find all configured bsps

Id	4201
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2020-12-09T01:46:10.000Z
Updated	2022-11-29T23:27:25.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::build, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4201
Merges	0

`config.ini` is:

```
[DEFAULT]
BUILD_TESTS = False
RTEMS_DEBUG = True
RTEMS_POSIX_API = True

[arm/beagleboneblack]

[arm/xilinx_zynq_a9_qemu]

[i386/pc686]

[powerpc/mvme2307]
```

And `configure` is:

```
$ /opt/work/chris/rtems/kernel/rtems.git/waf \\
--top=/opt/work/chris/rtems/kernel/rtems.git \\
--out=build configure \\
--rtems-config=config.ini \\
--prefix=/opt/work/chris/rtems/nfs/6
Setting top to                           : /opt/work/chris/rtems/kernel/rtems.git
Setting out to                           : /opt/work/chris/rtems/nfs/bsps/build
Configure board support package (BSP)    : powerpc/mvme2307
Checking for program 'powerpc-rtems6-gcc' : /opt/work/chris/rtems/nfs/6/bin/
↪powerpc-rtems6-gcc
Checking for program 'powerpc-rtems6-g++' : /opt/work/chris/rtems/nfs/6/bin/
↪powerpc-rtems6-g++
Checking for program 'powerpc-rtems6-ar'  : /opt/work/chris/rtems/nfs/6/bin/
↪powerpc-rtems6-ar
```

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```
Checking for program 'powerpc-rtems6-ld'  : /opt/work/chris/rtems/nfs/6/bin/
↪powerpc-rtems6-ld
Checking for program 'ar'                 : /opt/work/chris/rtems/nfs/6/bin/
↪powerpc-rtems6-ar
Checking for program 'g++, c++'           : /opt/work/chris/rtems/nfs/6/bin/
↪powerpc-rtems6-g++
Checking for program 'ar'                 : /opt/work/chris/rtems/nfs/6/bin/
↪powerpc-rtems6-ar
Checking for program 'gas, gcc'           : /opt/work/chris/rtems/nfs/6/bin/
↪powerpc-rtems6-gcc
Checking for program 'ar'                 : /opt/work/chris/rtems/nfs/6/bin/
↪powerpc-rtems6-ar
Checking for program 'gcc, cc'            : /opt/work/chris/rtems/nfs/6/bin/
↪powerpc-rtems6-gcc
Checking for program 'ar'                 : /opt/work/chris/rtems/nfs/6/bin/
↪powerpc-rtems6-ar
Checking for asm flags '-MMD'             : yes
Checking for c flags '-MMD'               : yes
Checking for cxx flags '-MMD'             : yes
Checking for program 'rtems-bin2c'        : /opt/work/chris/rtems/nfs/6/bin/rtems-
↪bin2c
Checking for program 'gzip'               : /usr/bin/gzip
Checking for program 'rtems-ld'           : /opt/work/chris/rtems/nfs/6/bin/rtems-
↪ld
Checking for program 'rtems-syms'         : /opt/work/chris/rtems/nfs/6/bin/rtems-
↪syms
Checking for program 'xz'                 : /usr/bin/xz
'configure' finished successfully (0.245s)
```

The same `config.ini` in the source tree finds all configured bsps.

Being able to cleanly sandbox builds is a feature of the `autotools` build system.

Author: Trac Migrate 2020-12-09T05:55:53.000Z

I guess the issue is that it finds a “config.ini” in the source tree since this is the current working directory of the wscript process.

For a discussion of out of tree builds see:

https://lists.rtems.org/pipermail/devel/2020-November/063066.html

Author: Chris Johns 2022-11-29T23:27:25.000Z

- **Resolution** set to ~”fixed”
- **Status** changed from *new* to *closed*

3.9.1.510 4200 - Build system doco link in the User Guide is broken

Id	4200
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2020-12-09T00:59:36.000Z
Updated	2022-11-29T23:26:11.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4200
Merges	0

https://docs.rtems.org/branches/master/user/bld/index.html#commands

The “RTEMS Software Engineering” guide link at the end of this section is to a `.rst` file.

I think cross-doc links is broken no matter how you attempt to solve this, ie PDF files will never work.

Author: Chris Johns	2020-12-09T01:02:36.000Z

There are cross doco links in the engineering manual. These are also broken.

Author: Chris Johns	2022-11-29T23:26:11.000Z

- **Resolution** set to ~”fixed”
- **Status** changed from *new* to *closed*

3.9.1.511 4166 - rtems-bsp-builder: Add way to select rtems version (6 vs 7)

Id	4166
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-10-28T13:04:23.000Z
Updated	2022-11-29T23:25:39.000Z
Milestone	6.1
Labels	priority::normal, resolution::duplicate, tickettype::enhancement, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4166
Merges	0

When testing the RTEMS master, one can use the rtems6 or rtems7 tools. The rtems-bsp-builder is hard-coded to rtems6.

As part of doing this, the version should be in the email subject and report so that similar reports can be distinguished.

Author: Chris Johns 2022-11-29T23:25:39.000Z

- **Resolution** set to ~"duplicate"
- **Status** changed from *new* to *closed*

Duplicate of #3671

3.9.1.512 4065 - Typo in rtems-boot.ini "ubootdior" should be "ubootdir"

Id	4065
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-08-28T11:06:46.000Z
Updated	2022-11-29T23:21:57.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4065
Merges	0

Original author: junkes@fhi-berlin.mpg.de

Typo in rtems-tools misc/tools/config/rtems-boot.ini

diff rtems-boot.ini ./tools/misc/tools/config/rtems-boot.ini 55c55 < first_stage = %{ubootdir}/spl/boot.bin —

first_stage = %{ubootdior}/spl/boot.bin

- rtems-boot.ini.patch

Author: Trac Migrate 2022-04-08T07:36:06.000Z

Original author: junkes@fhi-berlin.mpg.de

- **Attachment** rtems-boot.ini.patch added

patch file (diff)

Author: Trac Migrate 2022-04-08T07:38:38.000Z

Original author: junkes@fhi-berlin.mpg.de

- **Milestone** changed from %"5.1" to %"6.1"
- **Version** changed from ~"5" to ~"6"

Update, is still in master (6?)

Author: Trac Migrate 2022-11-29T23:21:57.000Z

Original author: junkes@fhi-berlin.mpg.de

- **Owner** set to Joel Sherrill <joel@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"f29483d14dfd80a5a8ab1f436631339ddf2c84cb/rtems-tools" f29483d/rtems-tools]:

```
rtems-boot.ini: Correct spelling of %{ubootdir}

Closes #4065.
```

3.9.1.513 3977 - Add unexplained-failure as option for Test Configuration Files

Id	3977
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-05-10T16:34:31.000Z
Updated	2022-11-29T23:16:56.000Z
Milestone	6.1
Labels	priority::normal, resolution::invalid, tickettype::enhancement, tool::test
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3977
Merges	0

RTEMS has many BSPs and it is a large amount of work to investigate each test execution that has an unexpected result. The tcfg files were initially created to just avoid trying build tests where the executable did not fit into target memory. That has grown to incorporate knowledge about which tests require human input and are not automated. This ticket is to add a new test state for "unexplained failure".

If a test has been investigated and has an explanation, it is a known failure. This could be associated with a ticket (e.g. dynamic loading or fenv not supported on an architecture) or just a comment explaining it (e.g. mips jmr3904 simulator trapping invalid memory accesses before the trap handler is tripped).

But many tests are currently just marked as failures because they do fail but no one has investigated and explained it. The addition of "unexplained failure" is to capture those. This will make it possible for someone looking to know they need investigating but are known to fail. Marking these are "known failure" permanently puts them in a category where they will not get looked at again.

This has two side-effects. The first is that we can have test results with no "unexpected failures." They are either known and explained or known and need investigation. This helps anyone looking at test results since there should be no unexpected failures. The second side-effect is

that it hopefully captures the set of repeatedly failing tests and encourages us to investigate and file tickets or explain.

The milestone for this is **NOT** 5.x because this is moving the goalpost for test results. Release 5.x is the first with the body of test results data we have. The build@ mailing list has them and can be compared by any user interested. We also do not have a way to machine check results yet which would ease checking the test results for deviations.

Note: As an odd case, there are multiple BSPs where the executables can run on hardware or 1+ simulators. Sometimes the results vary across the target environment even for the same executable. This is at least something to consider as we want to have a trustworthy and checkable set of test results available.

Author: Chris Johns 2020-05-13T01:32:55.000Z

For the record the TCFG files were created to manage the states for the tester. The change included excluding a test. The tester command had the state checks and handling added in April 2017. The test states were also added to `rtems.git` at this time so all states have been present and documented in README.testdata together. I also raised #2962 at the time to indicate we need to manage this before we release.

From my point of view and `rtems-test` nothing has changed. What was added did not set a policy for managing failures or the relationship to releasing and any failure, known, expected or otherwise is just a failure. The tester either expects to see a failure or it does not for accounting purposes only.

I have gone away and spent time looking at adding this state and the change feels wrong because this state and any like it are basically a logical `OR` of `expected-fail` and the tester does not care about a policy that manages this or arrives at the expected fail state. The end goal is to have `./waf test` that runs all the tests on a configured test harness and `waf` returns a non-zero exit code for any regressions from the build's baseline. I doubt we have single BSP that does this on any test harness.

We should actively discourage specific test analysis from test results as they are simply a tool to account for a build's baseline. The result's stats should be bounded and consistent and provide a simple way to have a machine determine the state of a build.

I have posted a detailed alternative. For these to work we will need a workable set of policies for the management of test failures.

I think it is unrealistic to expect RTEMS to have 100% pass on all tests on all BSPs on all test platforms a BSP supports. There will be failures. There has been little or no analysis of existing tests that fail captured and accounted for so I dispute the assertion moving them to expected failures will stop any analysis. I believe the solution to this issue lies else where.

I am fine with tests that have no analysis being left as unexpected failures but we need a way for buildbot or any other CI tool to run the test suite on selected profiles to know if a change has caused a regression. Any test failure in a clean clone from `rtems.git` breaks the ability to do this. This is the first thing we need to fix.

Transitioning from the current state to one where the tester can detect regressions requires some effort. It is unfair to instantly say _"all commits to rtems.git must

have no unexpected results for BSP XXX on YYY"_ if this is the policy. I do think we need to select a few key BSPs and test harnesses that are required to have no unexpected results befor a release can be made.

I would like to close this ticket and open a new one for the tester state changes. I suggest a ticket to document the unexpected results policy be created.

Author: Chris Johns 2020-09-25T01:20:22.000Z

This ticket should be closed. Please close.

Author: Chris Johns 2022-11-29T23:16:56.000Z

- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*

3.9.1.514 4037 - Python script distribution standardisation

Id	4037
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2020-08-01T00:16:32.000Z
Updated	2022-11-29T23:00:51.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4037
Merges	0

The RSB and Tools wrap python scripts in a shell script based wrapper that detects the installed version and uses it. Other python scripts in RTEMS do not. I would like to have a consistent model for all scripts.

[| PEP0394] discusses the issues and says a distro can decide not to provide a `python` command by default. It also says a `virtualenv` can be used to provide a consistent default environment.

Do we assume `#! /usr/bin/env python` will always work in our script and we make sure we are `python2` and `python3` clean for user installed commands?

If a user does not have a `python` command installed by default do we document how to install one or do we document using a `virtualenv`?

A simple shebang is cleaner for us to maintain however it added an extra dependency we need to document.

Note, development script and tools should follow the same model we decide on however they only need to support `python3`.

Author: Chris Johns 2020-08-01T00:17:16.000Z

- **Summary** changed from *Python script distrubution standardisation* to *Python script distribution standardisation*

Author: Trac Migrate 2020-08-02T09:00:11.000Z

I'm currently a bit undecided. Both methods have advantages and disadvantages.

Points that could be a reason _not_ to use a wrapper: * **One important point**: We start to use `waf` everywhere. `waf` starts with a `#!/usr/bin/env python`. So it assumes that `python` exists. That means as soon as a user wants to build something with `waf` he needs a `python`. I don't think that we want to provide a wrapper for `waf`? * Although you did a great job making it as simple as possible: A wrapper adds complexity. How many edge cases are missed in the wrappers? For example: If you try to call one of the source builder commands using a soft link in another directory, the `$(dirname $0)` of the wrapper will fail. * Every supported system has to provide a `/bin/sh` and a `dirname` command. Can we be sure that's the case? What about Windows? If we enforce the wrapper we will always need a mingw or msys for Windows. If we remove it it might be possible to build RTEMS with only a python installation somewhen in the future (although you still need a cross-compiled gcc or llvm). * Do we really want to support multiple python versions on the long term? It might start to get really complicated to test all relevant configurations. By the way: Does buildbot use `python2`, `python3` or both?

Points that could be a good reason for using a wrapper: * Do all our scripts work with `python3` already? The wrapper of the source builder currently defaults to `python2`. So most likely it is nearly untested with `python3`. * I think I had trouble building rtems-docs with python3 in the past (and I always have been too lazy to fix them - sorry). That means that currently _not_ everything is ready to work with all python versions. A wrapper could select the best one. But that also means we basically depend on `python2` _and_ `python3` to be installed. * We will have a really simple possibility to switch to `python4` when it comes out. * On systems without a `python` it will definitively make it simpler.

Background questions: * Do we know of distributions that don't provide a `python` (without version number) command?

Author: Trac Migrate 2020-08-03T07:16:27.000Z

openSUSE 15.2 installs Python 3 by default and Python 2 is **not** available by default. There is no "python" command by default, only "python3".

I think we should ask the waf community how they want to deal with this.

About a year ago I started a discussion about "Which Python version for new tool code?". It seems RHEL 7 was the only relevant distribution not providing a Python 3, but this changed during the discussion:

https://lists.rtems.org/pipermail/devel/2019-August/055010.html

CentOS 7.7 ships it also. Is there anything left which doesn't ship Python 3? If not, then why don't we change the shebang to `#!/usr/bin/env python3`?

Author: Chris Johns 2020-08-04T07:37:25.000Z

We need to support long life versions of host systems and I have understood this to mean `python2`. As a result we need to make sure our user facing tools run on Python 2 and 3 for a while yet. This ticket is about how we handle this and not that choice.

The `python` command may not install by default but is there a package that does provide it?

The `waf` point is a valid one. We need a `python` command while it requires it. If that changes then we can consider what happens then. If you wish to ask please do so.

Author: Trac Migrate 2020-08-04T09:11:31.000Z

Seems that I misinterpreted the intention of the ticket. You asked:

> Do we assume `#! /usr/bin/env python` will always work in our script and we make sure we are python2 and python3 clean for user installed commands? If a user does not have a python command installed by default do we document how to install one or do we document using a virtualenv? A simple shebang is cleaner for us to maintain however it added an extra dependency we need to document.
>
> From my point of view: As long as waf needs `python`, we can assume it for our scripts too. So we have to document that anyway as soon as we switch to `waf` for all core repos.
>
> From what you wrote we have to make sure that our scripts work with `python2` and `python3` anyway. I would reject a `python2` only version with it beeing no maintained anymore and slowly removed from distributions and you don't like a `python3` only version.
>
> The alternative would be to add a shell wrapper around `waf` too. But do we really want to maintain that with all edge cases? And again: That adds a fixed dependency to a shell. Without a wrapper we might be able to have packages for Windows that only contain a binary toolchain and a python installation. That could be useful for big teams that want to build the toolchain only on one host and distribute it in binary form to all developers.

Author: Chris Johns 2020-08-05T00:32:58.000Z

I tend to agree. I would like to first know if CentOS7 and openSUSE 15.2 to have a package to install `python`?

Author: Trac Migrate 2020-08-05T04:49:05.000Z

On the waf issue tracker I found this:

https://gitlab.com/ita1024/waf/-/issues/2259

The suggested solution is to modify the shebang by hand for waf 2.*.

On openSUSE 15.2 you have to install Python 2 to get a `python` command or add the symlink yourself as root.

My preferred solution would be to change all shebangs to `#!/usr/bin/env python3` and require all users of RTEMS to install Python 3.

Author: Chris Johns 2020-08-05T08:23:09.000Z

I have re-read PEP 394 and I am starting to think we should document and provide support for our users to run virtual environments. This is a recommendation in the PEP and I think it makes sense. As stated previously we need to support Python2 and Python3 for a period of time. Users restricted to Python2 should have a `python` command or they should have a `virtualenv` package for Python2. Python3 users should be on `python3.6` or later and that has the `venv` module which gives them a `python` command.

I feel hard coding the version of python into the shebang restricts us and only creates further issues. Getting our users educated to use a virtual environment will pay off in the long term.

Author: Trac Migrate 2020-08-05T08:30:03.000Z

I am not against using virtual environments, however, we should really evaluate if we want to support Python 2 in RTEMS 6. Maybe we should ask on the users mailing list if there are still host computer systems in use without a Python 3 support.

Author: Chris Johns 2020-08-06T00:20:26.000Z

A primary goal of RTEMS is to provide long life support for hardware and hosts.

I see the major issue with Python2 and Python3 as the shebang and `python` support rather than the coding. There are some basic things we need to do to support both but it is not a big deal. At this point in time I do not support just Python3.

As a result I prefer we focus on how we manage this situation. I believe virtual environments provide this. I see forcing the shebang to `python3` as problematic long term.

Author: Trac Migrate 2020-08-06T04:52:12.000Z

I still think we should try to learn a bit more about which hosts are in use by the RTEMS users. If there are still users around which are stuck with Python 2, then fine, otherwise we have one problem less.

How do you want to use the virtual environments? How is it set up? I have no experience in packaging and deploying Python projects. For me it would be a bit inconvenient if I have to activate a virtual environment just to run ./waf to build RTEMS for example.

Author: Joel Sherrill 2020-08-06T14:06:17.000Z

Can we write a simple program as an alternative to env which answers the question of "which Python" in a way we want? rtems-which-python python[23] and let it answer the question?

I am opposed to forcing use of virtualenv but only encouraging it. It is a nice feature and I am using it but I only use it because the host doesn't have everything in a complete (Tex packaging) or current way. If the host is sufficient, it shouldn't be needed.

CentOS 7 does have a Python 3 but you have to install a "software collection" (https://developers.redhat.com/products/softwarecollections/overview for a description and list). This is the RedHat way of adding newer technologies as an option. This is what I have been doing on CentOS 7 combined with a virtualenv.

```
scl enable rh-python36 bash
```

I have been doing the Python 3 Software Collection plus a virtualenv for Sphinx to build the RTEMS documentation.

Author: Trac Migrate 2020-08-06T14:12:46.000Z

Author: Chris Johns 2020-08-06T23:44:44.000Z

Using a virtual env, selecting an OS or a specific distribution of an OS, using `python3 waf` or adding a symlink yourself are all user choices. No one is forcing anyone to select any specific option and in fact I am concern we limit the choices in what we do. We also need to consider users may have other Python tools and commands and we need to make sure users can still run those tools.

The proposal I am putting forward is for user facing tools and scripts only and it is to shebang python only and we document a few of the approaches so it becomes a user choice. If you want to use CentOS with Python2 and `python` that is fine. If you want to install Python3 on CentOS that is no problem. If you use a bleeding edge Linux distro with a progressive set of packages and it only comes with Python3 that is also fine.

What I would like to avoid is us selecting a specific case and mandating it. This means we cannot force the shebang to `python3` and we cannot explicitly exploit something in a virtual env.

Creating a specific env for us does not help other tools like `waf`.

Author: Trac Migrate 2020-08-07T06:31:13.000Z

Maybe let me summarize a bit:

- No one really fought for keeping the wrappers. Instead we should start documenting how to set up a good environment (either via `virtualenv` or installing directly on host systems).
- For our tools we should select a shebang that is used in all user facing tools.

- We have at least `waf` which uses just `python` in the shebang. So regardless what we chose: Our environment needs a `python` command as long as `waf` uses it.
- There is no consensus about which python version we should use for user facing tools. Maybe we should move that discussion to the mailing list like suggested multiple times?

I think the first three points answer the original question of the ticket? Did I miss something from the discussion?

The last point is definitively a controversial one. There are good reasons for both directions. But again: Maybe that should be discussed with a broader audience?

Author: Chris Johns 2020-08-10T06:06:10.000Z

Replying to Christian Mauderer:

> I think the first three points answer the original question of the ticket? Did I miss something from the discussion?
>
> I agree and no I do not think you have.
>
> > The last point is definitively a controversial one. There are good reasons for both directions. But again: Maybe that should be discussed with a broader audience?
> >
> > I think there will be some push back to dropping Python2 right now and this will fade as time goes on.

Author: Chris Johns 2020-08-10T06:50:14.000Z

Replying to Christian Mauderer:

> > The last point is definitively a controversial one. There are good reasons for both directions. But again: Maybe that should be discussed with a broader audience?
> >
> > I think there will be some push back to dropping Python2 right now and this will fade as time goes on.
>
> There would be some advantages too. Maybe we should discuss an indicator that it is time to drop the python2 support (for example: as soon as waf does; or as soon as CentOS doesn't installs it by default; or in 1 year; or . . .) so that there is a clear plan and it isn't discussed again and again every few months. But like you said: That's not the topic of this ticket and I think it would be better to discuss this on the mailing list.
>
> I think the new build system and the qual project need to be done and we have releases with them. I think at the core of this issue is releases with python 2 and 3 and once we know how they are traveling it will become apparent what we can do.

I will remove the script support in the RSB and close this ticket when it is merged.

Author: Trac Migrate 2020-08-12T01:11:32.000Z

In [changeset:"b71f7f6960a628c0e1c930b5769d19c5957a6998/rtems-docs" b71f7f69/rtems-docs]:

```
user, README: Add Python script host set up information

- Add Python3 and venv to the README

- Add a section on how to set up a host if the python command is
not available.

Update #4037
```

Author: Chris Johns 2020-08-12T03:20:12.000Z

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2020-08-25T23:59:31.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"650c6f99333c7f163f81817d3f71f93d0ae17ee4/rtems-source-builder" 650c6f9/rtems-source-builder]:

```
sb: Use shebang env python

Closes #4037
```

Author: Chris Johns 2020-08-28T00:13:54.000Z

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

The `rtems-tools.git` repo needs to be changed to a `shebang env python`.

Author: Trac Migrate 2020-08-28T01:48:45.000Z

In [changeset:"c51f6342584f658ad56d9acde3c2cc7b3c8f5bca/rtems-source-builder" c51f634/rtems-source-builder]:

```
sb: Fix the imports on Python2

Updates #4037
```

Author: Chris Johns 2022-11-29T23:00:51.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

The user of a `virtualenv` is to be used to manage various versions of Python.

3.9.1.515 4705 - Installed header clean up

Id	4705
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2022-08-19T04:48:33.000Z
Updated	2022-11-29T22:52:49.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::build, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4705
Merges	0

A number of headers are installed when they should not or are not installed.

Author: Trac Migrate 2022-08-21T23:30:10.000Z

In [changeset:"e49a1c9b386b75e3f477f476239651bd38f42ae5/rtems" e49a1c9b/rtems]:

```
spec/bsps: Do not install tm27.h

Updates #4705
```

Author: Trac Migrate 2022-08-21T23:30:12.000Z

In [changeset:"bb0975508677240c93468762abd752aca59b8d66/rtems" bb09755/rtems]:

```
spec/bsps/aarch64: Install ELF machine types for libdl

Updates #4705
```

Author: Trac Migrate 2022-08-21T23:30:15.000Z

In [changeset:"eae542c02f05d8b16708aee70bd81d2af896004f/rtems" eae542c0/rtems]:

```
spec/librtemscpu: Fix installed headers

- pci.h is only for sparc

- keyimpl.h is not referenced and so not needed

Updates #4705
```

Author: Chris Johns 2022-11-29T22:52:49.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

3.9.1.516 4209 - STM32H743ZI Nucleo Consle support not working without workaround

Id	4209
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2021-01-02T14:39:38.000Z
Updated	2022-11-29T22:51:15.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, resolution::invalid, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4209
Merges	0

Original author: rmueller

I think here is still some issue with the HUART3 console support, at least for the STM32H743ZI-Nucleo board.

I solves the issue by calling some hardware initializaton functions and override void HAL_UART_MspInit(UART_HandleTypeDef* huart) like this:

```
#include "hardware_init.h"
#include <stm32h7xx_hal_rcc.h>
#include <stdio.h>

void hardware_init() {
MX_USART3_UART_Init(115200);
}
```

(continues on next page)

(continued from previous page)

```
8
9
10 /**
11 * ST-LINK UART3
12 * CN5 pins on board
13 */
14 UART_HandleTypeDef huart3;
15 GPIO_InitTypeDef gpio_uart_init_struct;
16
17 void MX_USART3_UART_Init(uint32_t baudRate)
18 {
19 __HAL_RCC_USART3_CONFIG(RCC_USART3CLKSOURCE_HSI);
20 __HAL_RCC_GPIOD_CLK_ENABLE();
21 __HAL_RCC_USART3_CLK_ENABLE();
22
23 int result;
24 huart3.Instance = USART3;
25 huart3.Init.BaudRate = baudRate;
26 huart3.Init.WordLength = UART_WORDLENGTH_8B;
27 huart3.Init.StopBits = UART_STOPBITS_1;
28 huart3.Init.Parity = UART_PARITY_NONE;
29 huart3.Init.Mode = UART_MODE_TX_RX;
30 huart3.Init.HwFlowCtl = UART_HWCONTROL_NONE;
31 huart3.Init.OverSampling = UART_OVERSAMPLING_16;
32 huart3.Init.OneBitSampling = UART_ONE_BIT_SAMPLE_DISABLE;
33 huart3.Init.ClockPrescaler = UART_PRESCALER_DIV1;
34 //huart3.Init.FIFOMode = UART_FIFOMODE_DISABLE;
35 //huart3.Init.TXFIFOThreshold = UART_TXFIFO_THRESHOLD_1_8;
36 //huart3.Init.RXFIFOThreshold = UART_RXFIFO_THRESHOLD_1_8;
37 huart3.AdvancedInit.AdvFeatureInit = UART_ADVFEATURE_NO_INIT;
38 // we can't do error handling (simple print out first) here because UART3 is our␣
   ↪print interface
39 result = HAL_UART_Init(&huart3);
40 if(result == HAL_OK) {
41 printf("\\rUART3 configured successfully!\\r\\n");
42 }
43 }
44
45 // Will be called by HAL_UART_Init
46 void HAL_UART_MspInit(UART_HandleTypeDef* huart) {
47 /*Configure GPIO pins : PD8 PD9 */
48 gpio_uart_init_struct.Pin = GPIO_PIN_8|GPIO_PIN_9;
49 gpio_uart_init_struct.Mode = GPIO_MODE_AF_PP;
50 gpio_uart_init_struct.Pull = GPIO_NOPULL;
51 gpio_uart_init_struct.Speed = GPIO_SPEED_FREQ_LOW;
52 gpio_uart_init_struct.Alternate = GPIO_AF7_USART3;
53 HAL_GPIO_Init(GPIOD, &gpio_uart_init_struct);
54 }
```

I then call hardware_init() from my main application and after that, printf is working properly.

Maybe the problem is also related to using the Nucleo board?

Kind Regards Robin

- hardware_init.c
- hardware_init.h
- nucleo-stm32-patch2.patch
- nucleo-stm32.patch
- stm32h7-doc.patch

Author: Trac Migrate 2021-01-02T14:41:11.000Z

Original author: rmueller

- **Attachment** hardware_init.c added

Hardware Init source file

Author: Trac Migrate 2021-01-02T14:42:08.000Z

Original author: rmueller

- **Attachment** hardware_init.h added

Hardware init header file

Author: Trac Migrate 2021-01-02T18:33:13.000Z

Original author: rmueller

I found the UART config in console-uart3.c

```
static const stm32h7_uart_config stm32h7_usart3_config = {
.gpio = {
.regs = GPIOB,
.config = {
.Pin = GPIO_PIN_9 | GPIO_PIN_10,
.Mode = GPIO_MODE_AF_PP,
.Pull = GPIO_NOPULL,
.Speed = GPIO_SPEED_FREQ_LOW,
.Alternate = GPIO_AF7_USART3
}
},
.irq = USART3_IRQn,
.device_index = 2
};
```

and tried to replace it with this:

```
static const stm32h7_uart_config stm32h7_usart3_config = {
.gpio = {
.regs = GPIOD,
.config = {
.Pin = GPIO_PIN_8 | GPIO_PIN_9,
.Mode = GPIO_MODE_AF_PP,
.Pull = GPIO_NOPULL,
.Speed = GPIO_SPEED_FREQ_LOW,
.Alternate = GPIO_AF7_USART3
}
},
.irq = USART3_IRQn,
.device_index = 2
};
```

Recompiled the BSP but it still is not working without the workaround from above. If I call printf, the function also never exits and something appears to be broken.. I don't really know why..

Author: Trac Migrate 2021-01-03T10:14:39.000Z

Original author: rmueller

The clocks are not initialized by the current console driver.

For a custom board initialization, you can provide the data structures defined in bsps/arm/stm32h7/start/stm32h7-config.c in your application configuration.

Author: Trac Migrate 2021-01-04T15:16:22.000Z

Original author: rmueller

- **Attachment** nucleo-stm32.patch added

STM32H732ZINucleo patch

Author: Trac Migrate 2021-01-04T15:19:13.000Z

Original author: rmueller

Thanks, it works now. I am not sure, maybe I did not rebuild the BSP properly. I supplied a patch for this particular STM32H7 board configuration so users just have to set an option in config.ini to true for the STM32H743ZI-Nucleo board.

Kind Regards Robin

Author: Trac Migrate 2021-01-04T18:23:47.000Z

Original author: rmueller

In [changeset:"affc8de85f951768b2fa6fb46f154f738f5a0150/rtems" affc8de/rtems]:

```
bsp/stm32h7: Split start configuration

This allows applications to individually provide configuration
structures.

Update #4209.
```

Author: Trac Migrate 2021-01-04T18:23:50.000Z

Original author: rmueller

In [changeset:"6600585fc8e5fa299bf1ca1e0856d44b23c195cf/rtems" 6600585f/rtems]:

```
bsp/stm32h7: Split console configuration

This allows applications to individually provide configuration
structures.

Update #4209.
```

Author: Trac Migrate 2021-01-05T22:50:06.000Z

Original author: rmueller

- **Attachment** nucleo-stm32-patch2.patch added

And yet it was another wrong file. This is the correct one.

Author: Trac Migrate 2021-01-06T11:46:55.000Z

Original author: rmueller

- **Attachment** stm32h7-doc.patch added

Updated documentation.

Author: Trac Migrate 2022-09-08T14:31:42.000Z

Original author: rmueller

There were some updates to the BSP. Is this issue still open?

Author: Chris Johns 2022-11-29T22:25:20.000Z

Original author: rmueller

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Closing as the patches have not been applied.

If these changes are still valid please reopen and apply the attached patches.

Author: Chris Johns 2022-11-29T22:44:32.000Z

Original author: rmueller

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

Te patches have been confirmed as suitable to be applied.

Author: Chris Johns 2022-11-29T22:44:50.000Z

Original author: rmueller

- **Owner** set to @joel
- **Status** changed from *reopened* to *assigned*

Author: Joel Sherrill 2022-11-29T22:51:15.000Z

Original author: rmueller

- **Resolution** set to ~"invalid"
- **Status** changed from *assigned* to *closed*

Neither patch is applying cleanly for me. Please update them, reopen the ticket, and attach them.

3.9.1.517 4363 - GDB does not build on Windows for MSYS2

Id	4363
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2021-03-28T06:08:46.000Z
Updated	2022-11-29T22:34:32.000Z
Milestone	6.1
Labels	priority::normal, resolution::wontfix, tickettype::defect, tool::gdb, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4363
Merges	0

The details are in the GDB bug ...

https://sourceware.org/bugzilla/show_bug.cgi?id=27657

Author: Chris Johns 2022-11-29T22:34:32.000Z

- **Resolution** set to ~"wontfix"
- **Status** changed from *assigned* to *closed*

Not sure if this is valid. Please reopen if it is broken.

3.9.1.518 4246 - Add libbsd DC NIC support to mvme2700 board

Id	4246
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2021-02-16T01:07:47.000Z
Updated	2022-11-29T22:29:45.000Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4246
Merges	0

Add support for the Tulip NIC to LibBSD for the MVME 2700 (the mvme2307 bsp).

Author: Chris Johns 2022-11-29T22:29:45.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Added and working.

3.9.1.519 4212 - libio leaks location clones

Id	4212
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2021-01-07T07:00:21.000Z
Updated	2022-11-29T22:27:24.000Z
Milestone	6.1
Labels	filesystem, priority::normal, resolution::invalid, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4212
Merges	0

`rtems_filesystem_location_copy` overwrites a location that may have been cloned via the ops handler leaking the destination node. If a file system has allocated resources in a location node when cloned it will leak. I assume there is a free for every clone?

An example of a leak is to mount of file system under IMFS and then open a file under the mounted file system. The path eval restart in the IMFS will clone a node and then open will:

```
rtems_filesystem_eval_path_extract_currentloc( &ctx, &iop->pathinfo );
rtems_filesystem_eval_path_cleanup( &ctx );
```

The `ctx` contains a cloned location.

Allocating resources to a location may be required because of the limited available file system fields and the opaque nature of the fields or a file system may have data it locks or reference counts and that needs to be managed.

I do not fully understand the semantics around the location object and while I could guess at a fix there are a number functions related to locations and a large number of use cases that I would not know if my fix is OK. For example should the copy function free the destination location and then clone the source location or should it just free the destination location or should all the places a copy is done be updated to manage the free and cloning based on the context? Or is the issue in the `open` call and the lines pasted here be swapped?

Author: Trac Migrate 2021-01-07T08:16:42.000Z

Do we have this resource leak with one of the current file systems? If yes, could you please add test case for this resource leak.

Author: Chris Johns 2021-01-07T22:20:27.000Z

Replying to Sebastian Huber:

> Do we have this resource leak with one of the current file systems?
>
> Yes I believe there is a leak with `open` as stated above.
>
> > If yes, could you please add test case for this resource leak.
> >
> > A test is a good idea however as stated I do not understand the _locations_ struct and the eval code in `libio`. I could create a test and provide a fix and break an existing file system.
> >
> > Maybe the following will help explain why I am confused:
> >
> > 1. Is this simply a bug in `open`? Does ...
>
> ```
> rtems_filesystem_eval_path_cleanup( &ctx );
> rtems_filesystem_eval_path_extract_currentloc( &ctx,
> ↪ &iop->pathinfo );
> ```
>
> > ... resolve the leak? Does that create another leak and so should the code be ...

```
rtems_filesystem_eval_path_cleanup( &ctx );
rtems_filesystem_eval_path_extract_currentloc( &ctx,
↪ &iop->pathinfo );
rtems_filesystem_eval_path_cleanup( &ctx );
```

... ? Would fixing the copy also resolve this leak? I have no idea which of these is right solution because I do not understand how this is suppose to work.

2. The call `rtems_filesystem_location_copy()` does not _free_ the resource. The only doco with this function says it is a bitwise copy yet the resource will be added to the corresponding mount. This is confusing because the resource is accounted for yet it does not perform a deep copy of the contents when the file system is required to provide an interface to do this.

Author: Trac Migrate 2021-01-08T05:28:40.000Z

I am not sure if we have an unintentional resource leak in open() with the current file systems. I would be good to have a test case. The purpose of open() is to create a location for a file which is released to the system through a call to close(). If errors happen during the path evaluation, the rtems_filesystem_eval_path_error() should be called which uses rtems_filesystem_location_detach() if necessary.

Author: Chris Johns 2021-01-09T01:24:43.000Z

I agree we need a test, there is no objection here. I will look at this when I have time.

The bug is in the eval restart call in the IMFS. When a mount point is found the eval restart call clones the root loc. The open code ends up calling copy which wipes the clone out. A test is needed to expose the leak.

Putting the test case side, I would like to know if the copy should be deep? The test could then check for it being shallow or deep.

Author: Trac Migrate 2021-01-11T05:25:37.000Z

From looking at the code, I don't see an issue in the restart code:

```
void rtems_filesystem_eval_path_restart(
rtems_filesystem_eval_path_context_t *ctx,
rtems_filesystem_global_location_t **newstartloc_ptr
)
{
free_location(&ctx->currentloc);
rtems_filesystem_instance_unlock(&ctx->startloc->location);
rtems_filesystem_global_location_assign(
```

(continues on next page)

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```
&ctx->startloc,
rtems_filesystem_global_location_obtain(newstartloc_ptr)
);
rtems_filesystem_instance_lock(&ctx->startloc->location);
rtems_filesystem_location_clone(&ctx->currentloc, &ctx->startloc->
↪location);
}
```

It first frees the current location and then continues with a clone of the new start location. A test case would definitely help.

The locations are just pointers which are registered in the system. I think the documentation of rtems_filesystem_location_copy() is in line with its implementation.

Author: Chris Johns 2021-01-12T01:36:02.000Z

It might have been the optimiser had not shown the path in the debugger and I was seeing something else. A review of this and then the path clean up in open does seem OK. The `struct vnode` counts will highlight an issue once I have that integrated. When I saw the problem and noted it I did not see the free but I saw the copy.

Author: Joel Sherrill 2021-12-17T17:05:49.000Z

Is this still an issue?

Author: Trac Migrate 2022-01-26T13:54:33.000Z

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Please close if possible.

Author: Chris Johns 2022-11-29T22:27:24.000Z

- **Resolution** set to ~"invalid"
- **Status** changed from *assigned* to *closed*

Please reopen if this is still a valid issue.

3.9.1.520 4048 - Move RTEMS 5 BSP and package build sets and configs to RTEMS 6

Id	4048
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2020-08-12T06:58:50.000Z
Updated	2022-11-29T22:17:01.000Z
Milestone	6.1
Labels	priority::normal, resolution::wontfix, tickettype::task, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4048
Merges	0

Move the BSP build sets with the related packages to RTEMS 6. Update the kernel and libbsd to point to RTEMS 6 commits.

Drop the tier build sets as these are not being used. They can be brought back if we need them.

Author: Trac Migrate 2020-08-15T00:24:27.000Z

In [changeset:"40af487dfc26a583e7d20b7af9ca2058ed69e1ef/rtems-source-builder" 40af487/rtems-source-builder]:

```
Move 5 build sets to 6

- Move 5/bsps/* to bsps/*

- Update package build references from 5 to 6

- Remove 5 build sets.

Update #4048
```

Author: Trac Migrate 2020-09-01T01:46:06.000Z

In [changeset:"5528b1779a45d60d015a73fb2a6d45974d81efe7/rtems-docs" 5528b17/rtems-docs]:

```
user: Change the BSP build set path

Updates #4048
```

Author: Chris Johns 2022-11-29T22:17:01.000Z

- **Resolution** set to ~"wontfix"
- **Status** changed from *assigned* to *closed*

I am closing this as the `rtems-deployment` project and repo should now be used to manage BSPs and vertical stacks. The repo is currently in my personal area.

3.9.1.521 3998 - fenv support is missing on arm

Id	3998
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2020-06-05T04:20:45.000Z
Updated	2022-11-29T22:11:08.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3998
Merges	0

Original author: sebastian.huber

The test program psxfenv01 fails on arm.

Author: Chris Johns	2022-11-29T22:11:08.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Fixed in newlib in 2020.

3.9.1.522 3997 - fenv support is missing on sparc

Id	3997
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2020-06-05T04:20:16.000Z
Updated	2022-11-29T22:10:47.000Z
Milestone	6.1
Labels	arch:sparc, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3997
Merges	0

Original author: sebastian.huber

The test program psxfenv01 fails on sparc.

Author: Chris Johns 2022-11-29T22:10:47.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Fixed in newlib in 2020.

3.9.1.523 3996 - fenv support is missing on powerpc

Id	3996
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2020-06-05T04:18:59.000Z
Updated	2022-11-29T22:10:19.000Z
Milestone	6.1
Labels	arch:powerpc, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3996
Merges	0

Original author: sebastian.huber

The test program psxfenv01 fails on powerpc.

Author: Chris Johns 2022-11-29T22:10:19.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Fixed in newlib in 2020.

3.9.1.524 3942 - multiple definition of `pci_indirect_functions'

Id	3942
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2020-04-08T10:14:16.000Z
Updated	2022-11-29T22:07:19.000Z
Milestone	6.1
Labels	mips, priority::normal, resolution::fixed, tickettype::defect, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3942
Merges	0

Original author: sebastian.huber

Building with GCC 10 showed a multiple definition error:

```
/build/rtems/6/lib/gcc/mips-rtems6/10.0.1/../../../../mips-rtems6/bin/ld: ./
↪librtemsbsp.a(i8259.c.19.o):/ramdisk/git-rtems-5/build/mips/malta/../../../bsps/
↪mips/malta/include/bsp/pci.h:113: multiple definition of `pci_indirect_functions
↪'; ./librtemsbsp.a(vectorisrs.c.19.o):/ramdisk/git-rtems-5/build/mips/malta/../.
↪./../bsps/mips/malta/include/bsp/pci.h:113: first defined here
/build/rtems/6/lib/gcc/mips-rtems6/10.0.1/../../../../mips-rtems6/bin/ld:
./librtemsbsp.a(simple_access.c.19.o):/ramdisk/git-rtems-5/build/mips/malta/../../
↪../bsps/mips/malta/include/bsp/pci.h:113: multiple definition of `pci_indirect_
↪functions'; ./librtemsbsp.a(vectorisrs.c.19.o):/ramdisk/git-rtems-5/build/mips/
↪malta/../../../bsps/mips/malta/include/bsp/pci.h:113: first defined here
/build/rtems/6/lib/gcc/mips-rtems6/10.0.1/../../../../mips-rtems6/bin/ld: ./
↪librtemsbsp.a(pci.c.19.o):/ramdisk/git-rtems-5/build/mips/malta/../../../bsps/
↪mips/malta/include/bsp/pci.h:113: multiple definition of `pci_indirect_functions
↪'; ./librtemsbsp.a(vectorisrs.c.19.o):/ramdisk/git-rtems-5/build/mips/malta/../.
↪./../bsps/mips/malta/include/bsp/pci.h:113: first defined here
```

Author: Trac Migrate 2020-04-08T10:14:54.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
+ Building with GCC 10 showed a multiple definition error:
+ {{{
/build/rtems/6/lib/gcc/mips-rtems6/10.0.1/../../../../mips-rtems6/bin/
↪ld: ./librtemsbsp.a(i8259.c.19.o):/ramdisk/git-rtems-5/build/mips/
↪malta/../../../bsps/mips/malta/include/bsp/pci.h:113: multiple␣
↪definition of `pci_indirect_functions'; ./librtemsbsp.a(vectorisrs.c.
↪19.o):/ramdisk/git-rtems-5/build/mips/malta/../../../bsps/mips/malta/
```

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```
↪include/bsp/pci.h:113: first defined here
/build/rtems/6/lib/gcc/mips-rtems6/10.0.1/../../../../mips-rtems6/bin/
↪ld:
- Building with GCC 10 showed a multiple definition error:
- {{{
./librtemsbsp.a(simple_access.c.19.o):/ramdisk/git-rtems-5/build/mips/
↪malta/../../../bsps/mips/malta/include/bsp/pci.h:113: multiple␣
↪definition of `pci_indirect_functions'; ./librtemsbsp.a(vectorisrs.c.
↪19.o):/ramdisk/git-rtems-5/build/mips/malta/../../../bsps/mips/malta/
↪include/bsp/pci.h:113: first defined here
/build/rtems/6/lib/gcc/mips-rtems6/10.0.1/../../../../mips-rtems6/bin/
↪ld: ./librtemsbsp.a(pci.c.19.o):/ramdisk/git-rtems-5/build/mips/malta/
↪../../../bsps/mips/malta/include/bsp/pci.h:113: multiple definition␣
↪of `pci_indirect_functions'; ./librtemsbsp.a(vectorisrs.c.19.o):/
↪ramdisk/git-rtems-5/build/mips/malta/../../../bsps/mips/malta/include/
↪bsp/pci.h:113: first defined here
}}}
```

Author: Gedare Bloom 2020-04-17T03:48:04.000Z

Original author: sebastian.huber

- **Milestone** changed from %"5.1" to %"6.1"
- **Version** changed from ~"5" to ~"6"

Bump to 6, gcc10 toolchain issue.

Author: Chris Johns 2022-11-29T22:07:19.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Looks to be fixed. Please reopen if it is still a problem.

3.9.1.525 3929 - Document use of virtualenv

Id	3929
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Trac Migrate
Created	2020-04-04T18:15:30.000Z
Updated	2022-11-29T22:04:28.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3929
Merges	0

The use of python virtualenv to build docs or use RSB has been suggested a few times. We should provide a brief sketch in our documentation about that utility.

For example, in modern versions of Arch Linux, `python` is now a shortcut to `python3` from the `python` package. For tools that do not yet function in Python 3, users can set up a virtual environment with Python 2 as follows:

At a root terminal, install `python2-virtualenv` with `pacman`.

```
# pacman -S python2-virtualenv
```

Examples of other architectures and uses for virtualenv would round out a reasonable section in the user manual for Preparation.

Author: Chris Johns 2022-11-29T22:04:28.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

3.9.1.526 3414 - Remove Makefiles from rtems-examples?

Id	3414
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2018-04-25T23:52:20.000Z
Updated	2022-11-29T21:54:49.000Z
Milestone	6.1
Labels	priority::normal, resolution::invalid, tickettype::defect, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3414
Merges	0

It seems to be time to remove Makefile build support from examples-v2

Author: Chris Johns 2018-10-14T01:04:36.000Z

- **Milestone** changed from %"5.1" to %"6.1"
- **Status** changed from *new* to *assigned*
- **Version** changed from ~"5" to ~"6"

Remove in 6.

Author: Chris Johns 2019-09-18T22:53:28.000Z

- **Summary** changed from *Remove Makefiles from examples-v2?* to *Remove Makefiles from rtems-examples?*

Does the Makefile build work with the rtems-example master HEAD?

Author: Joel Sherrill 2019-09-19T10:52:42.000Z

It did an couple of weeks ago

Author: Chris Johns 2019-09-20T04:31:42.000Z

Replying to Joel Sherrill:

> It did an couple of weeks ago
>
> How up to date is the build, for example we have a libbsd and graphics example in the repo now?

Author: Chris Johns 2022-11-29T21:54:49.000Z

- **Resolution** set to ~"invalid"
- **Status** changed from *assigned* to *closed*

`Makefile.inc` is to be supported so examples with Makefiles makes sense to keep.

3.9.1.527 2778 - Error building RTEMS Source Builder recipe for libxml

Id	2778
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2016-08-18T06:48:24.000Z
Updated	2022-11-29T21:50:55.000Z
Milestone	6.1
Labels	priority::normal, resolution::worksforme, tickettype::enhancement, version::4.11, version::4.12, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2778
Merges	0

Original author: Sambeet

I wrote the three essential files for cross build of libxml for RTEMS, i.e. the .bset file (libxml.bset), the version specific configuration file (libxml2-2.7.8.cfg) and the build configuration file (libxml2-2.7.8.cfg).As per the FreeBSD ports I have placed it under textproc.However when the build configuration script is run, an error “config file is not found” occurs. I tried to cd into the directory by providing a bash script but that is also not working,an error “can’t cd to ..<config directory>” appears.

- 0001-Adding-libxml-package.patch
- 0002-Changes-for-libxml.bset.patch
- 0003-changes-to-resolve-config-file-not-found-error.patch
- 0004-Added-the-.cfg-file.patch
- libxml2-2.7.8.cfg
- rsb-report-libxml2-2.7.8-2.txt

Author: Trac Migrate 2016-08-18T06:53:05.000Z

Original author: Sambeet

- **Attachment** libxml2-2.7.8.cfg added

The build configuration file that has the adress of the config file

Author: Trac Migrate 2016-08-20T07:55:37.000Z

Original author: Sambeet

- **Attachment** 0001-Adding-libxml-package.patch added

Patch to add libxml bset

Author: Trac Migrate 2016-08-20T07:56:23.000Z

Original author: Sambeet

- **Attachment** 0002-Changes-for-libxml.bset.patch added

Changes in the build set

Author: Trac Migrate 2016-08-20T07:57:31.000Z

Original author: Sambeet

- **Attachment** 0003-changes-to-resolve-config-file-not-found-error.patch added

change sto resolve the .cfg file error

Author: Trac Migrate 2016-08-20T07:58:36.000Z

Original author: Sambeet

- **Attachment** 0004-Added-the-.cfg-file.patch added

Changes in the .cfg file

Author: Trac Migrate 2016-08-20T08:04:44.000Z

Original author: Sambeet

- **Attachment** rsb-report-libxml2-2.7.8-2.txt added

The error report

Author: Trac Migrate 2016-08-20T08:12:31.000Z

Original author: Sambeet

- **Milestone** changed from %”4.11.1” to %”4.12”
- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*
- **Version** changed from ~”4.11” to ~”4.12”

There are a few more attachments for clarity.I have added the patches for the build set to reproduce my problem and a copy of the error report when I give the command

sambeet@Holmes ~/Documents/GitRepos/sambeet161616/rtems-source-builder/rtems $ ../source-builder/sb-set-builder –log=log_libxml_log –prefix=$HOME/NewRockPort/x86/Install/rtems/4.11.0-rc3/ –target=i386-rtems4.11 –with-rtems-bsp=pc486 textproc/libxml

Author: Trac Migrate 2017-05-11T07:31:02.000Z

Original author: Sambeet

- **Milestone** changed from %”4.12” to %”4.12.0”

Author: Trac Migrate 2017-11-09T06:27:14.000Z

Original author: Sambeet

- **Milestone** changed from %”4.12.0” to %”5.1”

Milestone renamed

Author: Joel Sherrill 2018-10-14T00:43:39.000Z

Original author: Sambeet

- **Milestone** changed from %”5.1” to %”6.1”
- **Version** changed from ~”5” to ~”6”

Pushing milestone but would prefer if someone could look into this and fix it.

Author: Chris Johns 2022-11-29T21:50:55.000Z

Original author: Sambeet

- **Resolution** set to ~”worksforme”
- **Status** changed from *assigned* to *closed*

If this is still broken please reopen.

3.9.1.528 3615 - Convert Tools_Used Wiki page into Support Tools Selection with Criteria

Id	3615
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2018-11-22T13:43:43.000Z
Updated	2022-11-29T21:44:27.000Z
Milestone	6.1
Labels	priority::high, resolution::wontfix, tickettype::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3615
Merges	0

Original author: Shashvat Jain

Originally, this ticket requested that ToolStatus and Tools_Used wiki pages be addressed. ToolsStatus was horribly out of date and removed. This leaves Tools_Used as a list of the tools used at a point in time. This list needs to be updated and grown into a Support Tools section of the Software Engineering Guide. Beyond a list of the tools and their use with RTEMS, it should discuss the attribute(s) that led to the tools selection.

Original ticket description below:

https://devel.rtems.org/wiki/TBR/Review/ToolStatus This page's data is very old and needs to be updated so that it can be added to the wiki with a link to the home page name "Development Tools".

All the data about the tools on the page must be updated to the latest used by RTEMS 5 , this new page can either be added to the page https://devel.rtems.org/wiki/Tools_Used or be made into a separate page altogether . Advice on the placement of the new page is needed.

Author: Gedare Bloom 2018-11-22T15:02:16.000Z

Original author: Shashvat Jain

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Joel Sherrill 2018-11-22T15:56:20.000Z

Original author: Shashvat Jain

Given the age of this information, I would say delete the page and fix references. Is there anything of value left in it?

Author: Chris Johns 2018-11-23T00:27:54.000Z

Original author: Shashvat Jain

I can see no value in either page. Please delete the pages and close this ticket.

Author: Trac Migrate 2018-11-23T03:39:39.000Z

Original author: Shashvat Jain

Does this wiki already has a "development tools" page , the information is quite old , is it worth deleting these and adding a new one which are updated?

Author: Chris Johns 2018-11-23T03:51:02.000Z

Original author: Shashvat Jain

Replying to shashvat jain:

> Does this wiki already has a "development tools" page , the information is quite old , is it worth deleting these and adding a new one which are updated?
>
> No it does have one. A wiki page for this type of thing for RTEMS is difficult to get right. The issues are: 1. Each version of RTEMS has a specific set of tools so a single page would not work. 2. The tool

matrix is complex with different versions of the various tools for different architectures and then differences for these for different hosts. You can see this my looking at the build output from the RSB on the `build` list, for example a recent ARM build (https://lists.rtems.org/pipermail/build/2018-November/001318.html) The last section is the build report that lists the files and patches. 3. The term “Tools” covers the compiler and its tools plus it now it includes the various eco-system tools. The size of the page would be large and getting all the detail right would be an busy long term task.

Author: Trac Migrate 2018-11-23T06:09:02.000Z

Original author: Shashvat Jain

Replying to Chris Johns:

Replying to shashvat jain:

> Does this wiki already has a “development tools” page , the information is quite old , is it worth deleting these and adding a new one which are updated?

No it does have one. A wiki page for this type of thing for RTEMS is difficult to get right. The issues are: 1. Each version of RTEMS has a specific set of tools so a single page would not work. 2. The tool matrix is complex with different versions of the various tools for different architectures and then differences for these for different hosts. You can see this my looking at the build output from the RSB on the `build` list, for example a recent ARM build (https://lists.rtems.org/pipermail/build/2018-November/001318.html) The last section is the build report that lists the files and patches. 3. The term “Tools” covers the compiler and its tools plus it now it includes the various eco-system tools. The size of the page would be large and getting all the detail right would be an busy long term task.

1)We may add the page for the current version under development 5 2)Instead of a tool matrix , we can mention all the tools shared by architecures like gdb , gcc newlib , g++ , binutils , etc . 3)If the term tools covers so much then can we make a document covering everything about the compiler ? , if we spend some time and make it , the next step left would be just to update it timely when the version changes.

Do you think it is worth the time and effort of updating?

Author: Chris Johns 2018-11-25T00:08:37.000Z

Original author: Shashvat Jain

Replying to shashvat jain:

1)We may add the page for the current version under development 5

What happens for RTEMS 6 or 7 etc?

> 2)Instead of a tool matrix , we can mention all the tools shared by architecures like gdb , gcc newlib , g++ , binutils , etc .
>
> This changes all the time.
>
> > 3)If the term tools covers so much then can we make a document covering everything about the compiler ? , if we spend some time and make it , the next step left would be just to update it timely when the version changes.
> >
> > We have this in the documentation ...
> >
> > https://docs.rtems.org/branches/master/user/tools/index.html
> >
> > > Do you think it is worth the time and effort of updating?
> > >
> > > No I do not think it is worth updating. A better solution is add to the RSB a way to generate the reports we need.
> > >
> > > Chris

Author: Trac Migrate 2018-11-25T06:58:35.000Z

Original author: Shashvat Jain

Replying to Chris Johns:

> Replying to shashvat jain:
>
> > 1)We may add the page for the current version under development 5
>
> What happens for RTEMS 6 or 7 etc?
>
> > 2)Instead of a tool matrix , we can mention all the tools shared by architecures like gdb , gcc newlib , g++ , binutils , etc .
>
> This changes all the time.
>
> > 3)If the term tools covers so much then can we make a document covering everything about the compiler ? , if we spend some time and make it , the next step left would be just to update it timely when the version changes.
>
> We have this in the documentation ... https://docs.rtems.org/branches/master/user/tools/index.html
>
> > Do you think it is worth the time and effort of updating?
>
> No I do not think it is worth updating. A better solution is add to the RSB a way to generate the reports we need. Chris

> All my doubts are solved , I have no reason to stop you from closing this Ticket . Thank you

Author: Joel Sherrill 2019-12-13T15:31:06.000Z

Original author: Shashvat Jain

I just removed https://devel.rtems.org/wiki/TBR/Review/ToolStatus since it had very out of date information.

https://devel.rtems.org/wiki/Tools_Used is a modest version of what we want in the Software Engineering Guide for documenting supporting tools.

Author: Joel Sherrill 2019-12-13T15:40:28.000Z

Original author: Shashvat Jain

- **Description** changed

```
+ Originally, this ticket requested that ToolStatus and Tools_Used wiki pages be addressed. ToolsStatus was horribly out of date and removed. This leaves Tools_Used as a list of the tools used at a point in time. This list needs to be updated and grown into a Support Tools section of the Software Engineering Guide. Beyond a list of the tools and their use with RTEMS, it should discuss the attribute(s) that led to the tools selection.
+
+ Original ticket description below:
+
+ ----
+
https://devel.rtems.org/wiki/TBR/Review/ToolStatus
This page's data is very old and needs to be updated so that it can be added to the wiki with a link to the home page name "Development Tools".

All the data about the tools on the page must be updated to the latest used by RTEMS 5 , this new page can either be added to the page https://devel.rtems.org/wiki/Tools_Used or be made into a separate page altogether .
Advice on the placement of the new page is needed.
```

- **Milestone** changed from %”5.1” to %”6.1”
- **Summary** changed from *[Wiki]Update data on development tools and Find a new home for it.* to *Convert Tools_Used Wiki page into Support Tools Selection with Criteria*

Author: Chris Johns 2022-11-29T21:44:27.000Z

Original author: Shashvat Jain

- **Resolution** set to ~"wontfix"
- **Status** changed from *assigned* to *closed*

This should be in the User Guide.

3.9.1.529 4729 - Add 64bit address support to RTEMS FDT

Id	4729
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2022-09-29T05:35:06.000Z
Updated	2022-11-27T22:53:29.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4729
Merges	0

RTEMS's FDT wrapper does not handle the `reg` property correctly. Update to handle 64bit register addresses.

Author: Chris Johns 2022-10-06T04:33:38.000Z

The calls `rtems_fdt_prop_map` and `rtems_fdt_get_value` change to return a table `uintptr_t` values.

Author: Trac Migrate 2022-10-10T00:30:12.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"40eb58fd5e7f0480601b0a9c3f48756921726df7/rtems" 40eb58f/rtems]:

```
libmisc/rtems-fdt: Update to support 64bit addresses

- Add support to get the parent address and size cells

- Provide support to get a reg prop address map

- Change getting a set of properties to uintptr_t

- Improve the debug mode of the ls command to print all props

Closes #4729
```

Author: Trac Migrate 2022-10-11T01:40:36.000Z

In [changeset:"fe104e399aeaf376310ba752f05c1d8f08737062/rtems" fe104e39/rtems]:

```
libmisc/rtems-fdt: Fix missing error string

- Coverity CID 1515930 issue

Updates #4729
```

Author: Trac Migrate 2022-10-14T02:33:37.000Z

In [changeset:"580a3a6817f9727f06b259571eaed075bf371d16/rtems" 580a3a6/rtems]:

```
libmisc/rtems-fdt: Fix return error values

Updates #4729
```

Author: Trac Migrate 2022-11-27T22:53:29.000Z

In [changeset:"408dbeb9225e1969113b81ad3ef484f351b9b4e3/rtems" 408dbeb/rtems]:

```
libmisc/rtems-fdt: Support prop map items up to the size of uintptr_t

Updates #4729
```

3.9.1.530 4762 - Add Versal SDHCI Arasan driver to libbsd

Id	4762
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2022-11-21T22:22:47.000Z
Updated	2022-11-22T02:40:47.000Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::defect, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4762
Merges	0

Original author: Eagleirony

Added support for SD card slots in libbsd for the Versal. Tested on VCK190.

- 0001-rtems-versal-Updated-mmu-to-include-mapping-for-SDHC.patch
- 0001-rtemsbsd-versal-Add-SDHCI-Driver-support-v2.patch

- 0001-rtemsbsd-versal-Add-SDHCI-Driver-support-v3.patch
- 0001-rtemsbsd-versal-Add-SDHCI-Driver-support.patch
- v4-0001-rtemsbsd-versal-Add-SDHCI-Driver-support.patch

Author: Trac Migrate 2022-11-21T22:26:26.000Z

Original author: Eagleirony

- **Attachment** 0001-rtemsbsd-versal-Add-SDHCI-Driver-support.patch added

Author: Kinsey Moore 2022-11-22T00:58:45.000Z

Original author: Eagleirony

The patch looks good to me.

Author: Kinsey Moore 2022-11-22T01:16:11.000Z

Original author: Eagleirony

My only comment beyond that is that I should have renamed the existing Arasan base define and reused it instead of making RTEMS_BSD_DRIVER_XILINX_ZYNQMP_SDHCI in rtems-bsd-nexus-bus.h when I added the driver to the ZynqMP platform.

Author: Kinsey Moore 2022-11-22T01:20:30.000Z

Original author: Eagleirony

If you feel like fixing that, you could combine the existing RTEMS_BSD_DRIVER_XILINX_ZYNQMP_SDHCI and RTEMS_BSD_DRIVER_XILINX_ZYNQ_SDHCI along with RTEMS_BSD_DRIVER_XILINX_VERSAL_SDHCI added in this patch into a single reused RTEMS_BSD_DRIVER_ARASAN_SDHCI.

Author: Trac Migrate 2022-11-22T01:35:29.000Z

Original author: Eagleirony

- **Attachment** 0001-rtemsbsd-versal-Add-SDHCI-Driver-support-v2.patch added

Author: Trac Migrate 2022-11-22T01:40:02.000Z

Original author: Eagleirony

- **Attachment** 0001-rtemsbsd-versal-Add-SDHCI-Driver-support-v3.patch added

Author: Trac Migrate 2022-11-22T01:40:51.000Z

Original author: Eagleirony

Added your suggestion in, v3 has the name you suggested. Thanks.

Author: Kinsey Moore 2022-11-22T01:43:41.000Z

Original author: Eagleirony

The v3 patch looks great, thanks!

Author: Trac Migrate 2022-11-22T01:47:04.000Z

Original author: Eagleirony

- **Attachment** v4-0001-rtemsbsd-versal-Add-SDHCI-Driver-support.patch added

Author: Trac Migrate 2022-11-22T02:08:44.000Z

Original author: Eagleirony

- **Attachment** 0001-rtems-versal-Updated-mmu-to-include-mapping-for-SDHC.patch added

Author: Trac Migrate 2022-11-22T02:09:14.000Z

Original author: Eagleirony

Attached patch for MMU to map SDHCI devices for the Versal.

Author: Kinsey Moore 2022-11-22T02:10:26.000Z

Original author: Eagleirony

That looks good as well.

Author: Trac Migrate 2022-11-22T02:39:24.000Z

Original author: Eagleirony

In [changeset:"c5fa19ecb3e1a8d1c86b72eacc811d5037896561/rtems" c5fa19e/rtems]:

```
rtems/versal: Updated mmu to include mapping for SDHCI devices on versal

Tested on VCK190

Updates #4762
```

Author: Trac Migrate 2022-11-22T02:40:47.000Z

Original author: Eagleirony

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"a39a6a249fe5c2bf4c75589a5c00ae4fad28c6d6/rtems-libbsd" a39a6a2/rtems-libbsd]:

```
rtemsbsd/versal: Add SDHCI Driver support

Tested on VCK190

Closes #4762
```

3.9.1.531 3420 - Deprecate/obsolete rtems_io_lookup_name

Id	3420
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2018-04-30T14:12:00.000Z
Updated	2022-11-10T21:06:05.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3420
Merges	0

I have noted in the RTEMS Class that this method is only kept for legacy purposes for many years now. There is no real use in the tree now. Only the following:

```
$ grep -rl rtems_io_lookup_name .
./cpukit/include/adainclude/rtems-io.adb
./cpukit/include/rtems/io.h
./cpukit/libfs/src/imfs/ioman.c
./testsuites/sptests/sp21/sp21.scn
./testsuites/sptests/sp21/init.c
```

Deprecate in 5.1 and remove in 6.x or obsolete and just remove now?

Author: Trac Migrate 2018-09-17T11:49:12.000Z

I would not touch this function. It adds no overhead to applications which don't use it.

Author: Chris Johns 2018-10-14T01:10:58.000Z

- **Milestone** changed from %"5.1" to %"6.1"
- **Owner** set to joel
- **Status** changed from *new* to *assigned*
- **Version** changed from ~"5" to ~"6"

Author: Trac Migrate 2020-07-14T05:26:39.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"dc4879bba4ce91b86b4cfcea0a0f8dd7450e2d00/rtems" dc4879b/rtems]:

```
rtems: Remove deprecated rtems_io_lookup_name()

Close #3420.
```

Author: Trac Migrate 2022-11-10T21:06:05.000Z

In [changeset:"ecd8aec9117a8a66aa5c4b3322def9ac48c2bd2b/rtems" ecd8aec9/rtems]:

```
Remove remnants of rtems_io_lookup_name

Updates #3420.
```

3.9.1.532 4750 - Linker discards RTEMS_SYSINIT_ITEM object

Id	4750
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-11-04T13:40:35.000Z
Updated	2022-11-07T15:00:32.000Z
Milestone	6.1
Labels	priority::normal, resolution::invalid, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4750
Merges	0

Original author: dsa93

Hi

I am developing device driver in custom BSP in RTEMS. I applied my BSP on top of master branch.

My driver code looks like this:

```
/* driver logic in "static" functions (omitted) */

void custom_driver_init(void);

RTEMS_SYSINIT_ITEM(
custom_driver_init,
RTEMS_SYSINIT_DEVICE_DRIVERS,
RTEMS_SYSINIT_ORDER_SEVENTH
);
```

It is discarded by linker. custom_driver_init is never called. I discovered hack how to make linker not discard this: if I put at least one extern linkage function and call it in other file then linker dont discard “custom_driver_init”

```
/* driver logic in "static" functions (omitted) */

/* Call this function for example from main function */
int workaraound(void) {
return 5;
}

void custom_driver_init(void);

RTEMS_SYSINIT_ITEM(
custom_driver_init,
RTEMS_SYSINIT_DEVICE_DRIVERS,
RTEMS_SYSINIT_ORDER_SEVENTH
);
```

Driver file compilation arguments:

```
-MMD,
-Wall,
-Wmissing-prototypes,
-Wimplicit-function-declaration,
-Wstrict-prototypes,
-Wnested-externs,
-O2,
-g,
-fdata-sections,
-ffunction-sections,
-mthumb,
-mcpu=cortex-m7,
-mfpu=fpv5-d16,
```

(continues on next page)

(continued from previous page)

```
-mfloat-abi=hard,
-save-temps,
-Icpukit/include,
-I../../../cpukit/include,
-Icpukit/score/cpu/arm/include,
-I../../../cpukit/score/cpu/arm/include,
-Ibsps/include,
-I../../../bsps/include,
-Ibsps/arm/include,
-I../../../bsps/arm/include,
../../../bsps/arm/someplatform/console/console.c,
-c,
-DHAVE_CONFIG_H=1,
-DBOARD_MAINCK_FREQ_HZ=10000000
```

Application linkage files

```
/home/dsa/rtems/rsb-6/bin/arm-rtems6-gcc
-g
-mthumb
-mcpu=cortex-m7
-mfpu=fpv5-d16
-mfloat-abi=hard
-DBOARD_MAINCK_FREQ_HZ=10000000
-I/home/dsa/arm-rtems6/someplatform/lib/include
-B/home/dsa/arm-rtems6/someplatform/lib
-qrtems
-Wl,--gc-sections
-Wl,-Map=ecu-app.map,--print-memory-usage,--cref
CMakeFiles/ecu-app.dir/src/main.c.obj
-o ecu-app.elf
-lrtemsbsp
-lrtemscpu
```

I tried to research this topic and I am not sure if there is a way to prevent this optimisation, so I decided to post it here. I can provide you some more details or perform some tests

Author: Trac Migrate 2022-11-07T15:00:08.000Z

Original author: dsa93

If it is discarded through the linker garbage collection, then you probably use a custom linker command file which doesn't have the KEEP() directive.

If it is not linked in at all, then your application has no reference to the driver or you didn't add the driver to the objects list of the executable link.

Questions like this should be discussed on the mailing list.

Author: Trac Migrate 2022-11-07T15:00:32.000Z

Original author: dsa93

- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*

3.9.1.533 4462 - CID 1437638: Logically dead code

Id	4462
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Gedare Bloom
Created	2021-06-28T23:48:06.000Z
Updated	2022-10-31T15:02:09.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4462
Merges	0

Original author: hgerber

In rtems-fdt.c:

The indicated dead code may have performed some action; that action will never occur.

In rtems_fdt_init_index: Code can never be reached because of a logical contradiction (CWE-561)

```
159  entries = calloc(num_entries, sizeof(rtems_fdt_index_entry));
cond_notnull: Condition entries, taking true branch. Now the value of entries is not NULL.
160  if (!entries)
161  {
162    return -RTEMS_FDT_ERR_NO_MEMORY;
163  }
164
165  names = calloc(1, total_name_memory);
notnull: At condition entries, the value of entries cannot be NULL.
dead_error_condition: The condition !entries cannot be true.
166  if (!entries)
167  {

CID 1437638 (#1 of 1): Logically dead code (DEADCODE)
dead_error_begin: Execution cannot reach this statement: free(entries);.
168    free(entries);
169    return -RTEMS_FDT_ERR_NO_MEMORY;
170  }
```

Author: Joel Sherrill	2021-06-29T00:31:27.000Z

Original author: hgerber

Shouldn't it be freeing the first variable allocated – names?

Author: Trac Migrate 2022-10-03T18:13:45.000Z

Original author: hgerber

In [changeset:"cab00c703525648cb8cd77c0b29aaf80d3f56276/rtems" cab00c70/rtems]:

```
cpukit/fdt: Check correct allocation

The second allocation check was mistakenly rechecking the first
allocation. It now checks the correct allocation and ensures that names
is not NULL.

Updates #4462
```

Author: Trac Migrate 2022-10-03T18:14:04.000Z

Original author: hgerber

In [changeset:"584f5bc9afa6ae293cfed58d02aab4ba3c23caa5/rtems" 584f5bc9/rtems]:

```
cpukit/fdt: Check correct allocation

The second allocation check was mistakenly rechecking the first
allocation. It now checks the correct allocation and ensures that names
is not NULL.

Updates #4462
```

Author: Gedare Bloom 2022-10-31T15:02:09.000Z

Original author: hgerber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

3.9.1.534 4460 - CID 1437647: Explicit null dereferenced

Id	4460
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Gedare Bloom
Created	2021-06-22T19:57:20.000Z
Updated	2022-10-31T15:00:24.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4460
Merges	0

Original author: hgerber

A null pointer dereference will occur.

In rtems_fdt_unload: Dereference of an explicit null value (CWE-476)

Author: Trac Migrate 2022-10-03T18:13:47.000Z

Original author: hgerber

In [changeset:"05461aa47519c51d3ac5e73337ebeaf395b17589/rtems" 05461aa4/rtems]:

```
cpukit/fdt: Free index before container

Ensure that the index is released before the structure containing it is
freed and NULLed.

Updates #4460
```

Author: Trac Migrate 2022-10-03T18:14:06.000Z

Original author: hgerber

In [changeset:"3af84c1beabd129c08d5d1bfcb553c79ad59d462/rtems" 3af84c1/rtems]:

```
cpukit/fdt: Free index before container

Ensure that the index is released before the structure containing it is
freed and NULLed.

Updates #4460
```

Author: Gedare Bloom 2022-10-31T14:54:26.000Z

Original author: hgerber

- **Milestone** changed from %”6.1” to %”7.1”

Author: Gedare Bloom 2022-10-31T15:00:24.000Z

Original author: hgerber

- **Milestone** changed from %”7.1” to %”6.1”
- **Resolution** set to ~”fixed”
- **Status** changed from *assigned* to *closed*

3.9.1.535 4744 - libdebugger arm backend does not single step

Id	4744
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2022-10-25T03:11:26.000Z
Updated	2022-10-30T20:52:30.000Z
Milestone	6.1
Labels	cpukit::debugger, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4744
Merges	0

Single stepping with the ARM backend does not cleanly step instructions.

Author: Trac Migrate 2022-10-30T20:52:30.000Z

- **Resolution** set to ~”fixed”
- **Status** changed from *assigned* to *closed*

In [changeset:”18b1a59184339eabef9abf7aed94aebea43bcbad/rtems” 18b1a591/rtems]:

```
cpukit/libdebugger: Fix stepping on ARM architectures

Closes #4744
```

3.9.1.536 4689 - mips/jmr3904 Massive Number of Test Failures

Id	4689
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2022-07-30T16:26:45.000Z
Updated	2022-10-27T22:00:45.000Z
Milestone	6.1
Labels	mips, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4689
Merges	0

jmr3904 last had a good test run in January 2022 (now July). Since then, there has not been one in which more than 1 test pass and I suspect that's because the one doesn't expect output.

https://lists.rtems.org/pipermail/build/2022-January/030809.html

This has been tracked down to a gdb simulator bug which has been reported as:

https://sourceware.org/bugzilla/show_bug.cgi?id=29439

Many details follow in the comments.

- hello.exe.xz

Author: Joel Sherrill 2022-07-30T18:21:29.000Z

- **Summary** changed from *mps/jmr3904 Massive Number of Test Failures* to *mips/jmr3904 Massive Number of Test Failures*

Author: Joel Sherrill 2022-07-30T21:13:04.000Z

I checked with the gdb 8 used with RTEMS 5 and the hello.exe runs. The same executable fails to run with the gdb 11.2 used with RTEMS 6 or the gdb 13 used with RTEMS 7.

I will try to narrow it down some more before reporting to the gdb mailing list. At least it doesn't look like something broken in RTEMS itself.

Author: Trac Migrate 2022-08-01T07:57:50.000Z

This looks like a GDB or other tool issue. Maybe a sign extension bug:

```
1 objdump -h build/mips/jmr3904/testsuites/samples/ticker.exe
2
3 build/mips/jmr3904/testsuites/samples/ticker.exe:     file format elf32-
  ↪tradbigmips
4
```

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```
Sections:
Idx Name          Size      VMA       LMA       File off  Algn
0 .text         000115a0  88000000  88000000  00001000  2**4
CONTENTS, ALLOC, LOAD, READONLY, CODE
1 .rtemsroset   00000070  880115a0  880115a0  000125a0  2**2
CONTENTS, ALLOC, LOAD, READONLY, DATA
2 .init         00000048  88011610  88011610  00012610  2**0
CONTENTS, ALLOC, LOAD, READONLY, CODE
3 .fini         00000030  88011658  88011658  00012658  2**0
CONTENTS, ALLOC, LOAD, READONLY, CODE
4 .ctors        00000008  88011688  88011688  00012688  2**2
CONTENTS, ALLOC, LOAD, DATA
5 .dtors        00000008  88011690  88011690  00012690  2**2
CONTENTS, ALLOC, LOAD, DATA
6 .rdata        00002030  880116a0  880116a0  000126a0  2**4
CONTENTS, ALLOC, LOAD, READONLY, DATA
7 .MIPS.abiflags 00000018  880136d0  880136d0  000146d0  2**3
CONTENTS, ALLOC, LOAD, READONLY, DATA, LINK_ONCE_SAME_SIZE
8 .data         000005c0  880136e8  880136e8  000146e8  2**3
CONTENTS, ALLOC, LOAD, DATA
9 .bss          00001410  88013cb0  88013cb0  00014ca8  2**4
ALLOC
10 .noinit       00001310  880150c0  880150c0  00014ca8  2**3
ALLOC
11 .rtemsstack   00004000  880163d0  880163d0  00014ca8  2**4
ALLOC
12 .debug_aranges 00002958  00000000  00000000  00014ca8  2**3
CONTENTS, READONLY, DEBUGGING, OCTETS
13 .debug_info   00109cb1  00000000  00000000  00017600  2**0
CONTENTS, READONLY, DEBUGGING, OCTETS
14 .debug_abbrev 00023397  00000000  00000000  001212b1  2**0
CONTENTS, READONLY, DEBUGGING, OCTETS
15 .debug_line   0003dc56  00000000  00000000  00144648  2**0
CONTENTS, READONLY, DEBUGGING, OCTETS
16 .debug_frame  000048f4  00000000  00000000  001822a0  2**2
CONTENTS, READONLY, DEBUGGING, OCTETS
17 .debug_str    0001160c  00000000  00000000  00186b94  2**0
CONTENTS, READONLY, DEBUGGING, OCTETS
18 .gnu.attributes 00000010  00000000  00000000  001981a0  2**0
CONTENTS, READONLY
19 .comment      00000063  00000000  00000000  001981b0  2**0
CONTENTS, READONLY
20 .debug_line_str 000001be  00000000  00000000  00198213  2**0
CONTENTS, READONLY, DEBUGGING, OCTETS
21 .debug_loclists 00022d89  00000000  00000000  001983d1  2**0
CONTENTS, READONLY, DEBUGGING, OCTETS
22 .debug_rnglists 0000605d  00000000  00000000  001bb15a  2**0
CONTENTS, READONLY, DEBUGGING, OCTETS
~/src/rtems (master) > /opt/rtems/6/bin/mipstx39-rtems6-gdb build/mips/
```

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```
↪jmr3904/testsuites/samples/ticker.exe
GNU gdb (GDB) 11.2
Copyright (C) 2022 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.
↪html>
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.
Type "show copying" and "show warranty" for details.
This GDB was configured as "--host=x86_64-linux-gnu --target=mipstx39-
↪rtems6".
Type "show configuration" for configuration details.
For bug reporting instructions, please see:
<https://www.gnu.org/software/gdb/bugs/>.
Find the GDB manual and other documentation resources online at:
<http://www.gnu.org/software/gdb/documentation/>.

For help, type "help".
Type "apropos word" to search for commands related to "word"...
Reading symbols from build/mips/jmr3904/testsuites/samples/ticker.exe...
(gdb) tar sim
Connected to the simulator.
(gdb) load
Loading section .text, size 0x115a0 lma ffffffff88000000
Loading section .rtemsroset, size 0x70 lma ffffffff880115a0
Loading section .init, size 0x48 lma ffffffff88011610
Loading section .fini, size 0x30 lma ffffffff88011658
Loading section .ctors, size 0x8 lma ffffffff88011688
Loading section .dtors, size 0x8 lma ffffffff88011690
Loading section .rdata, size 0x2030 lma ffffffff880116a0
Loading section .MIPS.abiflags, size 0x18 lma ffffffff880136d0
Loading section .data, size 0x5c0 lma ffffffff880136e8
Start address ffffffff88000004
Transfer rate: 648448 bits in <1 sec.
(gdb) r
Starting program: /tmp/sh/b-rtems/mips/jmr3904/testsuites/samples/
↪ticker.exe
mips-core: 4 byte read to unmapped address 0xffffffff88000004 at␣
↪0xffffffff88000004

Program received signal SIGBUS, Bus error.
_start () at /home/EB/sebastian_h/src/rtems/bsps/mips/jmr3904/start/
↪start.S:57
57              bal     $LF1
```

Author: Joel Sherrill 2022-08-01T19:32:17.000Z

I did a git bisect after narrowing down which release branches it worked on. That let me track it down to a commit based on git bisect. I will file a gdb ticket once I get my login working there again.

$ git bisect log git bisect start

git bisect good ce35d7163e779b1321058b22f005c70ce1524b25

git bisect bad ef6ec3333e80e39ce207c6c5d5628bdd5402111d

git bisect good 8087c3fa8b5d695e3e29e69d70d0b35ec902ac59

git bisect skip d3dacd0fafba473fd42fdf3ca86fd3203db28ae8

git bisect skip 40d07d07d051308626f6079fa6d1598fafb445c7

git bisect good a4eba6087d4cec81f8b41477b4da56ff87b88e91

git bisect good 546b77fe78bb366bbec3c708ac371e2f553bbdae

git bisect good 2e8adb6448c78fdb748c13c7859b68f3e7984c4d

git bisect bad 50a6759f0f541ea965c7330bfbfe335cb8d66af8

git bisect good c572c4580e774f1ec0115948d31dcf8a5b04878e

git bisect good 209f108f73888741bf31d03d35722b6e0b521ec8

git bisect bad 57a922a59801a9e7684f9661a65fa2ed5833d65d

git bisect good 162c6aef1f3a96923e75f0b4ef430822d273465c

git bisect good 07490bf81d2fc91676eb71b77e07f80f20fc1b54

git bisect bad ce3ec98acd2f344ae911de3f41dd2e3c6c68b141

git bisect good c30420d82a0b743285cf8333f90ca85274632714

git bisect bad bc56166f66244a9e3abc62c7bc595a6f800f23b0

Author: Joel Sherrill 2022-08-01T19:35:18.000Z

- **Attachment** hello.exe.xz added

Stripped executable which produces the failure

Author: Joel Sherrill 2022-08-01T19:38:10.000Z

FYI you can't run jmr3904 executables with just _tar **sim_**, you need to use _tar sim –board=jmr3904_ in gdb or you can use the run command. Here's an example with an older gdb/run

```
$  ~/rtems-work/tools/5/bin/mipstx39-rtems5-run --board=jmr3904 /tmp/
↪hello.exe


*** BEGIN OF TEST HELLO WORLD ***
....
```

Author: Joel Sherrill 2022-08-02T20:56:23.000Z

- **Description** changed

```
jmr3904 last had a good test run in January 2022 (now July). Since then,
↪ there has not been one in which more than 1 test pass and I suspect␣
↪that's because the one doesn't expect output.

https://lists.rtems.org/pipermail/build/2022-January/030809.html
+
+ This has been tracked down to a gdb simulator bug which has been␣
↪reported as:
+
+ https://sourceware.org/bugzilla/show_bug.cgi?id=29439
+
+ Many details follow in the comments.
```

Author: Joel Sherrill 2022-10-24T13:38:27.000Z

Fix pushed to gdb repository and confirmed to work with ticker.exe.

Author: Trac Migrate 2022-10-27T22:00:45.000Z

- **Owner** set to Joel Sherrill <joel@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"cb8821e93378118e78a9cb25859789b126bd5761/rtems-source-builder" cb8821e/rtems-source-builder]:

```
Update mipstx39 gdb version to pick up fix to make simulator work

Closes #4689.
```

3.9.1.537 4746 - Armv7-M SysTick clock driver uses off by one reload value

Id	4746
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-10-26T09:31:03.000Z
Updated	2022-10-26T09:36:01.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::defect, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4746
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2022-10-26T09:36:01.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"1eae6f24fec6c3ab00d8f5d0152d2a5b57ea4589/rtems" 1eae6f2/rtems]:

```
bsps/arm: fix Cortex-M7 systick reload value

- see ARM DUI 0646C Arm Cortex-M7 Devices Generic User Guide
"The RELOAD value is calculated according to its use.
For example, to generate a multi-shot timer with a period
of N processor clock cycles, use a RELOAD value of N-1.
If the SysTick interrupt is required every 100 clock pulses,
set RELOAD to 99."
- see routines used in CMSIS project for reference

Close #4746.
```

3.9.1.538 2871 - Use bibtex references thoughout the documentation

Id	2871
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2017-01-18T10:25:55.000Z
Updated	2022-10-25T22:22:37.000Z
Milestone	6.1
Labels	doc, priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2871
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2017-11-09T06:26:42.000Z

Original author: sebastian.huber

- **Milestone** changed from %"5.0" to %"6.1"

Milestone renamed

Author: Joel Sherrill 2021-12-17T17:00:38.000Z

Original author: sebastian.huber

Has this been done? We don't have that may references.

Author: Joel Sherrill 2022-10-25T22:22:37.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Classic API Guide has a generated references section now

3.9.1.539 4202 - Add BSP for ARM Fixed Virtual Platform with a Cortex-R52

Id	4202
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-12-09T13:31:40.000Z
Updated	2022-09-22T05:55:24.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4202
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2020-12-09T16:32:14.000Z

Original author: sebastian.huber

In [changeset:"9ce47a52a49cadd3505576e0462fb908f40be0b7/rtems" 9ce47a5/rtems]:

```
bsps: Add SMP support to ARM GICv3

Update #4202.
```

Author: Trac Migrate 2020-12-10T08:08:19.000Z

Original author: sebastian.huber

In [changeset:"9955487de6b92a08f932c8e9ea3a8a130a2ae040/rtems" 9955487d/rtems]:

```
arm: Support Armv8 in <rtems/score/arm.h>

Update #4202.
```

Author: Trac Migrate 2020-12-10T08:08:22.000Z

Original author: sebastian.huber

In [changeset:"e68827e1d9453ca47f95bafe0aac45fc4f7b8e6d/rtems" e68827e/rtems]:

```
arm/cache-cp15: Support Armv8

Update #4202.
```

Author: Trac Migrate 2020-12-10T08:08:26.000Z

Original author: sebastian.huber

In [changeset:"5efa15b49d47ace494410e423fc69213d9c2a4e9/rtems" 5efa15b/rtems]:

```
bsps/arm: Unify ARM Generic Timer options

Update #4202.
```

Author: Trac Migrate 2020-12-10T08:08:29.000Z

Original author: sebastian.huber

In [changeset:"bd7bef528db094914cefef040ddca6c5a0e963d1/rtems" bd7bef52/rtems]:

```
bsps/arm: Support system level ARM Generic Timer

Update #4202.
```

Author: Trac Migrate 2020-12-10T08:08:32.000Z

Original author: sebastian.huber

In [changeset:"617aeaf572777886fd5dd11b1d8a283fd9865201/rtems" 617aeaf5/rtems]:

```
bsps/arm: Move BSP_START_IN_HYP_SUPPORT option

Clarify documentation.

Update #4202.
```

Author: Trac Migrate 2020-12-10T15:19:15.000Z

Original author: sebastian.huber

In [changeset:"b6925e10c8a7990ef9d9649e0f13ac0cbdd41071/rtems" b6925e1/rtems]:

```
bsps: Fix GICv3 arm_gic_trigger_sgi()

Use the targets parameter to determine the targets of the SGI.  Change
targets parameter type to 32-bit to ease the parameter passing.  GICv3
supports up to 16 targets.

Update #4202.
```

Author: Trac Migrate 2020-12-10T15:19:18.000Z

Original author: sebastian.huber

In [changeset:"105e52032e524873924ddec0167535a33f8cd9f7/rtems" 105e520/rtems]:

```
bsps: Remove ARM GIC SGI target filter

Remove the target filter for software-generated interrupts since this
feature is not supported by the affinity routing in GICv3.

Update #4202.
```

Author: Trac Migrate 2020-12-17T14:32:46.000Z

Original author: sebastian.huber

In [changeset:"747fb65c6e5921c39c324c6e86ab2f2d87b47ee0/rtems" 747fb65/rtems]:

```
bsps: Add GICv3 arm_gic_irq_processor_count()

Update #4202.
```

Author: Trac Migrate 2020-12-17T14:32:50.000Z

Original author: sebastian.huber

In [changeset:"b5aceef5d921de3d146b45c20f6f8aa7e9413717/rtems" b5aceef/rtems]:

```
bsps: Remove gicvx_interrupt_dispatch()

Avoid one level of indirection.

Update #4202.
```

Author: Trac Migrate 2020-12-17T14:32:53.000Z

Original author: sebastian.huber

In [changeset:"a299c4feef70318c5098cb1d15557b37ac253d17/rtems" a299c4fe/rtems]:

```
arm: Optimize arm_interrupt_disable()

Update #4202.
```

Author: Trac Migrate 2020-12-23T09:26:50.000Z

Original author: sebastian.huber

In [changeset:"be5eee575b166f8f351cec0a1e988a6bc8cbd2bb/rtems" be5eee57/rtems]:

```
libdebugger: Fix for Armv8-R

This architecture variant has no MMU.

Update #4202.
```

Author: Trac Migrate 2020-12-23T09:26:54.000Z

Original author: sebastian.huber

In [changeset:"39ef7e549669c657b21128ad2e10bc65e459c019/rtems" 39ef7e5/rtems]:

```
bsps: Fix includes

Update #4202.
```

Author: Trac Migrate 2020-12-23T09:26:57.000Z

Original author: sebastian.huber

In [changeset:"6944cd10e6bdc450d66ab245bf0620979fba8f71/rtems" 6944cd10/rtems]:

```
arm: Add header file for AArch32 System Registers

Update #4202.
```

Author: Trac Migrate 2020-12-23T09:27:00.000Z

Original author: sebastian.huber

In [changeset:"854ea2b4d8a32753da9afe8770be191cd0b4ade8/rtems" 854ea2b/rtems]:

```
arm: Add support for Arm PMSAv8-32

Update #4202.
```

Author: Trac Migrate 2020-12-23T09:27:03.000Z

Original author: sebastian.huber

In [changeset:"272534eb725f2486b7a32b39d998202a101bd36e/rtems" 272534e/rtems]:

```
bsps/arm: Set VBAR in start.S

Set the VBAR to the vector table in the start section before
bsp_start_hook_0() is called to earlier handle exceptions in RTEMS.

Set the VBAR to the normal vector table in start.S for the main
processor.  Secondary processors set it in bsp_start_hook_0().

Update #4202.
```

Author: Trac Migrate 2020-12-23T09:27:07.000Z

Original author: sebastian.huber

In [changeset:"76a1a5378031e56d29d16c713aee73c6747c3e61/rtems" 76a1a53/rtems]:

```
bsps/arm: Invalidate branch predictors earlier

Make sure the branch predictors are invalidated before the first branch
is executed.

Update #4202.
```

Author: Trac Migrate 2020-12-23T09:27:10.000Z

Original author: sebastian.huber

In [changeset:"46a3c0446f6a18ca1fa9e6995504bc7291d66495/rtems" 46a3c04/rtems]:

```
bsps/arm: Remove optional start hook arguments

```

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```
The start hook arguments are not used by a BSP.  Removing them avoids
the need for a stack during the very early system initialization.

Update #4202.
```

Author: Trac Migrate 2020-12-23T09:27:13.000Z

Original author: sebastian.huber

In [changeset:"b32fd22732ea9344bd7573c767573a3ce148c3f7/rtems" b32fd227/rtems]:

```
bsps/arm: Add arm-data-cache-loop-set-way.h

This makes it possible to reuse this loop.

Update #4202.
```

Author: Trac Migrate 2020-12-23T09:27:17.000Z

Original author: sebastian.huber

In [changeset:"e164df5e33608576443b4cd5923a9046358ee773/rtems" e164df5e/rtems]:

```
bsps/arm: Clear SCTLR[M, I, A, C] in start.S

Initialize the data and unified cache levels.  Invalidate the
instruction cache levels.

Update #4202.
```

Author: Trac Migrate 2020-12-23T09:27:20.000Z

Original author: sebastian.huber

In [changeset:"23d9223ad3b67156b99d828457d0ebd74687cf71/rtems" 23d9223a/rtems]:

```
bsps/arm: Invalidate TLB in start.S

Update #4202.
```

Author: Trac Migrate 2020-12-23T09:27:23.000Z

Original author: sebastian.huber

In [changeset:"9f3a08ef2de99714d679aecf6b1ecb4e11869424/rtems" 9f3a08e/rtems]:

```
bsps: Use header file for GIC architecture support

This avoids a function call overhead in the interrupt dispatching.

Update #4202.
```

Author: Trac Migrate 2020-12-23T09:27:27.000Z

Original author: sebastian.huber

In [changeset:"016bcb3f9d82a0c02aab87326ce94bee0365a956/rtems" 016bcb3/rtems]:

```
bsps/arm: Rely on initialized vector table

The arm_cp15_set_exception_handler() is a complicated function which
should be avoided if possible.

Update #4202.
```

Author: Trac Migrate 2020-12-23T09:27:30.000Z

Original author: sebastian.huber

In [changeset:"81c7f5be92803f96c39b5325006071771709125b/rtems" 81c7f5be/rtems]:

```
arm/fvp: New BSP

This BSP supports the Arm Fixed Virtual Platform.  Only the Cortex-R52
processor configuration is supported by the BSP.  It should be easy to
add support for other variants if needed.

Update #4202.
```

Author: Trac Migrate 2021-01-04T05:12:11.000Z

Original author: sebastian.huber

In [changeset:"90342feb4dd63d188ce945adfb0a7694a42a65cd/rtems-tools" 90342fe/rtems-tools]:

```
tester: Add support for arm/fvp_cortex_r52 BSP

Update #4202.
```

Author: Trac Migrate 2021-01-04T09:59:30.000Z

Original author: sebastian.huber

In [changeset:"1e9c608cb2fb27f4a4fd6c7f2cb4c1c1ce42cf62/rtems-source-builder" 1e9c608/rtems-source-builder]:

```
6/7: Update to the latest rtems-tools

Update #4202.
```

Author: Trac Migrate 2021-06-07T07:41:26.000Z

Original author: sebastian.huber

In [changeset:"2d1c494fa86904544e4faa259289873a828b6a89/rtems" 2d1c494f/rtems]:

```
arm/fvp: Remove unused GICv2 BSP option

Update #4202.
```

Author: Trac Migrate 2021-06-07T07:41:29.000Z

Original author: sebastian.huber

In [changeset:"55ce66ca7302cad0175fb6dc61df361659800b3e/rtems" 55ce66ca/rtems]:

```
arm/fvp: Fix integer from pointer without a cast

Update #4202.
```

Author: Trac Migrate 2021-06-16T15:49:05.000Z

Original author: sebastian.huber

In [changeset:"f89a527336f12202b16d2534ea6a401703c97e9f/rtems" f89a527/rtems]:

```
arm: Fix parameter use in AARCH32_PMSA_MEM_ATTR()

Update #4202.
```

Author: Trac Migrate 2021-06-29T12:59:30.000Z

Original author: sebastian.huber

In [changeset:"13b18d129e8f8ee92360ab5f27f1e71a3ec5016c/rtems" 13b18d12/rtems]:

```
arm: Disable alignment check in PMSA init

Disable the alignment check through SCTLR[A] in
_AArch32_PMSA_Initialize().

Update #4202.
```

Author: Trac Migrate 2021-06-29T12:59:34.000Z

Original author: sebastian.huber

In [changeset:"b35768002624a2e7c075da53a8f4aacc7e1f21bf/rtems" b357680/rtems]:

```
arm: Fix AArch32 memory attribute defines

Update #4202.
```

Author: Trac Migrate 2021-06-29T12:59:37.000Z

Original author: sebastian.huber

In [changeset:"9b84adb4aa7bfbd39cf8417863eae559426bfedb/rtems" 9b84adb/rtems]:

```
arm: Fix AARCH32_PMSA_ATTR_XN value

Update #4202.
```

Author: Trac Migrate 2021-06-29T12:59:41.000Z

Original author: sebastian.huber

In [changeset:"bb9a4b816b7efaab4e1e45e4c1ea1d81f6c8a21e/rtems" bb9a4b8/rtems]:

```
arm: For AArch32 use non-shareable memory

The Cortex-R52 does not support cache coherency and the shareable memory
attribute.  If a region is configured to be shareable, then it falls
back to use non-cacheable memory.

Update #4202.
```

Author: Trac Migrate 2021-11-30T07:11:55.000Z

Original author: sebastian.huber

In [changeset:"7fec89e24d5c5874599f4caacfdba43d42f25f7a/rtems" 7fec89e2/rtems]:

```
arm: Fix AARCH32_PMSA_DATA_READ_WRITE_CACHED

Fix definition of AARCH32_PMSA_DATA_READ_WRITE_CACHED.  Since
AARCH32_PMSA_ATTR_AP_EL1_RW_EL0_NO is zero, this fix is only cosmetic.

Update #4202.
```

Author: Trac Migrate 2021-11-30T07:11:59.000Z

Original author: sebastian.huber

In [changeset:"73305a1044bcf7289bbfa8cebc925f06972f44cb/rtems" 73305a1/rtems]:

```
arm: Add AARCH32_PMSA_DATA_READ_WRITE_DEFAULT

Add default memory attributes for read-write data.  The actual
attributes depend on the RTEMS_SMP build option.

Update #4202.
```

Author: Trac Migrate 2022-06-08T07:04:47.000Z

Original author: sebastian.huber

In [changeset:"0b9497a6dd1cb89e9b8100572554d31598481f9f/rtems" 0b9497a/rtems]:

```
arm: Fix PMSA region mapping with 0x0 end address

A section may span up to the end of the address range.  In this case the
end address is zero.  Use the base address to check if a region should
be before another region.

Update #4202.
```

Author: Trac Migrate 2022-06-08T07:04:49.000Z

Original author: sebastian.huber

In [changeset:"c93f0f01e5a260df008b568b74ca8bb7677e1bf5/rtems" c93f0f01/rtems]:

```
arm: Fix PMSA regions for contiguous sections

Sections with identical attributes may be contiguous with a respective
begin and end address which is not on a minimum region boundary.  The
begin address is aligned down to the region base address.  The end
address is aligned up to the region end address.  Account for this in
the check for contiguous sections.

Update #4202.
```

Author: Trac Migrate 2022-09-09T05:41:43.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"13be9a2b282e6fd690512d4d75b5767fc69bbdb3/rtems-docs" 13be9a2/rtems-docs]:

```
user: Document arm/fvp BSP

Close #4202.
```

Author: Trac Migrate 2022-09-22T05:55:24.000Z

Original author: sebastian.huber

In [changeset:"f6e7c627059e22da2f5ffb7853ef73b1200a1fa9/rtems" f6e7c627/rtems]:

```
bsps/arm: Mark functions in start.S

Add the function type to _start() and bsp_start_hook_0_done() so that
the linker can generate ARM/Thumb interworking code.

Update #4202.
```

3.9.1.540 4108 - Review minimum and ensure it really is a minimum configuration

Id	4108
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-10-01T16:25:45.000Z
Updated	2022-09-08T14:29:37.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::test, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4108
Merges	0

Does minimum actually reflect what you think is the smallest possible configuration now? That as always the test's purpose – to have a single that was the smallest we thought we could produce. It seems all your changes that it needs a review for tweaks to the configuration.

Inspecting the size of this test should tell you the smallest executable possible on this BSP with the current configuration settings.

There is a version in rtems-examples/misc which will either need to be synchronized or deleted.

This needs to be checked on 5 and 6.

Author: Joel Sherrill 2020-10-01T16:25:56.000Z

- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2020-10-01T17:08:50.000Z

- **Milestone** changed from %"5.2" to %"6.1"
- **Version** changed from ~"5" to ~"6"

Author: Trac Migrate 2022-09-08T14:29:37.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"120c857ea15d03cae777b0e27364aa4cb04a4e0f/rtems" 120c857e/rtems]:

```
minimum: Do not use unified work areas

The CONFIGURE_UNIFIED_WORK_AREAS option pulls in a system initialization
handler which initializes the unified heap.
```

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```
5
6 Close #4108.
```

3.9.1.541 4712 - powerpc: Add AltiVec VRSAVE support

Id	4712
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-09-01T08:09:42.000Z
Updated	2022-09-08T13:45:03.000Z
Milestone	6.1
Labels	arch:powerpc, priority::normal, resolution::fixed, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4712
Merges	0

Original author: sebastian.huber

The VRSAVE feature of the Altivec unit can be used to reduce the amount of Altivec registers which need to be saved/restored during interrupt processing and context switches.

Author: Trac Migrate 2022-09-08T13:21:34.000Z

Original author: sebastian.huber

In [changeset:"be84706024958fc15032e2a077aecf6763b90ed5/rtems-source-builder" be84706/rtems-source-builder]:

```
1 6: Update GCC 10 and 12
2
3 Update #4712.
```

Author: Trac Migrate 2022-09-08T13:45:01.000Z

Original author: sebastian.huber

In [changeset:"d907c2294a438f07099730b88ff88a659e940de7/rtems" d907c22/rtems]:

```
1 powerpc: Add support for VRSAVE
2
3 The VRSAVE feature of the Altivec unit can be used to reduce the amount␣
  ↪of
4 Altivec registers which need to be saved/restored during interrupt␣
  ↪processing
```

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```
and context switches.

In order to use the VRSAVE optimization a corresponding multilib (-mvrsave) is
required, see GCC configuration.  The -mvrsave option must be added to the
ABI_FLAGS of the BSP.

Currently only the -mcpu=e6500 based QorIQ BSP support this optimization.

Update #4712.
```

Author: Trac Migrate 2022-09-08T13:45:03.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"52d566c864977418ad33d3bb2658aa2357ad893c/rtems" 52d566c/rtems]:

```
bsp/qoriq: Enable VRSAVE optimization

Close #4712.
```

3.9.1.542 3897 - Dhcpcd does not daemonize

Id	3897
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-03-04T10:29:59.000Z
Updated	2022-09-08T08:15:06.000Z
Milestone	6.1
Labels	libbsd, priority::high, priority::normal, resolution::wontfix, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3897
Merges	0

Original author: ionut.vilsan

Background: the DCHP client is started using the rc.conf script. In the background a new task dedicated to the dhcp client is created and then the dhcp client takes over this task. This works fine, we can get IP form the dhcp server and then take part in network communication based on IPv4.

Problem: The dhcp client cannot be stopped any time. Any shell commands will never reach the dhcpcd task, but rather it will instantiate a new dhcpd task which will take over the current task. E.g: in rtems console if you enter dhcpd -x, instead of killing the dhcpcd task a new dhcpcd task will be created which will run from the console. This means that the console cannot be used anymore.

There seems to be noway to communicate with the already created dhcpcd task.

I took a look over the dhcpcd in libbsd code and some of the features are turned off. Can someone give more details regarding this ?

Author: Trac Migrate 2020-04-03T15:01:19.000Z

Original author: ionut.vilsan

- **Priority** changed from ~"high" to ~"normal"
- **Resolution** set to ~"wontfix"
- **Status** changed from *assigned* to *closed*

The dhcpcd is not intended to be started via a shell command. Maybe we should remove the shell command.

Author: Chris Johns 2020-04-14T22:47:44.000Z

Original author: ionut.vilsan

- **Milestone** set to %"6.1"
- **Resolution** ~"wontfix" deleted
- **Status** changed from *closed* to *reopened*
- **Version** set to ~"6"

Replying to Sebastian Huber:

> The dhcpcd is not intended to be started via a shell command. Maybe we should remove the shell command.
>
> Reopening this bug. This is either a bug in dhcpcd (my view) or the rc.conf support needs to be enhanced to correctly support it. The rc.conf model uses working commands that are wrapped. On FreeBSD the wrapping is using shell scripts and on RTEMS it is a C framework. Another solution is to enhance the shell to push a command into the back ground.
>
> I have stated before now and I will repeat what I have said, `rc.conf` is the documented method to use libbsd. I know of no other documented method and I am reluctant to expose and support other methods built on RTEMS internal specifics. If other methods exist and are in use then it is those users who are at risk of things changing and breaking on them. We fell into this hole in the legacy stack and I do not wish to repeat doing that here.

Author: Joel Sherrill 2020-04-14T23:51:19.000Z

Original author: ionut.vilsan

Can you file a new ticket for a general solution to spawning a daemon that this ticket will use? Reference this ticket in that one.

Author: Trac Migrate 2020-04-15T04:45:06.000Z

Original author: ionut.vilsan

The RTEMS shell and the RTEMS rc.conf parser are two different things. This bug here is about controlling (e.g. stopping) the dhcpcd from the RTEMS shell. The dhcpcd is intended to be started at most once and then run forever.

Author: Chris Johns 2020-04-16T03:32:27.000Z

Original author: ionut.vilsan

Replying to Sebastian Huber:

> The RTEMS shell and the RTEMS rc.conf parser are two different things.
>
> Is the rc.conf support for dhcpcd using the shell? I am not sure and I have not looked.
>
> > This bug here is about controlling (e.g. stopping) the dhcpcd from the RTEMS shell. The dhcpcd is intended to be started at most once and then run forever.
> >
> > Is this related to our implementation or the upstream sources?

Author: Trac Migrate 2022-09-08T08:15:06.000Z

Original author: ionut.vilsan

- **Resolution** set to ~"wontfix"
- **Status** changed from *reopened* to *closed*

The dhcpcd is intended to be started at most once and then run forever. This is a limitation of the libbsd port and related to the fact that RTEMS is a single process operating system.

3.9.1.543 3924 - Test the application configuration options

Id	3924
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-04-02T08:35:24.000Z
Updated	2022-09-08T08:09:59.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::project, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3924
Merges	0

Original author: sebastian.huber

There exists a specification of the application configuration options (work in progress) here:

https://git.rtems.org/sebh/rtems-qual.git/tree/spec/acfg/opt/

For the RTEMS Qualification project we have to test the implementation according to the specification (validation and unit tests).

A test plan needs to be developed. The tests should use the RTEMS Test Framework. Add C preprocessor error tests to the new build system, e.g. test #error and #warning directives.

Author: Trac Migrate 2020-04-02T08:39:09.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
There exists a specification of the application configuration options
(work in progress) here:

https://git.rtems.org/sebh/rtems-qual.git/tree/spec/acfg/opt/

For the RTEMS Qualification project we have to test the implementation
according to the specification (validation and unit tests).

- A test plan needs to be developed.  The tests should use the RTEMS
Testing Framework.
+ A test plan needs to be developed.  The tests should use the RTEMS
Test Framework. Add C preprocessor error tests to the new build
system, e.g. test #error and #warning directives.
```

Author: Trac Migrate 2022-09-08T08:09:59.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

The pre-qualified application configurations are fully specified and validiated.

3.9.1.544 4078 - GCC C++ compiler for powerpc defines _GNU_SOURCE as a built-in

Id	4078
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-09-14T06:51:45.000Z
Updated	2022-09-08T05:31:33.000Z
Milestone	6.1
Labels	arch:powerpc, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4078
Merges	0

Original author: sebastian.huber

For example:

powerpc-rtems6-g++ -E -P -v -dD empty.cc 2>&1 | grep GNU_SOURCE

Yields:

```
/opt/rtems/6/libexec/gcc/powerpc-rtems6/10.2.1/cc1plus -E -quiet -v -P -D_GNU_
↪SOURCE -Dmpc750 empty.cc -dD
#define _GNU_SOURCE 1
```

This is a GCC configuration bug. The reason is that the RTEMS GCC configuration includes gnu-user.h.

Author: Trac Migrate 2020-09-14T06:52:17.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
For example:

powerpc-rtems6-g++ -E -P -v -dD empty.cc 2>&1 | grep GNU_SOURCE

Yields:

+ {{{
/opt/rtems/6/libexec/gcc/powerpc-rtems6/10.2.1/cc1plus -E -quiet -v -P -
```

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```
↪D_GNU_SOURCE -Dmpc750 empty.cc -dD
#define _GNU_SOURCE 1
+ }}}

This is a GCC configuration bug. The reason is that the RTEMS GCC␣
↪configuration includes gnu-user.h.
```

Author: Joel Sherrill 2020-09-14T12:53:32.000Z

Original author: sebastian.huber

I agree that this isn't right. We shouldn't be implicitly defining anything that enables extended APIs.

How did you spot this?

Author: Trac Migrate 2020-09-14T15:19:38.000Z

Original author: sebastian.huber

I noticed this during the tests of the new build system. The powerpc is the only RTEMS target which defines _GNU_SOURCE.

Author: Chris Johns 2020-09-15T03:19:01.000Z

Original author: sebastian.huber

Replying to Joel Sherrill:

> How did you spot this?
>
> I have updated `rtems-exeinfo` to optionally output the full flags used to build an object file.
>
> ```
> $ rtems-exeinfo -O --full-flags `find . -name hello.exe`
> ```
>
> This is the output from `hello.exe` for the `psim` showing a mix of options:
>
> ```
> | wcrtomb.c                          : -mcpu=603e -mcpu=603e -
> ↪g -O2 -fno-builtin -ffunction-sections -fdata-sections
> | wctomb_r.c                         : -mcpu=603e -mcpu=603e -
> ↪g -O2 -fno-builtin -ffunction-sections -fdata-sections
> | wkspace.c                          : -mcall-sysv -meabi -
> ↪mcpu=603e -msdata=sysv -g -O2 -fno-common -fno-keep-inline-
> ↪functions -ffunction-sections -fdata-sections
> | wkspaceisunifieddefault.c          : -mcall-sysv -meabi -
> ↪mcpu=603e -msdata=sysv -g -O2 -fno-common -fno-keep-inline-
> ↪functions -ffunction-sections -fdata-sections
> | write.c                           : -mcall-sysv -meabi -
> ```

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```
↪mcpu=603e -msdata=sysv -g -O2 -fno-common -fno-keep-inline-
↪functions -ffunction-sections -fdata-sections
| write_r.c                          : -mcall-sysv -meabi -
↪mcpu=603e -msdata=sysv -g -O2 -fno-common -fno-keep-inline-
↪functions -ffunction-sections -fdata-sections
| wsetup.c                           : -mcpu=603e -mcpu=603e -
↪g -O2 -fno-builtin -ffunction-sections -fdata-sections
```

And there is the `pc686` BSP with LibBSD showing the `i386` issue:

```
| tzset.c                                : -mtune=pentiumpro -
↪march=i386 -g -O2 -fno-builtin -ffunction-sections -fdata-
↪sections
| tzset_r.c                              : -mtune=pentiumpro -
↪march=i386 -g -O2 -fno-builtin -ffunction-sections -fdata-
↪sections
| tzvars.c                               : -mtune=pentiumpro -
↪march=i386 -g -O2 -fno-builtin -ffunction-sections -fdata-
↪sections
| u_strerr.c                             : -mtune=pentiumpro -
↪march=i386 -g -O2 -fno-builtin -ffunction-sections -fdata-
↪sections
| uart_bus_pci.c                        : -mtune=pentiumpro -
↪march=pentium -g -O2 -ffunction-sections -fdata-sections
| udp6_usrreq.c                         : -mtune=pentiumpro -
↪march=pentium -g -O2 -ffunction-sections -fdata-sections -
↪fno-strict-aliasing -ffreestanding -fno-common
| udp_usrreq.c                          : -mtune=pentiumpro -
↪march=pentium -g -O2 -ffunction-sections -fdata-sections -
↪fno-strict-aliasing -ffreestanding -fno-common
| uenvgetgroups.c                       : -mtune=pentiumpro -
↪march=pentium -g -O2 -ffunction-sections -fdata-sections
| uipc_accf.c                           : -mtune=pentiumpro -
↪march=pentium -g -O2 -ffunction-sections -fdata-sections -
↪fno-strict-aliasing -ffreestanding -fno-common
| uipc_domain.c                         : -mtune=pentiumpro -
↪march=pentium -g -O2 -ffunction-sections -fdata-sections -
↪fno-strict-aliasing -ffreestanding -fno-common
```

I think preprocessor flags are not captured.

Author: Trac Migrate 2022-09-08T05:31:33.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Fixed in GCC 10, 11, 12, and 13.

3.9.1.545 4713 - Make pthread_atfork follow FACE Technical Standard Behavior for Single Process Environments

Id	4713
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Created	2022-09-02T16:38:18.000Z
Updated	2022-09-06T22:22:09.000Z
Milestone	6.1
Labels	api::posix, priority::normal, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4713
Merges	0

The POSIX specification for pthread_atfork() does not address the behavior when in a single process environment. The RTEMS implementation was an arbitrary decision on our part with no basis from the wider POSIX community. The FACE Technical Standard includes profiles without multiple process support and has defined the behavior for this method as follows:

When multiple POSIX processes are supported, pthread_atfork(), the functionality is per the POSIX standard. When multiple POSIX processes are not supported, pthread_atfork() should return 0. The provision to support only a single process is not addressed in the POSIX standard.

The RTEMS implementation currently returns ENOSYS instead of 0.

This ticket is to track the change to RTEMS and the documentation.

Author: Trac Migrate 2022-09-06T21:59:42.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"dbba94304472ebd9d2965741cf75b501a84fb60e/rtems" dbba9430/rtems]:

```
pthread_atfork(): Change to behavior from FACE Technical Standard

Closes #4713.
```

Author: Trac Migrate 2022-09-06T22:22:09.000Z

In [changeset:"8741d2c23451828bd22bbf98e412f72d6caf5199/rtems-docs" 8741d2c/rtems-docs]:

```
posix-users/process_creation_and_execution.rst: Update pthread_atfork()

Updates #4713.
```

3.9.1.546 4225 - Cobham Gaisler NOEL-V RISC-V 32- and 64-bit processor BSP

Id	4225
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-01-27T15:19:04.000Z
Updated	2022-09-06T14:08:36.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4225
Merges	0

Original author: daniel

To add a BSP configurations for Cobham Gaisler's NOEL-V processor IP. The NOEL-V processor is compliant with the open RISC-V 32/64-bit ISA. Depending on the soft-core IP configuration different RISC-V extensions may or may not be available, a matching RTEMS BSP build configuration must be selected accordingly. Similar to Cobham Gaisler's LEON3/4/5 processor designs, the NOEL-V is also a part of GRLIB providing building blocks such as I/O peripherals and L2-cache etc. that is typically used with the processor in SoC solutions. For more information about GRLIB and the current state and road-map of NOEL-V: * https://www.gaisler.com/grlib * https://www.gaisler.com/noel-v

The NOEL-V and GRLIB are available either under open-source GPL or commercial license. Demonstration designs with pre-built bit-streams, DTS/DTB, user's manuals, quick-start guides, etc. are freely available for the FPGA development boards listed under the NOEL-V page above. For example: * Arty A7: Artix-7 FPGA Development Board (https://www.gaisler.com/NOEL-ARTYA7) * PolarFire FPGA Splash Kit (https://www.gaisler.com/NOEL-PF) * Xilinx Kintex UltraScale FPGA KCU105 Evaluation Kit (https://www.gaisler.com/NOEL-XCKU)

All the above demonstration designs have the same base memory layout and peripherals based on GRLIB. A DTS/DTB is needed to describe the system for RTEMS. The first BSP implementation targets only a minimal system with Memory Controller, Processor, IRQ Controller and Timer (RISC-V plic, clint, mtime). Thus the GRLIB drivers based on the driver manager is not needed to run RTEMS on NOEL-V.

The free GRMON eval hardware debugger can be used with the above demonstration designs to initialize, upload RTEMS images, execute RTEMS and debug the new NOEL-V BSPs.

Author: Trac Migrate 2021-02-08T19:48:28.000Z

Original author: daniel

Patches are now posted here: https://lists.rtems.org/pipermail/devel/2021-February/064343.html

Author: Joel Sherrill 2022-02-10T22:19:41.000Z

Original author: daniel

Pinging after chatting with Daniel. Hopefully updated patches will show up in the next few weeks.

Author: Trac Migrate 2022-09-06T14:08:36.000Z

Original author: daniel

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"9ec9be834d94c5a90890eddb9a1eed8269d67300/rtems" 9ec9be83/rtems]:

```
bsp/riscv: Add NOEL-V BSP

Added support for Cobham Gaisler NOEL-V systems. The NOEL-V support
is implemented as a riscv BSP. Both 32-bit and 64-bit processor
systems are supported. Cobham Gaisler's NOEL-V RISC-V processor IP
is described here:
https://www.gaisler.com/NOELV

Compatible with the following NOEL-V FPGA example design ranges
available from Cobham Gaisler. Follow the links for free
bit-streams, DTS/DTB, user's manuals and quick-start guides:
- NOEL-ARTYA7-EX    (https://www.gaisler.com/NOEL-ARTYA7)
- NOEL-PF-EX        (https://www.gaisler.com/NOEL-PF)
- NOEL-XCKU-EX      (https://www.gaisler.com/NOEL-XCKU)

Uses the shared GRLIB APBUART console driver "apbuart_termios.c".
APBUART devices are probed using device tree.

Closes #4225.
```

3.9.1.547 4693 - Remove ILP32 aarch64/xilinx_versal_* BSPs

Id	4693
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2022-08-02T02:45:54.000Z
Updated	2022-08-22T21:51:43.000Z
Milestone	6.1
Labels	arch:aarch64, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4693
Merges	0

The BSPs:

1. `aarch64/xilinx_versal_ilp32_qemu`
2. `aarch64/xilinx_versal_ilp32_vck190`

support ILP32 addressing and the Versal has default memory regions above the 4G address boundary. There is value in supporting ILP32 if there is not practical use for it.

If a use case is identified they can be added back.

Author: Chris Johns 2022-08-21T23:40:09.000Z

I will rename the `aarch64/xilinx_versal_ilp64_qemu` to `aarch64/xilinx_versal_qemu` and `aarch64/xilinx_versal_ilp64_vck190` to `aarch64/xilinx_versal_vck190`

Author: Chris Johns 2022-08-21T23:43:02.000Z

I will add `aarch64/xilinx_versal_aiedge` as a generic BSP. The AI Edge series product range Xilinx Versal has the same scalar processors on all variants.

Author: Trac Migrate 2022-08-22T21:51:43.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"dee5ea81479eed172b634506fd5ab91bb53e9982/rtems" dee5ea81/rtems]:

```
bsps/xilinx/versal: Remove IPL32 BSPs, add aiedge and change defaults

- Versal has IO mapped to the upper 64bit address space and
needs full 64bit addresses.

- Add xilinx_versal_aiedge for custom hardware

- Make the hardware settings the defaults and qemu as variants

Closes #4693
```

3.9.1.548 4703 - NetSNMP 5.7.2.1 Patch

Id	4703
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2022-08-16T06:22:40.000Z
Updated	2022-08-16T06:24:06.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4703
Merges	0

This ticket is a place holder for the NetSNMP patch moving it out of the `rtems-tools` repo.

- rtems-net-snmp-5.7.2.1-20140623.patch

Author: Chris Johns 2022-08-16T06:23:53.000Z

- **Attachment** rtems-net-snmp-5.7.2.1-20140623.patch added

Moved from https://git.rtems.org/rtems-tools/tree/tools/4.11/net-snmp/rtems-net-snmp-5.7.2.1-20140623.patch

Author: Chris Johns 2022-08-16T06:24:06.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

3.9.1.549 4700 - Fix instances of "is" operator used with literals

Id	4700
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-08-11T18:45:34.000Z
Updated	2022-08-12T14:18:07.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4700
Merges	0

Original author: rlong

Python 3.8 introduced new warnings when using the "is" operator when comparing literals.

Author: Trac Migrate 2022-08-11T18:53:29.000Z

Original author: rlong

- **Summary** changed from *Fix isntances of "is" operator used with literals* to *Fix instances of "is" operator used with literals*

Author: Trac Migrate 2022-08-12T14:18:07.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"f3d9c879583a9f89a6deb8b9e52a61b946ef6fab/rtems-tools" f3d9c87/rtems-tools]:

```
rtemstoolkit: Fix conditions using "is" with literals

Fix warnings that come from python 3.8 about using the "is" operator with
string literals.

Closes #4700
```

3.9.1.550 4701 - Relocatable write data is placed in read-only region on some BSPs

Id	4701
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-08-12T08:01:22.000Z
Updated	2022-08-12T08:02:07.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4701
Merges	0

Original author: sebastian.huber

The .data.rel.ro* linker input section pattern accidentally matches with writeable data those symbol name starts with "ro".

Author: Trac Migrate 2022-08-12T08:02:07.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"21a36ed19b68bc0b5338eb661028c706cdbbb6ee/rtems" 21a36ed1/rtems]:

```
bsps: Fix .data.rel.ro placement

The .data.rel.ro* linker input section pattern accidentally matches with
writeable data those symbol name starts with "ro".

Close #4701.
```

3.9.1.551 4686 - Refactor shared code in Arm and AArch64

Id	4686
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-07-26T16:08:14.000Z
Updated	2022-08-08T16:53:46.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4686
Merges	0

Original author: rlong

rtl-mdreloc-arm.c and rtl-mdreloc-aarch64.c share code. The shared code should be pulled out and included into each file.

Author: Trac Migrate 2022-08-08T16:53:46.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"5500232a8989ecad90a44a1051896ad9b53d6732/rtems" 5500232/rtems]:

```
libdl: Refactor shared code in ARM and AArch64

rtl-mdreloc-arm.c was used as the basis for rtl-mdreloc-aarch64.c. This␣
↪lead
to some code being shared by the two files. The code was consolidated␣
↪into
rtl-unwind-arm.c.

Closes #4686
```

3.9.1.552 4694 - sptests/sp37 fails to compile if RTEMS_SMP is not defined

Id	4694
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-08-02T14:47:10.000Z
Updated	2022-08-08T09:59:01.000Z
Milestone	6.1
Labels	priority::normal, resolution::invalid, tickettype::defect, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4694
Merges	0

Original author: lsilistr

Issue seems to be caused by lines 191-193 and 207 in testsuites/sptests/sp37/init.c * name is undefined * _ISR_lock_Initialize is “(void)name”

In file included from ../../../../../../RTEMS/cpukit/include/rtems/rtems/intr.h:70, from ../../../../../../RTEMS/cpukit/include/rtems.h:69, from ../../../../../../RTEMS/bsps/include/bsp/default-initial-extension.h:40, from ../../../../../../RTEMS/bsps/myriad2/ma2x8x/include/bsp.h:27, from ../../../../../../RTEMS/testsuites/support/include/tmacros.h:41, from ../../../../../../RTEMS/testsuites/sptests/sp37/system.h:35, from ../../../../../../RTEMS/testsuites/sptests/sp37/init.c:41: ../../../../../../RTEMS/testsuites/sptests/sp37/init.c: In function ‘test_isr_locks’: ../../../../../../RTEMS/testsuites/sptests/sp37/init.c:207:42: error: ‘name’ undeclared (first use in this function) 207 | _ISR_lock_Initialize(&container.lock, name); | ^~~~ ../../../../../../RTEMS/cpukit/include/rtems/score/isrlock.h:202:12: note: in definition of macro ‘_ISR_lock_Initialize’ 202 | (void) _name | ^~~~~ ../../../../../../RTEMS/testsuites/sptests/sp37/init.c:207:42: note: each undeclared identifier is reported only once for each function it appears in 207 | _ISR_lock_Initialize(&container.lock, name); | ^~~~ ../../../../../../RTEMS/cpukit/include/rtems/score/isrlock.h:202:12: note: in definition of macro ‘_ISR_lock_Initialize’ 202 | (void) _name | ^~~~~

Author: Joel Sherrill 2022-08-02T17:51:36.000Z

Original author: lsilistr

This report appears to be against an architecture and BSP (myriad2/ma2x8x) that are not in the RTEMS.org source base. I have built two other non-SMP BSPs this week (mips and powerpc) and the weekly BSP build sweeps would also catch a general or BSP specific build issue.

The ISR method definitions are part of the architecture port. My guess is that you are dropping the architecture and BSP code into a git clone from rtems.org and that the myriad2/ma2x8x code is not up to date.

Author: Trac Migrate 2022-08-03T16:05:16.000Z

Original author: lsilistr

Thanks for confirmation that it should work.

Figured it was cherrypick from an older version that broke it for us. Once removed we don't see the issue anymore.

Author: Trac Migrate 2022-08-08T09:59:01.000Z

Original author: lsilistr

- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*

3.9.1.553 4682 - Add AArch64 support to libdl

Id	4682
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-07-20T21:12:13.000Z
Updated	2022-07-29T13:25:02.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4682
Merges	0

Original author: rlong

Add AArch64 support to libdl using NetBSD code as necessary.

Author: Trac Migrate 2022-07-29T13:24:52.000Z

Original author: rlong

In [changeset:"ad94dc352e9e9d1d602602b7d33bff9f43a1d35d/rtems" ad94dc3/rtems]:

```
sys/exec_elf.h: Bring in newer file

Updated this file with the newer version in NetBSD.

Updates #4682
```

Author: Trac Migrate 2022-07-29T13:24:54.000Z

Original author: rlong

In [changeset:"f6432156483c632b776f5baf197782901d43669d/rtems" f6432156/rtems]:

```
libdl/rtl-elf.h: Fix aarch64 define

The aarch64 define was incorrect. This was causing the libdl tests to not
work correctly.

Updates #4682
```

Author: Trac Migrate 2022-07-29T13:24:57.000Z

Original author: rlong

In [changeset:"0bd6514aa249322edbd52026ebfc2675a1685ead/rtems" 0bd6514a/rtems]:

```
cpukit/libdl: Add support for AArch64

rtl-mdreloc-aarch64.c and elf_machdep.h came from NetBSD.

Updates #4682
```

Author: Trac Migrate 2022-07-29T13:24:59.000Z

Original author: rlong

In [changeset:"2ea37e8b0d9c2976a5be5202956af7b3ae9ccc54/rtems" 2ea37e8/rtems]:

```
libtests/dl*: Bump up the size of CONFIGURE_INIT_TASK_STACK_SIZE

Updates #4682
```

Author: Trac Migrate 2022-07-29T13:25:02.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"1c6ac88f938f4b135f3bbffc4b19bbc540508c80/rtems" 1c6ac88/rtems]:

```
cpukit/libdl/rtl-sym.c: Fix increment of variable

In rtems_rtl_symbol_global_add() the loop that gets to the end of the symbol
```

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```
table used "unsigned long" to increment the index for the table. For␣
↪most
architectures this resulted in 4, but with AArch64, it results in 8.␣
↪This
resulted in the symbols being read in wrong. Changing this to void*␣
↪along with
changing the RISC-V specific code for 8 byte pointers in rtems-tools to␣
↪work
independent of the architecture.

Updates #4673
Closes #4682
```

3.9.1.554 4673 - Runtime loader exported symbols address size not consistent

Id	4673
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-06-30T20:42:09.000Z
Updated	2022-07-29T13:25:02.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4673
Merges	0

Original author: rlong

In rtl-sym.c, where the exported symbols table is read in `rtems_rtl_symbol_global_add`, the addresses are expected to be of size `sizeof(unsigned long)`. This works fine for most architectures because most of them evaluate to 4. For Aarch64 however, this evaluates to 8.

Author: Trac Migrate 2022-07-29T13:17:44.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"ace7db96d4561665b07ba15c2fe5f9349f4d3d8c/rtems-tools" ace7db9/rtems-tools]:

```
rtems-syms.cpp: Change check to pointer size

Changed from a RISC-V specific value being in the conditional to a␣
↪check for
```

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```
the size of the architecture's pointer.

Closes #4673
```

Author: Trac Migrate 2022-07-29T13:25:02.000Z

Original author: rlong

In [changeset:"1c6ac88f938f4b135f3bbffc4b19bbc540508c80/rtems" 1c6ac88/rtems]:

```
cpukit/libdl/rtl-sym.c: Fix increment of variable

In rtems_rtl_symbol_global_add() the loop that gets to the end of the symbol
table used "unsigned long" to increment the index for the table. For most
architectures this resulted in 4, but with AArch64, it results in 8. This
resulted in the symbols being read in wrong. Changing this to void* along with
changing the RISC-V specific code for 8 byte pointers in rtems-tools to work
independent of the architecture.

Updates #4673
Closes #4682
```

3.9.1.555 3847 - Test programs are not re-linked if a start.o or linker command file changes

Id	3847
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-12-18T09:39:08.000Z
Updated	2022-07-28T07:17:35.000Z
Milestone	6.1
Labels	priority::normal, resolution::duplicate, rtems::build, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3847
Merges	0

Original author: sebastian.huber

The test programs are not re-linked if a start.o or linker command file changes. The dependency tracking doesn't know anything about the linker command files or GCC specification files. The start files are normally included through the linker command file START() directive. Somehow these dependencies must be manually added to the test programs.

Author: Trac Migrate 2022-07-28T07:17:35.000Z

Original author: sebastian.huber

- **Resolution** set to ~"duplicate"
- **Status** changed from *assigned* to *closed*

The start.o dependency tracking works, see #4080. For linkcmds issue see #4681.

3.9.1.556 4607 - support for SATAAHCI drives

Id	4607
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-02-11T03:44:37.000Z
Updated	2022-07-28T06:40:44.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::wontfix, tickettype::defect, ticket-type::enhancement, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4607
Merges	0

Original author: ostyche

Added support for SATAAHCI drives.The relevant file path is cpukitsataThe files involved in the question were uploaded by git user ostyche who created a branch at 10:55 am on February 11, 2022

Author: Joel Sherrill 2022-03-10T16:33:46.000Z

Original author: ostyche

- **Milestone** changed from %"5.1" to %"6.1"
- **Version** ~"4.11" deleted

Can you provide a URL? If this was a pull on github, then it would be appreciated to get the patches submitted via the devel@ mailing list.

Author: Trac Migrate 2022-07-28T06:40:44.000Z

Original author: ostyche

- **Resolution** set to ~"wontfix"
- **Status** changed from *new* to *closed*

SATA support should be added through LibBSD.

3.9.1.557 4684 - Support Versal DDRMC0 regions 0 and 1

Id	4684
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2022-07-22T06:04:41.000Z
Updated	2022-07-27T23:00:10.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4684
Merges	0

The Versal's DDRMC0 supports region 0 and 1. Region 0's base address defaults to `0x00000000000` and can be up to 2G in length. If the hardware has more than 2G of DDR memory it is placed in region 1 and it's default base address is `0x00800000000` placing it in the A64 address space.

Add support so the user defined memory length `BSP_XILINX_VERSAL_RAM_LENGTH` spans region 0 and 1.

Extend the heap with the region 1 memory.

Author: Trac Migrate 2022-07-27T23:00:07.000Z

In [changeset:"b868d0a722167f35b627b7ca7d42c9b6939be33d/rtems" b868d0a/rtems]:

```
basp/aarch64: Make the unexpected sections origin address 64bit

Update #4684
```

Author: Trac Migrate 2022-07-27T23:00:10.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"51ffa21011a8f62649af0c98d27a1717eaa1e96d/rtems" 51ffa21/rtems]:

```
aarch64/versal: Support DDRMC0 region 0 and 1

- Support DDRMC0 region 0 up to 2G in size

- Support DDRMC0 region 1 with DDR memory greater than 2G
up to the DDRMC0 max amount

- Extend the heap with region 1's memory
```

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```
9
10 Closes #4684
```

3.9.1.558 4661 - GCC 12 generates wrong code

Id	4661
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2022-06-08T03:45:09.000Z
Updated	2022-07-19T06:02:18.000Z
Milestone	6.1
Labels	priority::high, resolution::fixed, tickettype::defect, tool::gcc, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4661
Merges	0

Calling `exit()` in a C++ application results in `std::terminate()` being called.

The `std::ios_base::Init::~Init()` destructor flushes `std::cout`, `std::cerr` and `std::clog`. The flush of `std::cerr` results in terminate being called.

The `ios_base` class uses a sentry to check the state. The code in it's destructor is:

```
1 if (bool(_M_os.flags() & ios_base::unitbuf) && !uncaught_exception())
```

The `std::cerr` object has `ios_base::unitbuf` set so `uncaught_exception()` is called. This call gets the cxa globals:

```
1 __cxa_eh_globals *globals = __cxa_get_globals ();
```

The `__cxa_get_globals()` checks if the `ec_globals init` object:

```
1 static __eh_globals_init init;
```

to see if it is still valid and the state is:

```
1 (gdb) p /x init
2 $2 = {
3 _M_key = 0x13010001,
4 _M_init = 0x1
5 }
```

However the static destructor has run and the POSIX key has been deleted. This results in `std::terminate()` being called.

The code for the destructor on ARM is:

```
1 006562e0 <__eh_globals_init::~__eh_globals_init()>:
2 6562e0:       7903            ldrb    r3, [r0, #4]
```

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```
6562e2:       b510            push    {r4, lr}
6562e4:       4604            mov     r4, r0
6562e6:       b90b            cbnz    r3, 6562ec <__eh_globals_init::~__eh_
↪globals_init()+0xc>
6562e8:       4620            mov     r0, r4
6562ea:       bd10            pop     {r4, pc}
6562ec:       6800            ldr     r0, [r0, #0]
6562ee:       f04d fe6b       bl      6a3fc8 <pthread_key_delete>
6562f2:       4620            mov     r0, r4
6562f4:       bd10            pop     {r4, pc}
```

and for `aarch64` it is:

```
0000000010222c30 <__eh_globals_init::~__eh_globals_init()>:
10222c30:   39401001        ldrb    w1, [x0, #4]
10222c34:   35000041        cbnz    w1, 10222c3c <__eh_globals_init::~__eh_
↪globals_init()+0xc>
10222c38:   d65f03c0        ret
10222c3c:   a9bf7bfd        stp     x29, x30, [sp, #-16]!
10222c40:   910003fd        mov     x29, sp
return pthread_key_delete (__key);
10222c44:   b9400000        ldr     w0, [x0]
10222c48:   94008806        bl      10244c60 <pthread_key_delete>
10222c4c:   a8c17bfd        ldp     x29, x30, [sp], #16
10222c50:   d65f03c0        ret
```

The `_M_init` boolean is not set to `false`.

Author: Chris Johns 2022-06-08T05:13:41.000Z

https://gcc.gnu.org/bugzilla/show_bug.cgi?id=105880

Author: Trac Migrate 2022-06-09T02:21:00.000Z

In [changeset:"80aea6aee138dfa73dbce552e216fd9c4dd1fc05/rtems" 80aea6a/rtems]:

```
testsuite/libtests: Add exit03 to test exit() with C++

Updates #4661
```

Author: Trac Migrate 2022-07-19T06:02:18.000Z

- **Owner** set to Chris Johns <chrisj@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"a2bda894e225a66c082af2b2ff7c1325f9fdafc1/rtems-source-builder" a2bda89/rtems-source-builder]:

```
gcc12/libstdc++: Fix lifetime bugs for non-TLS eh_globals

- This is the fix from PR105880:
https://gcc.gnu.org/bugzilla/attachment.cgi?id=53103

Closes #4661
```

3.9.1.559 4215 - nios2: Add multilib with all custom floating-point instructions supported by GCC

Id	4215
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-01-14T10:19:47.000Z
Updated	2022-06-29T09:05:49.000Z
Milestone	6.1
Labels	arch:nios2, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4215
Merges	0

Original author: sebastian.huber

See Table 13. "Floating Point Custom Instruction 2 Operation Summary" in the Nios II Custom Instruction User Guide:

https://www.intel.com/content/dam/www/programmable/us/en/pdfs/literature/ug/ug_nios2_custom_instruction.pdf

- 0001-nios2-Remove-custom-instruction-warnings.patch

Author: Trac Migrate 2021-01-16T16:57:12.000Z

Original author: sebastian.huber

Changes for GCC 11:

https://gcc.gnu.org/git?p=gcc.git;a=commit;h=7e02426ba0cc4f97ed347f963a6409b32c3c0c88
https://gcc.gnu.org/git?p=gcc.git;a=commit;h=42f4e23992487ecacba70575bf88af11288f557f
https://gcc.gnu.org/git?p=gcc.git;a=commit;h=5e5d56919dd544a530445cfd8c3f6264f3d706f3

Author: Trac Migrate 2021-01-17T18:47:18.000Z

Original author: sebastian.huber

- **Attachment** 0001-nios2-Remove-custom-instruction-warnings.patch added

Author: Trac Migrate 2021-01-17T20:19:05.000Z

Original author: sebastian.huber

In [changeset:"e6f29b3fe54a0b59370113101606410ad167d615/rtems-source-builder" e6f29b3/rtems-source-builder]:

```
6: Add FPH2 multilib for nios2

Update #4215.
```

Author: Trac Migrate 2022-06-29T09:05:49.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

It is available through the RSB provided GCC 12.

3.9.1.560 4214 - nios2: Add thread-local storage support

Id	4214
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-01-08T08:26:31.000Z
Updated	2022-06-09T13:58:28.000Z
Milestone	6.1
Labels	arch:nios2, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4214
Merges	0

Original author: sebastian.huber

Author: Joel Sherrill 2021-01-08T13:54:58.000Z

Original author: sebastian.huber

Could you add a link to where the ABI for this is defined? Last time I looked for what the mechanics were for TLS for various architectures, I didn't find it for many. Is there a generic mechanism in GCC I have missed?

Author: Trac Migrate 2021-01-08T14:07:45.000Z

Original author: sebastian.huber

It is a pretty standard approach:

https://www.intel.com/content/dam/www/programmable/us/en/pdfs/literature/hb/nios2/n2cpu_nii51016.pdf

Author: Joel Sherrill 2021-01-08T15:51:24.000Z

Original author: sebastian.huber

Great! I am sure you will include that link and summarize the pertinent info in the CPU Guide.

Author: Trac Migrate 2021-02-01T06:21:24.000Z

Original author: sebastian.huber

In [changeset:"c968b27fbd8d8b4f012b638826d35446b4f4e0c0/rtems" c968b27/rtems]:

```
nios2: Add TLS support

Update #4214.
```

Author: Trac Migrate 2022-06-09T13:58:28.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"5a7acfcd39be55a7925370bfd642d442be2806ee/rtems-docs" 5a7acfc/rtems-docs]:

```
cpu-supplement: Mention that nios2 supports TLS

Close #4214.
```

3.9.1.561 4475 - Add NFSv4 client support to libbsd

Id	4475
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2021-07-19T08:57:15.000Z
Updated	2022-06-08T13:11:44.000Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4475
Merges	0

Add NFSv4 client support to libbsd. The client support is part of kernel and provides support for a range of the NFS protocol version including version 4.

The task is made of the following:

1. Update the locks and locking to support the lock manager. VFS requires this be supported 1. Add support for the FreeBSD Virtual File System (VFS) 1. Add the kernel RPC implementation 1. Add NFS client support

VFS

VFS is built around the FB's file structure and file descriptor structure. These need to be supported. The file struct and file descriptor form the basis for all `fd` based interactions with the FB kernel code such as files, devices and sockets.

3.9.1.561.1.1 LibIO and FB *fd*

The FB `fd` and `file` support clashes with the existing `libio` implementations used for things like `socket`, `kqueue` and `select`. The work to port the VFS requires:

1. `socket`, `kqueue`, `select` support FB `fd` support. This is closer to the kernel. No direct `libio` access
2. Provide an interface to `libio` mapping the `iop` descriptors to FB descriptors.

This approach nests the FB file descriptors inside the `libio` support. This is not optimal in terms of some activities but the hot paths in the code should not see a significant change in performance. Some paths like `open` are not optimal because the RTEMS file system op handlers imply a specific implementation that does not match up well with the FB `namei` interface. The long term approach is to look at `libio` and the handlers and consider allowing closer integration of FB's `fd` support.

3.9.1.561.1.2 BIO and Paging

The `bio` layer is required for VFS. No paging support other than the calls needed to have VFS link are provided. No VM paging is need and none of that code need be ported.

3.9.1.561.1.3 System Calls

Collect all the `syscall` functionality exported to RTEMS into a single place. Currently the calls are spread around the code and this:

1. Does not centralize the code
2. Add a lot of code to FB being ported

Proc0

FreeBSD's initialization creates the initial process called `proc0`. Add support to create `proc0` and let all thread' reference it. This allow the creds to be managed, kernel trace to work and it removes a number of changes that do not need to be made.

File Descripter Reuse

The `libio` functionality of cycling across the `fd` range rather than reusing lower `fd` numbers is not compatible with the `select` call. Not reusing `fd` numbers once closed until the range as been used provides some protection against bugs where a user does not cleanly handle the `fd` they own however this is not compatible with FB and makes supporting `select` harder.

The `select` interface should not be used on RTEMS and users should be encourages to use threads for concurrent IO or `kqueue`. The means `select` may exist for legacy code porting reasons however the cycling `fd` count reduces how well the code ported will actually work. For example port a piece of `select` code, open a socket and use, it may work. Then `open` and `close` a file 64 times then run the same code. It will fail.

FB `fd`'s are reused.

RPC

The legacy NFSv2 client the the NFSv4 cannot be built at the same time.

The kernel RPC and the user land RPC cannot exist in the same build. I have not looked extensively into this but I was seeing clashes with headers for the same types but different contents. The legacy NFSv2 client uses the user land RPC code while the kernel NFSv4 uses the kernel's RPC.

Module support is already in `libbsd` to handle the separate building of each piece.

Security

NFSv4 provides a number of extra security features. The code will be ported is possible but little or no security tested is planned at this point in time.

Testing

The NFSv4 stack will be tested against Linux and FreeBSD servers.

Author: Chris Johns 2021-07-20T07:36:52.000Z

- **Description** changed

```
Add NFSv4 client support to libbsd. The client support is part of␣
↪kernel and provides support for a range of the NFS protocol version␣
↪including version 4.

The task is made of the following:

1. Update the locks and locking to support the lock manager. VFS␣
↪requires this be supported
1. Add support for the FreeBSD Virtual File System (VFS)
1. Add the kernel RPC implementation
1. Add NFS client support

== VFS

```

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```
VFS is built around the FB's file structure and file descriptor structure. These need to be supported. The file struct and file descriptor form the basis for all `fd` based interactions with the FB kernel code such as files, devices and sockets.

=== LibIO and FB `fd`

The FB `fd` and `file` support clashes with the existing `libio` implementations used for things like `socket`, `kqueue` and `select`. The work to port the VFS requires:

1. `socket`, `kqueue`, `select` support FB `fd` support. This is closer to the kernel. No direct `libio` access
2. Provide an interface to `libio` mapping the `iop` descriptors to FB descriptors.

This approach nests the FB file descriptors inside the `libio` support. This is not optimal in terms of some activities but the hot paths in the code should not see a significant change in performance. Some paths like `open` are not optimal because the RTEMS file system op handlers imply a specific implementation that does not match up well with the FB `namei` interface. The long term approach is to look at `libio` and the handlers and consider allowing closer integration of FB's `fd` support.

=== BIO and Paging

The `bio` layer is required for VFS. No paging support other than the calls needed to have VFS link are provided. No VM paging is need and none of that code need be ported.

=== System Calls

Collect all the `syscall` functionality exported to RTEMS into a single place. Currently the calls are spread around the code and this:

1. Does not centralize the code
2. Add a lot of code to FB being ported

+ == Proc0
+
+ FreeBSD's initialization creates the initial process called `proc0`. Add support to create `proc0` and let all thread' reference it. This allow the creds to be managed, kernel trace to work and it removes a number of changes that do not need to be made.
+
== File Descripter Reuse

The `libio` functionality of cycling across the `fd` range rather than
```

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```
↪reusing lower `fd` numbers is not compatible with the `select` call.␣
↪Not reusing `fd` numbers once closed until the range as been used␣
↪provides some protection against bugs where a user does not cleanly␣
↪handle the `fd` they own however this is not compatible with FB and␣
↪makes supporting `select` harder.

The `select` interface should not be used on RTEMS and users should be␣
↪encourages to use threads for concurrent IO or `kqueue`. The means␣
↪`select` may exist for legacy code porting reasons however the␣
↪cycling `fd` count reduces how well the code ported will actually␣
↪work. For example port a piece of `select` code, open a socket and␣
↪use, it may work. Then `open` and `close` a file 64 times then run␣
↪the same code. It will fail.

FB `fd`'s are reused.

== RPC

The legacy NFSv2 client the the NFSv4 cannot be built at the same time.

The kernel RPC and the user land RPC cannot exist in the same build. I␣
↪have not looked extensively into this but I was seeing clashes with␣
↪headers for the same types but different contents. The legacy NFSv2␣
↪client uses the user land RPC code while the kernel NFSv4 uses the␣
↪kernel's RPC.

Module support is already in `libbsd` to handle the separate building␣
↪of each piece.

== Security

NFSv4 provides a number of extra security features. The code will be␣
↪ported is possible but little or no security tested is planned at␣
↪this point in time.

== Testing

The NFSv4 stack will be tested against Linux and FreeBSD servers.
```

Author: Joel Sherrill 2021-07-20T14:51:34.000Z

- **Summary** changed from *Add NFSv4 client support to libbds* to *Add NFSv4 client support to libbsd*

Author: Trac Migrate 2021-09-02T02:43:16.000Z

In [changeset:"59f652fe881de4a170d4916d148fe72f33e35ef2/rtems-libbsd" 59f652fe/rtems-libbsd]:

```
Implement portable kernel symbol namespace tool

- The script's use of sort proved to not be portable

- No need to check the commits as symbols are only added

- Regenerated kernel header to reset the sort order

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:19.000Z

In [changeset:"f700edc5b83a68c40ddbe03eb2b1d40fa93fa42b/rtems-libbsd" f700edc/rtems-libbsd]:

```
waf: Fix clashing symbols in the user land symbols

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:21.000Z

In [changeset:"5ef23a2836a3c56ea370affa9e81221dcf49b6e8/rtems-libbsd" 5ef23a2/rtems-libbsd]:

```
sys/netinet/libalias: Fix symbols clashes

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:24.000Z

In [changeset:"974742defc96f25501e5ca71011c3c5ddf745562/rtems-libbsd" 974742d/rtems-libbsd]:

```
kern-symbols: Add symbols from the everything build set

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:27.000Z

In [changeset:"684cf3cdc20d2adcc5211dff90570f26d5aea534/rtems-libbsd" 684cf3c/rtems-libbsd]:

```
rtemsbsd: Add FrreBSD's clang-format style

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:29.000Z

In [changeset:"2a01430ba5f2cbb3c4275abc6ab6fb7dec1e44c5/rtems-libbsd" 2a01430/rtems-libbsd]:

```
rtemsbsd: Catch timeout overflows

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:32.000Z

In [changeset:"e1ca99b535bd5ebdfe410cf2653ea447ce7c6ce5/rtems-libbsd" e1ca99b/rtems-libbsd]:

```
testsuite: Optionally allow all command in a shell

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:35.000Z

In [changeset:"46a15fa7aa5a2382d2e09d42786ee931a22e8770/rtems-libbsd" 46a15fa/rtems-libbsd]:

```
sys/kern: Add lockmgr support

- See `man lockmgr`

- Implement the lock_object and move the RTEMS mutex to that object

- Add debug support to track the locks with gdb

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:38.000Z

In [changeset:"761fd6939386f7b1c44430ad89130583cc94cb04/rtems-libbsd" 761fd693/rtems-libbsd]:

```
kern: Import kern_prot.c fnd kern_resource.c for proc0

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:40.000Z

In [changeset:"c7427fc1548755104a929fc55f7a659937b6cd46/rtems-libbsd" c7427fc/rtems-libbsd]:

```
kern: Add a proc0

- Provides the thread's proc pointer and with that access to creds

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:43.000Z

In [changeset:"9800a0f9fa49f64684aa00febb4adc962be7e231/rtems-libbsd" 9800a0f/rtems-libbsd]:

```
kern: Import kern_ktr.c

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:46.000Z

In [changeset:"e56b5cb135b9d47f2137b96089ea3bc7f607004b/rtems-libbsd" e56b5cb/rtems-libbsd]:

```
kern: Add kernel trace support (KTR)

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:48.000Z

In [changeset:"1739d74f7dc53232fe20ed3ea9d8b4b0730b4025/rtems-libbsd" 1739d74/rtems-libbsd]:

```
freebsd/sys: Import VFS support

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:51.000Z

In [changeset:"ac4db4cec5b6b1e0a25e910851e50831afb0749d/rtems-libbsd" ac4db4c/rtems-libbsd]:

```
rtemsbsd: Remove DHCP init wrapper

- Object files cannot config init and resided in libbsd.a

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:53.000Z

In [changeset:"6514d561587fd1527fe6a26cb43e6b5742c8c779/rtems-libbsd" 6514d56/rtems-libbsd]:

```
sys/kern: Add VFS support

- Refactor the libio interface

- Move syscalls into an rtemsbsd location

- Provide a root directory mount point

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:56.000Z

In [changeset:"3da45ae4bcb1cedb32339d15ee1f65706a083540/rtems-libbsd" 3da45ae/rtems-libbsd]:

```
freebsd/sys: Import RPC and XDR support

Update #4475
```

Author: Trac Migrate 2021-09-02T02:43:59.000Z

In [changeset:"c6dbc967480ed034cf52992ec5773252b646edc5/rtems-libbsd" c6dbc96/rtems-libbsd]:

```
kern/sys: Add the kernel RPC and XDR support

Updates #4475
```

Author: Trac Migrate 2021-09-02T02:44:01.000Z

In [changeset:"6138f242be4f9d989a4052be71f1b116bd806e44/rtems-libbsd" 6138f24/rtems-libbsd]:

```
kern/sys: Import NFS and NFS file system client

Update #4475
```

Author: Trac Migrate 2021-09-02T02:44:04.000Z

In [changeset:"882425fe547f73a1a77caa4938dec369cfd1063d/rtems-libbsd" 882425f/rtems-libbsd]:

```
kern/sys: Add NFSv4 client

Update #4475
```

Author: Trac Migrate 2021-09-02T02:44:07.000Z

In [changeset:"7e282d25068ec09163e00cbe5819a1b5be3571be/rtems-libbsd" 7e282d2/rtems-libbsd]:

```
rtemsbsd/nfs: Add support to mount NFSv2

- NFSv2 requires userland RPC calls to determine the version of
NFS and the FH. This is passed to the kernel.

- Port more libc/rpc.

Update #4475
```

Author: Chris Johns 2021-09-24T00:00:06.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Author: Trac Migrate 2022-06-08T13:11:44.000Z

In [changeset:"dba9346b43351fbcf7cf33c41a3c8bd90fa1060c/rtems-libbsd" dba9346/rtems-libbsd]:

```
uma_core.c: Fix use of uninitialized variable

Update #4475.
```

3.9.1.562 4656 - sync() whould synchronize all file descriptors (cloned)

Id	4656
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-05-13T10:58:51.000Z
Updated	2022-05-17T13:20:31.000Z
Milestone	6.1
Labels	filesystem, priority::normal, resolution::fixed, tickettype::defect, version::4.5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4656
Merges	0

Original author: sebastian.huber

Cloned from #4655:

According to POSIX

https://pubs.opengroup.org/onlinepubs/9699919799/functions/sync.html

we have

```
The sync() function shall cause all information in memory that updates file␣
↪systems to be scheduled for writing out to all file systems.
```

Currently, the RTEMS sync() implementation synchronizes only the file descriptors associated with a FILE object. This should be changed to call fsync() and fdatasync() for all file descriptors.

Author: Trac Migrate 2022-05-17T13:20:31.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"3ccfb58311ace35a0562daa6ecff6e94f77bfe8b/rtems" 3ccfb583/rtems]:

```
Synchronize all file descriptors in sync()

Synchronize all file descriptors and not just the ones associated with␣
↪a FILE
object.

Close #4656.
```

Author: Mohamed Ayman 2026-09-04T11:17:39.479Z

mentioned in issue #2129

3.9.1.563 4646 - Control buildsets using the –with-* command line option

Id	4646
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2022-05-05T01:03:50.000Z
Updated	2022-05-05T22:03:49.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4646
Merges	0

The following thread has raise an important issue on how we can test newer versions of tools. This ticket is about providing a solution:

https://lists.rtems.org/pipermail/devel/2022-May/071458.html

The solution is allow users to specific a tool set on the command line for a build of tools. The standard option is `--with-.*`. For example a command line could be:

```
../source-builder/sb-set-builder \\
--prefix=/opt/rtems/6 \\
--log=arm.txt \\
--with-rtems-gcc=tools/rtems-gcc-head-newlib-head \\
6/rtems-arm
```

The buildset logic is to be changed to expand macros for buildset file names and to add a new buildset specific keyword `%defineifnot`. The tools default file becomes:

```
#
# Default tools configuration.
#
%include 6/rtems-base.bset

#
# Default RTEMS build. Override on the command line to the
# the RSB. For example to test the latest versino of gcc use:
#
#  --with-rtems-gcc=tools/rtems-gcc-head-newlib-head
#
%defineifnot with_rtems_dtc      devel/dtc-1.6.1-1
%defineifnot with_rtems_expat    devel/expat-2.4.8-1
%defineifnot with_rtems_gmp      devel/gmp-6.2.1
%defineifnot with_rtems_gdb      tools/rtems-gdb-11.2
%defineifnot with_rtems_binutils tools/rtems-binutils-2.38
%defineifnot with_rtems_gcc      tools/rtems-gcc-10-newlib-head
%defineifnot with_rtems_tools    tools/rtems-tools-6

```

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```
#
# Build gdb first to raise the Python install error as early as
# possible.  GDB needs expat so it needs to be built before.
#
%{with_rtems_dtc}
%{with_rtems_expat}
%{with_rtems_gmp}
%{with_rtems_gdb}
%{with_rtems_binutils}
%{with_rtems_gcc}
%{with_rtems_tools}
```

This approach lets `cron` based CI flows configure a build with the latest gcc, binutils etc so they can always be tested as a workflow.

The new keyword lets a define in a nested buildset file override a command line value. That may be needed.

Author: Trac Migrate 2022-05-05T22:03:49.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"7d80719f7472debdf7d54a61f9ffc7fc31d57d13/rtems-source-builder" 7d80719/rtems-source-builder]:

```
sb/setbuilder: Control buildsets using the --with-* command line option

- Expand macros in buildset file names

- Add support to buildsets for `%defineifnot`

- Update 6 and 7 to support command line build overrides

Closes #4646
```

3.9.1.564 4631 - RSB fails to build gdb with Python 3.10 (and newer)

Id	4631
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2022-03-18T12:09:33.000Z
Updated	2022-04-26T23:12:34.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::gdb, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4631
Merges	0

Original author: frank_k

The rtems-source-builder fails to build the tools in a Fedora 35 container. I am building ARM for RTEMS 6 and get this error message:

```
config: tools/rtems-gdb-11.2.cfg
error: shell macro failed: /home/minna/src/rtems-source-builder/source-builder/sb/
↪rtems-build-dep -c gcc  -l : 2: error: no library (-l) provided
Build Set: Time 0:00:33.396165
```

The same error appears for other architectures like AARCH64, POWERPC, RISCV on Fedora 35. The source for this error is in file `source-builder/config/gdb-common-1.cfg` in line 118:

```
104 %ifnos darwin
105   %if %{host_ldflags} == %{nil}
106     %define gdb-host-libs %{nil}
107   %else
108     %define gdb-host-libs -L '%{host_ldflags}'
109   %endif
110   %if %{gdb-python-config} != %{nil}
111     %define gdb-python-lib-filter awk 'BEGIN{FS=" "}/python/{for(i=1;i<NF;
↪++i)if(match($i,".*lpython.*")) print "lib"substr($i,3)"*";}'
112     %if %{gdb-python-ver-mm} < 3.8
113         %define gdb-python-config-lib-check-flags --ldflags
114     %else
115         %define gdb-python-config-lib-check-flags --ldflags --embed
116     %endif
117     %define gdb-python-config-libs %(%{gdb-python-config} %{gdb-python-config-
↪lib-check-flags} | %{gdb-python-lib-filter})
118     %define gdb-python-lib-check %(%{_sbdir}/sb/rtems-build-dep -c %{__cc} %
↪{gdb-host-libs} -l %{gdb-python-config-libs})
119   %else
120     %define gdb-python-lib-check %(%{_sbdir}/sb/rtems-build-dep -c %{__cc} %
↪{gdb-host-libs} -l %{gdb-python-ver-lib})
121   %endif
122   %if %{gdb-python-lib-check} == not-found && !%{_rsb_getting_source}
```

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```
123     %error "gdb: python: library file not found: %{gdb-python-ver-lib},␣
↪please install"
124   %endif
125 %endif
```

Some values of involved variables:

```
gdb-python-ver-mm = 3.10
gdb-python-config = /usr/bin/python3-config
gdb-python-config-lib-check-flags = --ldflags
gdb-python-lib-filter = awk 'BEGIN{FS=" "}/python/{for(i=1;i<NF;++i)if(match($i,".
↪*lpython.*")) print "lib"substr($i,3)"*";}'
gdb-python-config-libs = ''
```

The trouble is that `gdb-python-config-libs` is empty when line 118 gets called. It is empty because there is no python-library in the output of this call on Fedora 35:

```
$ /usr/bin/python3-config --ldflags
-L/usr/lib64  -lcrypt -ldl  -lm -lm
```

Just to compare, on OpenSUSE 15.3 the same call returns (note the ``-lpython3.6m ``):

```
$ /usr/bin/python3-config --ldflags
-L/usr/lib64 -lpython3.6m -lpthread -ldl  -lutil -lm  -Xlinker -export-dynamic
```

Commenting out line 118 makes the build go through smoothly but I would prefer a permanent fix.

- Would be skipping line 118 when `gdb-python-config-libs` is empty be an appropriate solution?
- Is the “real” error in line 112? (`%if 3.10 < 3.8` evaluates unexpectedly to `true`)
- Would the “error” in line 123 print out the correct library name?
- Does the whole check make sense when `python3-config` is obviously installed (both the command and the library are “usually” in the same `pythonX-devel` package)?

Notes:

- On Fedora 35 `/usr/lib64/libpython3.10.so` exists.
- On Fedora 35 adding `--embed` provides the library:

```
$ /usr/bin/python3-config --ldflags --embed
-L/usr/lib64 -lpython3.10 -lcrypt -ldl  -lm -lm
```

For the records:

Command:

```
../source-builder/sb-set-builder --rtems-version 6 --prefix /opt/rtems/6 --with_
↪cxx --with_fortran --with_objc --jobs=12 --log ~/sb-set-builder.log 6/rtems-arm
```

RTEMS rtems-source-builder git: `6fe98f91d94bbf965bc0e78015585ff8823d17bd` RTEMS: 6 Target architecture: ARM Host architecture: x86_64 Hoast Kernel: `5.3.18-150300.59.49-default` OS: Fedora Linux 35 (Container Image) Container image base: `docker.io/library/fedora:latest` Python version in container: 3.10.2 Test date: 2022-03-18T11:02:10+01:00 `rtems-source-builder/source-builder/sb-check` log:

```
RTEMS Source Builder - Check, 6 (6fe98f91d94b modified)
warning: exe: absolute exe found in path: (__chown) /usr/sbin/chown
warning: exe: absolute exe found in path: (__install_info) /usr/bin/install-info
Environment is ok
```

Author: Trac Migrate 2022-03-21T14:31:11.000Z

Original author: frank_k

- **Summary** changed from *RSB fails to build gdb on Fedora 35* to *RSB fails to build gdb with Python 3.10 (and newer)*

Author: Trac Migrate 2022-04-21T07:42:35.000Z

Original author: frank_k

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2022-04-26T23:12:33.000Z

Original author: frank_k

In [changeset:"4c3708f127a4dd179271a8f17855a4f209953bd5/rtems-source-builder" 4c3708f/rtems-source-builder]:

```
sb: %if checks are numeric if the left and right values are numbers

- If the left and right values are numbers make the check numeric.

Update #4631
```

Author: Trac Migrate 2022-04-26T23:12:34.000Z

Original author: frank_k

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"70f302e08c9053637f5eff7dfb52d3442aaf76cb/rtems-source-builder" 70f302e/rtems-source-builder]:

```
gdb: Split python's version into major/minor and check for embed option

Closes #4631
```

3.9.1.565 4641 - x86_64 elf_machdep header file missing body

Id	4641
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2022-04-07T12:59:03.000Z
Updated	2022-04-08T13:25:41.000Z
Milestone	6.1
Labels	arch:x86_64, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4641
Merges	0

Original author: rlong

The elf_machdep header file is missing the body under cpukit/score/cpu/x86_64/include/machine.

Joel found the code that needed to be put in at http://cvsweb.netbsd.org/bsdweb.cgi/src/sys/arch/amd64/include/elf_machdep.h.

Author: Trac Migrate 2022-04-08T13:25:41.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"5efcd021ef4032412f3d698f7d53b491e6498ff4/rtems" 5efcd021/rtems]:

```
x86_64/elf_machdep.h: Replace stub with NetBSD version

The other ports included that architecture's version of this file from
NetBSD. This patch follows that pattern.

closes #4641
```

3.9.1.566 4639 - Error in imfs memfile when device is full

Id	4639
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2022-04-04T13:31:12.000Z
Updated	2022-04-07T08:27:37.000Z
Milestone	6.1
Labels	filesystem, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4639
Merges	0

Cloned from #4638:

The problem from #2353 still exists in 5 and 6:

Original description:

From the reporter (<skruglov@nm.ru>):

- First bug I detect with attempt write file to full device (zero empty blocks).
- And after I send too many files, disk overflow and system not responding (receive and write to disk have high priority). A test, and found block=0, after – = too big value.
- In imfs_memfile.c

function IMFS_memfile_extend block declared: unsigned int block, and after block— work incorrect (if block = 0). for (; block>=old_blocks ; block–) { IMFS_memfile_remove_block(memfile, block); }

Must be declare int block;

Author: Trac Migrate 2022-04-07T08:27:37.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"43119193ef0f3fef6bc01a391ccda8a97cfc149c/rtems" 43119193/rtems]:

```
imfs: Fix index underrun when extending empty file

Currently the following sequence causes a endless loop when extending an
IMFS file:

- Create a file with zero length and close it.
```

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(continued from previous page)

```
- Make sure nearly no allocatable memory is left.
- Open the file and write enough data into it that more than the
remaining memory will be used.

In that case when extending the IMFS file, the file currently need zero
blocks. If allocating enough new blocks fails, the already allocated new
blocks will be freed again.

The comparison of block>=old_blocks that has been used prior to this
patch compared two unsigned numbers. If old_blocks was zero, the
comparison of these two numbers always evaluated to true.

This patch frees the last block in a separate step to avoid this
problem.

Fixes #4639
```

3.9.1.567 4635 - untar on JFFS slow down

Id	4635
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2022-03-29T05:27:34.000Z
Updated	2022-04-05T21:52:37.000Z
Milestone	6.1
Labels	filesystem::jffs2, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4635
Merges	0

Using `untar` on JFFS is slower on rtems 6 compared to 4.11. The application writes files to the flash disk from an in memory tarfile and the difference is easy to see for 10M or so of files.

I reviewed the changes to JFFS in rtems 6 and they look OK so it is not a regression the `libfs`. I also timed the flash driver and it is the same on 6 as 4.11.

I noticed on 6 there is a lot more blocks being written at the flash driver level compared to 4.11. Looking at `untar` I see the block size written is `512` bytes and with compression this results in a lot of small blocks. Changing the `untar` block write size to 8K speeds returns the performance.

I am not sure why there are more blocks on 6. A guess is the compression is better, which is is nice. I will not look into this any more than changing `untar` to use 8K blocks.

Author: Trac Migrate 2022-04-05T21:52:37.000Z

- **Owner** set to Chris Johns <chrisj@rtems.org>
- **Resolution** set to ~"fixed"

- **Status** changed from *new* to *closed*

In [changeset:"500e69639e3009ae542c6677b8600af591ad7d2f/rtems" 500e6963/rtems]:

```
libmisc/untar: Use a larger block size to read and write files

- A larger block size lets files systems work better. On JFFS
a 512 byte compressed block means lots of small flash updates

Closes #4635
```

3.9.1.568 4632 - Error in rtems/thread.hpp with GCC 12

Id	4632
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2022-03-18T13:59:22.000Z
Updated	2022-03-19T09:24:02.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4632
Merges	0

Original author: sebastian.huber

There is a compile error with GCC 12:

```
In file included from /home/EB/sebastian_h/src/rtems/cpukit/librtemscxx/thread.
↪cpp:35:
/home/EB/sebastian_h/src/rtems/cpukit/include/rtems/thread.hpp:449:14: error:␣
↪redefinition of default argument for 'class<template-parameter-1-4>'
449 |              class = thread::enable_if_attributes<A>>
|              ^~~~~
/home/EB/sebastian_h/src/rtems/cpukit/include/rtems/thread.hpp:312:17: note:␣
↪original definition appeared here
312 |                 class = enable_if_attributes<A>>
|                 ^~~~~
```

Author: Trac Migrate 2022-03-19T09:24:02.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"7fe3c623290a3f17d37241748410c8484a326483/rtems" 7fe3c62/rtems]:

```
thread.hpp: Fix redefinition of default argument

A default argument shall be defined only once.

Close #4632.
```

3.9.1.569 4548 - Add RTEMS version option to waf configure

Id	4548
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2021-11-12T23:00:52.000Z
Updated	2022-03-18T13:48:30.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::build, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4548
Merges	0

We need a way to override the default release for testing. This is a developer option and is not for production. A `waf` option is considered the best way to manage this.

Author: Trac Migrate 2021-11-13T13:53:19.000Z

This enhancement should be solved in a more general setting. What we need is the ability for maintainers to alter build system variables which a user should not be able to change.

What we could do is using an _ prefix for internal build system variables which may be changed by the `config.ini` file if an `--rtems-maintainer-mode` option is given at the configure command line.

An alternative would be a `get-option` option action (similar to `set-value`) which uses a command line specified value if it is available. We could also add this feature to `set-value`.

Author: Chris Johns 2021-11-14T02:56:59.000Z

I think maintainer experiments should be done with `spec` file changes on feature branches. My concern about a generic method from the command line, INI file or any other method is the testable dependencies it exposes. I feel what we have and where we are at is a good compromise between the web of options we had with //autoconf's// `configure` and the ever present complexity of build and BSP options we have to have.

I agree the implementation of how to manage this should follow reasonable design paths but I think the type of action needed has to be explicit with `wscript` or `spec`

file changes.

I have added a call named `item_set_action_value()` that takes a `path` and `value`. The `value` needs to be of a type and nature that matches the `action`. The code to set the major version from the command line is:

```
if conf.options.rtems_version is not None:
item_set_action_value(conf, '/cpukit/optvermaj/set-value', conf.options.
↪rtems_version)
```

I think a path to address an item is a suitable abstraction. This version value update happens before the items are processed by `configure` which is important.

Author: Trac Migrate 2021-11-17T08:12:02.000Z

In [changeset:"a0650f5f323204f7eec709d6d1155d7ce85ca16c/rtems" a0650f5f/rtems]:

```
build: Support command line specified options

Update #4548.
```

Author: Trac Migrate 2021-11-17T08:12:05.000Z

In [changeset:"f06dd3e1762e9555adf74d7f1bcc7b09db9c401c/rtems" f06dd3e/rtems]:

```
build: Optional __RTEMS_MAJOR__ via command line

Update #4548.
```

Author: Trac Migrate 2021-11-17T08:12:09.000Z

In [changeset:"c1395ca0568a27e4b4b4d22f309f36b18a575db7/rtems" c1395ca0/rtems]:

```
build: Add --rtems-version command line option

Update #4548.
```

Author: Joel Sherrill 2021-12-17T17:22:19.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Closing. This is in the tree now.

Author: Trac Migrate 2022-01-11T15:47:42.000Z

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>

In [changeset:"fa1c18ef0732c4b07d584b3e5199560ae4c8e795/rtems-docs" fa1c18e/rtems-docs]:

```
eng: Document get-string-command-line action

Close #4548.
```

Author: Trac Migrate 2022-01-11T15:56:22.000Z

In [changeset:"1ba0f4103a220d0793d4fe25d3dbe09eac29cbd7/rtems-docs" 1ba0f41/rtems-docs]:

```
eng: Document get-string-command-line action

Update #4548.
```

Author: Trac Migrate 2022-03-18T13:48:30.000Z

In [changeset:"1a5991e4e763305c3133a5bb2ad9c036b9b7bf9b/rtems" 1a5991e/rtems]:

```
build: Apply command line options to all variants

Update #4548.
```

3.9.1.570 4345 - Nexus Driver for Marvell mv643xx Ethernet Adapter (powerpc/beatnik BSP, MVME6100 board)

Id	4345
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-16T09:37:03.000Z
Updated	2022-03-07T09:43:45.000Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4345
Merges	0

Original author: till.straumann@psi.ch

This pull request implements a nexus driver (on top of the 5-freebsd-12 branch) for the Marvell 643xx ethernet adapter which is used on the MVME6100 board (powerpc/beatnik BSP).

Note that this driver builds on top of the low-level driver which is part of the beatnik BSP and requires a patch to the rtems bsp which was submitted in a related ticket.

Author: Trac Migrate 2022-03-07T09:42:58.000Z

Original author: till.straumann@psi.ch

- **Milestone** changed from %"5.1" to %"6.1"

Author: Trac Migrate 2022-03-07T09:43:24.000Z

Original author: till.straumann@psi.ch

In [changeset:"de0badf2c3aea5328936e583c842f58e80e56d62/rtems-libbsd" de0badf/rtems-libbsd]:

```
if_mve: Add MV643XX Ethernet driver

Update #4345.
```

Author: Trac Migrate 2022-03-07T09:43:45.000Z

Original author: till.straumann@psi.ch

- **Owner** set to Heinz Junkes <junkes@fhi-berlin.mpg.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"878713ba4536b5826bd537da7d4fb3d668409153/rtems-libbsd" 878713b/rtems-libbsd]:

```
if_mve: Add MV643XX Ethernet driver

Close #4345.
```

3.9.1.571 4167 - Coverity Scan Does Not Run on rtems6

Id	4167
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Created	2020-10-28T16:14:14.000Z
Updated	2022-02-09T14:52:58.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, ticket-type::enhancement, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4167
Merges	0

This is a ticket to note that Coverity does not appear to like the gcc version going from one to two digits. Since the Coverity Scan support for free users is minimal, I asked on the GCC mailing list if anyone had insight (https://gcc.gnu.org/pipermail/gcc/2020-October/234073.html).

This is completely outside our control and this is just a tracking ticket to note that Coverity Scan reports will be run against the 5 branch until this is fixed. This will likely be of limited use since rtems 5 is stable and changes are minimal compared to the rtems master.

If it really is a two digit major issue (unconfirmed if this works for gcc 9), I could do Coverity builds using a special toolchain based on gcc 9.

Author: Joel Sherrill 2020-10-29T15:19:10.000Z

I have done some more analysis which I reported in the GCC mailing list thread. I build sparc-rtems6 tools using gcc 7, 8, 9, and 10. Coverity worked using GCC 7, 8, and 9 but not 10 using the autoconf build since that made it more similar to gcc 7 on rtems5. It required uninstalling Coverity and reinstalling each time I switched GCC versions. There must be some residual configuration left between runs which this addresses.

I did try the waf build with gcc 7, 9, and 10. Same behavior as with the autoconf build.

The questions going forward are:

- Is there a way to make Coverity aware of a bug like this? Support for the open source projects using Coverity Scan is minimal.
- Do we want to switch to the master for Coverity runs? This would require me using a special gcc9 build. The code on rtems5 is stable and any fixes/changes are much more likely to be on the master so I tend to lean to switching.

This is going to be an issue until Coverity updates the binary for Scan to support GCC 10.

Author: Joel Sherrill 2021-12-16T20:02:55.000Z

Coverity Scan has been running on RTEMS for a while now. Closing.

Author: Joel Sherrill 2022-02-09T14:52:58.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Didn't get closed last time.

3.9.1.572 4588 - RTEMS Stack Checker Report Bad Access When Not Enabled

Id	4588
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Created	2022-01-26T20:40:58.000Z
Updated	2022-01-27T18:59:40.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4588
Merges	0

The RTEMS stack checker reporting function can be called without the stack checker infrastructure being enabled. This causes a bad access to 0x0 because the static interrupt stack checker data remains null instead of being initialized by rtems_stack_checker_begin_extension. The actual failure occurs in Stack_check_Find_high_water_mark while searching for U32_PATTERN.

This was found when the trailing D was left off of the CONFIGURE_STACK_CHECKER_ENABLED define in a test program.

Author: Trac Migrate 2022-01-27T18:59:40.000Z

- **Owner** set to Kinsey Moore <kinsey.moore@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"b539af865ea3217a50c8e4cbf0f668807c134356/rtems" b539af8/rtems]:

```
cpukit: Prevent error with disabled stack checker

When the stack checker is not enabled, the stack checker reporting
function can still be called. This prevents that call from performing a
null memory access in trying to find the high water mark if the stack
checker was never initialized.

This also introduces a test to ensure this call does not cause a crash.

Closes #4588
```

3.9.1.573 3143 - Remove obsolete rtems_gxx_*() implementation

Id	3143
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2017-09-19T11:35:01.000Z
Updated	2022-01-27T13:10:49.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::score, ticket-type::enhancement, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3143
Merges	0

Original author: sebastian.huber

GCC versions prior to 6.1 used a RTEMS thread model based on rtems_gxx_*() functions. GCC version 6.1 or later uses the self-contained synchronization objects of Newlib <sys/lock.h> for the RTEMS thread model.

Remove the obsolete implementation.

Author: Trac Migrate 2017-09-19T11:40:43.000Z

Original author: sebastian.huber

- **Status** changed from *assigned* to *accepted*

Author: Joel Sherrill 2017-09-19T12:01:26.000Z

Original author: sebastian.huber

Are all the tool targets now using a sufficiently new GCC to remove this?

Author: Trac Migrate 2017-09-19T12:05:58.000Z

Original author: sebastian.huber

- **Milestone** changed from %"4.12.0" to %"Indefinite"

Oh no, some targets still use GCC 4.8...

Author: Trac Migrate 2018-11-12T06:44:18.000Z

Original author: sebastian.huber

- **Milestone** changed from %"Indefinite" to %"5.1"

The removal of the m32c port removed the dependency on GCC 4.8.

Author: Trac Migrate 2018-11-12T06:46:03.000Z

Original author: sebastian.huber

An update of the or1k tools will remove the dependency on GCC 4.9.

Author: Trac Migrate 2018-11-21T07:12:33.000Z

Original author: sebastian.huber

- **Milestone** changed from %"5.1" to %"6.1"
- **Version** changed from ~"5" to ~"6"

Move milestone to allow RTEMS 5 builds with older GCCs.

Author: Trac Migrate 2022-01-27T13:10:49.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"2145e0c7bf31c681a745eeee57f4e889d7587ecc/rtems" 2145e0c7/rtems]:

```
Remove obsolete rtems_gxx_*() implementation

GCC versions prior to 6.1 used a RTEMS thread model based on
rtems_gxx_*() functions. GCC version 6.1 or later uses the
self-contained synchronization objects of Newlib <sys/lock.h> for the
RTEMS thread model.

Remove the obsolete implementation.

Close #3143.
```

3.9.1.574 4585 - Multiple Prototype Issues/Mismatches in rtems-examples from trace linker

Id	4585
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2022-01-24T22:38:14.000Z
Updated	2022-01-26T18:29:01.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4585
Merges	0

This is some of the build failures in rtems-examples if the BSP has POSIX turned on:

```
/home/joel/rtems-class/tools/bin/aarch64-rtems6-gcc:  hello-test.c:185:199: error: expected declaration specifiers or '...' before 'Thread_CPU_budget_algorithm_callout'
/home/joel/rtems-class/tools/bin/aarch64-rtems6-gcc:   185 | bool __wrap__Thread_Initialize(Objects_Information* a1, Thread_Control* a2, const Scheduler_Control* a3, void* a4, size_t a5, bool a6, Priority_Control a7, bool a8, Thread_CPU_budget_algorithms a9, Thread_CPU_budget_algorithm_callout a10, uint32_t a11,  Objects_Name a12)
/home/joel/rtems-class/tools/bin/aarch64-rtems6-gcc:       |                                                
```

3.9.1.575 2869 - Remove support for 16-bit object identifiers

Id	2869
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2017-01-17T13:04:40.000Z
Updated	2022-01-26T13:49:37.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::score, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2869
Merges	0

Original author: sebastian.huber

The only target using 16-bit object identifiers is M32C. This optimization is not worth the trouble. Self-contained objects are much more attractive for low end systems.

Author: Trac Migrate 2017-11-09T06:26:42.000Z

Original author: sebastian.huber

- **Milestone** changed from %"5.0" to %"6.1"

Milestone renamed

Author: Joel Sherrill 2021-12-17T16:56:58.000Z

Original author: sebastian.huber

This has been implemented. Closing.

Author: Trac Migrate 2022-01-26T13:49:37.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

3.9.1.576 4025 - NFS Client is broken on 64-bit targets

Id	4025
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-07-08T11:35:07.000Z
Updated	2022-01-26T13:44:40.000Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4025
Merges	0

Original author: sebastian.huber

Cloned from #4024.

Author: Trac Migrate	2022-01-26T13:44:40.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

This was fixed by [03d7f76a810fe13c750afc3324f615b25fa7006b/rtems-libbsd].

3.9.1.577 4020 - Change all version numbers to RTEMS 6 on the master branches

Id	4020
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-06-30T07:12:02.000Z
Updated	2022-01-26T13:42:45.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::build, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4020
Merges	0

Original author: sebastian.huber

Author: Trac Migrate	2020-06-30T07:14:55.000Z

Original author: sebastian.huber

In [changeset:"b89e62fd191d2cf974e042cfbd0bda3e4342d0df/rtems-source-builder" b89e62f/rtems-source-builder]:

```
Change version to RTEMS 6

Update #4020.
```

Author: Trac Migrate 2020-06-30T07:20:48.000Z

Original author: sebastian.huber

In [changeset:"37c36def7a7ef4488c68958735275fb23b80fd86/rtems" 37c36de/rtems]:

```
Change version to RTEMS 6

Update #4020.
```

Author: Trac Migrate 2020-06-30T07:32:05.000Z

Original author: sebastian.huber

In [changeset:"351bb7e41d15a18ed388b005f8c21614a272e8c0/rtems-tools" 351bb7e/rtems-tools]:

```
Change version to RTEMS 6

Update #4020.
```

Author: Trac Migrate 2020-06-30T07:40:30.000Z

Original author: sebastian.huber

In [changeset:"16f8cc46bb12072ea7dd639497a408a4f78a717c/rtems-docs" 16f8cc4/rtems-docs]:

```
Change version to RTEMS 6

Update #4020.
```

Author: Trac Migrate 2020-08-10T09:49:47.000Z

Original author: sebastian.huber

In [changeset:"6626ed504c954d0208129b3b2c8524fcfe572f12/rtems" 6626ed50/rtems]:

```
Doxyfile: Change version to 6.0.0

Update #4020.
```

Author: Trac Migrate	2022-01-26T13:42:45.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

This is probably done.

3.9.1.578 3951 - Remove obsolete powerpc BSPs

Id	3951
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-04-14T15:44:13.000Z
Updated	2022-01-26T13:42:27.000Z
Milestone	6.1
Labels	arch:powerpc, priority::normal, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3951
Merges	0

Original author: sebastian.huber

Remove powerpc BSPs for unsupported ISA variants (e.g. SPE and the embedded FPU). Remove powerpc BSPs for dead projects. This includes:

- brs5l
- brs6l
- dp2
- mpc5566evb_spe
- mpc5643l_dpu
- mpc5643l_evb
- mpc5674f_ecu508_app
- mpc5674f_ecu508_boot
- mpc5674fevb_spe
- mpc5674f_rsm6

Author: Trac Migrate 2020-07-05T16:01:15.000Z

Original author: sebastian.huber

In [changeset:"70b803b5549016ab1ca12816e862217b8198e449/rtems" 70b803b5/rtems]:

```
bsps/powerpc: Remove SPE enabled variants

The PowerPC SPE support was removed from GCC.

Update #3951.
```

Author: Trac Migrate 2020-07-05T16:01:18.000Z

Original author: sebastian.huber

In [changeset:"523551ccf66085584ecb1f9685a454f99ab102a9/rtems" 523551cc/rtems]:

```
bsps/powerpc: Remove obsolete BSPs

Update #3951.
```

Author: Trac Migrate 2020-12-10T07:32:48.000Z

Original author: sebastian.huber

In [changeset:"efda67be4f1ae39ef4b44855d90f48910af5156e/rtems-tools" efda67b/rtems-tools]:

```
config: Remove obsolete BSPs

Update #3951.
```

Author: Trac Migrate 2022-01-26T13:42:27.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

3.9.1.579 3566 - Remove checks for Newlib features introduced during the RTEMS 5 development

Id	3566
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-10-22T06:02:08.000Z
Updated	2022-01-26T13:36:18.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::build, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3566
Merges	0

Original author: sebastian.huber

Remove checks for O_DIRECTORY, O_CLOEXEC and O_NOFOLLOW.

Author: Trac Migrate	2022-01-26T13:36:18.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

This was done as a side-effect of the new build system.

3.9.1.580 3321 - Improve console driver documentation

Id	3321
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-03-06T12:14:57.000Z
Updated	2022-01-26T13:31:59.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3321
Merges	0

Original author: sebastian.huber

We have now three different standard console drivers. Improve the console driver configuration documentation to assist the user to select the right one.

Author: Trac Migrate	2018-03-06T12:15:14.000Z

Original author: sebastian.huber

- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2022-01-26T13:31:59.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Documentation was improved.

3.9.1.581 4198 - arm: Add multilib for Cortex-R52 processor

Id	4198
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-12-03T07:59:08.000Z
Updated	2022-01-26T10:01:55.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4198
Merges	0

Original author: sebastian.huber

This processor uses the ARMv8-R instruction set.

Author: Trac Migrate 2020-12-03T19:34:38.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"9ef9956f600dcce0ec9cf06820adf47203e22dc3/rtems-source-builder" 9ef9956/rtems-source-builder]:

```
6/7: Add multilib for ARM Cortex-R52 processor

Close #4198.
```

Author: Trac Migrate 2020-12-04T06:16:30.000Z

Original author: sebastian.huber

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

There is an issue with the memchr() implementation provided by Newlib:

```
File: /opt/rtems/6/lib/gcc/arm-rtems6/10.2.1/../../../../arm-rtems6/lib/
↪thumb/cortex-r52/hard/libc.a(lib_a-memchr.o)
Attribute Section: aeabi
File Attributes
Tag_CPU_name: "7-A"
Tag_CPU_arch: v7
Tag_CPU_arch_profile: Application
Tag_ARM_ISA_use: Yes
Tag_THUMB_ISA_use: Thumb-2
Tag_FP_arch: VFPv3
Tag_Advanced_SIMD_arch: NEONv1
```

Author: Trac Migrate 2020-12-15T09:35:09.000Z

Original author: sebastian.huber

In [changeset:"96c1e17164bc58118342ca8ab9deede6bf5ba29a/rtems-source-builder" 96c1e17/rtems-source-builder]:

```
6/7: Update unstable RTEMS 6/7 tool chain

This update includes a fix for the ARM Cortex-R52 support in Newlib.

Update #4198.
```

Author: Trac Migrate 2022-01-26T10:01:55.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

3.9.1.582 4581 - Add AArch64 to Tier 1 BSPs

Id	4581
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Created	2022-01-18T16:08:13.000Z
Updated	2022-01-25T23:44:37.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4581
Merges	0

I finally got around to producing an emailed test run on the Avnet ZU3EG development board. The test results are available here

Author: Trac Migrate 2022-01-19T17:53:07.000Z

- **Owner** set to Kinsey Moore <kinsey.moore@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"e0f9f8ff5058d3217f07a261c5579836efd0b716/rtems-tools" e0f9f8f/rtems-tools]:

```
tiers: Add AArch64 to tier 1

Hardware test results have recently been posted for AArch64.

Closes #4581
```

Author: Trac Migrate 2022-01-25T23:44:37.000Z

In [changeset:"91a58afdc89fab3fbc5661b49c5fbebfafdf8e0b/rtems-tools" 91a58af/rtems-tools]:

```
rtems-bsps-tiers.ini: Move appropriate aarch64 BSPs to Tier 1 and 2

This also resulted in finding some BSPs listed which were no longer
in the RTEMS source.

Updates #4581.
```

3.9.1.583 4583 - rtems-bsp-builder: Do not vary on network

Id	4583
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Created	2022-01-20T16:04:49.000Z
Updated	2022-01-25T23:44:33.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4583
Merges	0

With the network stack removed from the rtems.git repository, there is no need to build BSPs with and without networking. This should be removed. It should reduce the number of BSP build configurations in a run.

Author: Joel Sherrill 2022-01-20T18:01:44.000Z

- **Owner** set to @joel

I'll take a swing at this while testing the tier updates.

Author: Trac Migrate 2022-01-25T23:44:33.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"519acfb2f6ad7957bf2a3d0c73c2535988dd5de4/rtems-tools" 519acfb/rtems-tools]:

```
rtems-bsps-arm.ini, config/rtems-bsps.ini: Remove build variance on␣
↪network

With the legacy TCP/IP stack no longer in rtems.git, there is nothing
to turn on/off with regards to BSPs or the stack itself. Removing this
significantly reduces the number of configurations built.

Closes #4583.
```

3.9.1.584 4302 - Obsolete powerpc/haleakala board

Id	4302
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2021-03-04T19:40:49.000Z
Updated	2022-01-19T17:53:04.000Z
Milestone	6.1
Labels	arch:powerpc, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4302
Merges	0

This BSP was merged in 1995 and there has been no mention of it recently. There do not appear to be any recent modifications to this BSP that are not part of a generic sweep of BSPs.

Removing this will reduce the number of BSPs which need modification to account for changes being introduced to support libbsd bus interface properly on PowerPC.

Author: Trac Migrate 2021-12-21T15:04:49.000Z

- **Owner** set to Joel Sherrill <joel@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"e92bc254530825ae14646520b35efe000699ce74/rtems" e92bc254/rtems]:

```
Remove powerpc/haleakala board

Closes #4302.
```

Author: Trac Migrate 2022-01-19T17:53:04.000Z

In [changeset:"f2282276c68155dc1928cdc0d9611d977ad6b86b/rtems-tools" f228227/rtems-tools]:

```
rtems-bsps-powerpc.ini: Remove powerpc/halekala

Updates #4302.
```

3.9.1.585 4110 - Ubuntu package list is broken

Id	4110
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2020-10-02T02:33:59.000Z
Updated	2021-12-22T15:28:57.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4110
Merges	0

The list found here:

https://docs.rtems.org/branches/master/user/hosts/posix.html#xubuntu

failed with `libpython-dev`. A Linux user needs to check this and update the list.

Author: Chris Johns 2020-10-02T02:39:02.000Z

I suggest adding:

```
sudo apt-get install python3-venv
python3 -m venv py
. ./py/bin/activate
```

because there is no `python` command

Author: Trac Migrate 2021-12-22T15:28:57.000Z

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"4e22dfefea3c2ee26d0be2aef91732fb95cac607/rtems-docs" 4e22dfe/rtems-docs]:

```
Update package list for Ubuntu

Updated the latest version referenced of Ubuntu to 20.04, updated
package list, and identified what packages need to still be installed
afterwards to pass sb-check.

Closes #4110
```

3.9.1.586 3613 - Remove m32c architecture port from upstream tools

Id	3613
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2018-11-19T08:59:20.000Z
Updated	2021-12-21T15:11:17.000Z
Milestone	6.1
Labels	arch:m32c, priority::normal, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3613
Merges	0

Original author: sebastian.huber

The m32c architecture port was removed in RTEMS 5.1. Remove RTEMS-specific support in the upstream tools, e.g. Binutils and GCC.

Author: Joel Sherrill 2021-12-17T16:10:41.000Z

Original author: sebastian.huber

Patch for GCC submitted: https://gcc.gnu.org/pipermail/gcc-patches/2021-December/587094.html

Nothing beyond pattern matching in stanzas in ld/configure.tgt and bfd/config.bfd. Asked on binutils mailing list if there is anything to do.

Author: Joel Sherrill 2021-12-21T15:08:30.000Z

Original author: sebastian.huber

GCC commit pushed here:

https://gcc.gnu.org/g:1f56dbe2daaa5931356d0018c2c2c17bb4691d0e

GCC WWW commit pushed here:

https://gcc.gnu.org/git/?p=gcc-wwwdocs.git;a=commit;h=e8c01982ea7abc0acc0c4a52552ca8786abaa4fb

Binutils-GDB commit pushed here:

https://sourceware.org/git?p=binutils-gdb.git;a=commit;h=ae47e3097e9f0608490ed4a53c1710301d409ad1

Author: Joel Sherrill 2021-12-21T15:11:17.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"

- **Status** changed from *assigned* to *closed*

3.9.1.587 2872 - Get rid of CONFIGURE_MAXIMUM_PTYS

Id	2872
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2017-01-19T12:07:26.000Z
Updated	2021-12-17T16:57:43.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::score, tickettype::enhancement
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2872
Merges	0

Original author: sebastian.huber

Change the Termios PTY driver for Telnet to use the new Termios device API. This why the CONFIGURE_MAXIMUM_PTYS gets superfluous.

Author: Chris Johns 2017-01-19T22:45:33.000Z

Original author: sebastian.huber

Should the pty support the separated to allow reuse?

I am porting tinyssh can could use it.

Author: Trac Migrate 2017-01-20T09:21:40.000Z

Original author: sebastian.huber

The current PTY driver is a collection of hacks. It would be certainly good to overhaul it and make it generally useful.

Author: Trac Migrate 2017-11-09T06:26:42.000Z

Original author: sebastian.huber

- **Milestone** changed from %”5.0” to %”6.1”

Milestone renamed

Author: Joel Sherrill 2021-12-17T16:57:43.000Z

Original author: sebastian.huber

- **Resolution** set to ~”fixed”
- **Status** changed from *new* to *closed*

This has been implemented.

3.9.1.588 4129 - x86_64 not listed as architecture in components in Trac

Id	4129
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-10-07T13:55:05.000Z
Updated	2021-12-17T14:23:53.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4129
Merges	0

Just needs to be added.

Author: Joel Sherrill 2021-12-17T14:23:53.000Z

- **Cc** added @karel.gardas
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Added the component and cc'ed Karel so he would know about it. :)

3.9.1.589 3828 - Switch over to new build system

Id	3828
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-12-02T07:59:33.000Z
Updated	2021-12-17T14:19:10.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::build, tickettype::task, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3828
Merges	0

Original author: sebastian.huber

During a four month period every RTEMS user is encouraged to test its BSPs of interest with the new build system. The user should use the following check list. Issues should be reported on devel@rtems.org or this ticket.

1. Review the build system specification in the user manual. If something is unclear, please complain.

2. Use "./waf bsp_defaults" to get a list of options with default values for the BSPs of interest. Check that all options are present. Check the type of the options in the build specification (e.g. actions get-integer, get-boolean, get-string). Review the description of the options. Review the default values. Add sanity checks to options (e.g. actions assert-*).
3. Build the BSPs of interest with all tests enabled (BUILD_TESTS = True). Review the ABI and linker options. Review the linker command files. Run the test on the boards.
4. Build the BSPs of interest with different permutations of build options. Make sure a sample set of tests runs for each permutation.
5. Check that all artefacts (libraries, header files, start files, linker command files, etc.) are properly installed.
6. Check that you can build your applications and third-party libraries with the installed BSPs of interest.

Author: Trac Migrate 2019-12-19T08:21:07.000Z

Original author: sebastian.huber

- **Milestone** changed from %"5.1" to %"6.1"
- **Version** changed from ~"5" to ~"6"

Author: Trac Migrate 2021-12-17T08:01:03.000Z

Original author: sebastian.huber

RTEMS commit https://git.rtems.org/rtems/commit/?id=db8f598d56951cf43f22a5e325e0d23c8f7559f9 removed the old build system so this ticket is most likely done?

Author: Joel Sherrill 2021-12-17T14:19:10.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Agreeing with Christian that this ticket is complete. Any issues with the waf build system now are being treated as bugs and the autotools one has been removed.

3.9.1.590 4180 - Add BSP for i.MXRT1050

Id	4180
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-11-17T10:16:50.000Z
Updated	2021-12-17T07:40:16.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4180
Merges	0

Original author: Christian Mauderer

Add a BSP for the i.MXRT1050 series. The default settings for the BSP will run on the IMXRT1050-EVKB evaluation board.

Author: Trac Migrate 2020-11-20T07:54:42.000Z

Original author: Christian Mauderer

In [changeset:"e00f4434281bad6d06fdc7d0f940de8710976e06/rtems" e00f443/rtems]:

```
imx: Move imx_iomux to arm/shared

Update #4180
```

Author: Trac Migrate 2020-11-20T07:54:45.000Z

Original author: Christian Mauderer

In [changeset:"6cece5854499bfba8b00aa23588c78156fe1ff16/rtems" 6cece585/rtems]:

```
bsps/imx: Move imx-gpio to arm/shared

Update #4180
```

Author: Trac Migrate 2020-11-20T07:54:49.000Z

Original author: Christian Mauderer

In [changeset:"b169095c7dfd106a9c0c3d47e9f1c640ac3377d2/rtems" b169095c/rtems]:

```
cpu/armv7m: Add table based init for ARMV7M_MPU

Modify the MPU functions of the stm32h7 BSP to be table based and
available for all ARMV7M BSPs.

Update #4180
```

Author: Trac Migrate 2020-11-20T07:54:53.000Z

Original author: Christian Mauderer

In [changeset:"48f6a6c302a3e1a3f8915e2503d0fe618d1af285/rtems" 48f6a6c/rtems]:

```
bsp/imxrt: Import files from MCUXpresso SDK V2.8.5

The following files have been imported:

cp ${SDK}/boards/evkbimxrt1050/project_template/clock_config.c nxp/
↪boards/evkbimxrt1050
cp ${SDK}/boards/evkbimxrt1050/project_template/clock_config.h include/
↪fsl_clock_config.h
cp ${SDK}/boards/evkbimxrt1050/project_template/dcd.c start/flash-dcd.c
cp ${SDK}/boards/evkbimxrt1050/project_template/pin_mux.c nxp/boards/
↪evkbimxrt1050
cp ${SDK}/boards/evkbimxrt1050/project_template/pin_mux.h include/fsl_
↪pin_mux.h
cp ${SDK}/boards/evkbimxrt1050/xip/evkbimxrt1050_flexspi_nor_config.h␣
↪include/fsl_flexspi_nor_config.h
cp ${SDK}/devices/MIMXRT1052/MIMXRT1052.h include
cp ${SDK}/devices/MIMXRT1052/MIMXRT1052_features.h include
cp ${SDK}/devices/MIMXRT1052/drivers/fsl_*.c nxp/devices/MIMXRT1052/
↪drivers
cp ${SDK}/devices/MIMXRT1052/drivers/fsl_*.h include
cp ${SDK}/devices/MIMXRT1052/fsl_device_registers.h include
cp ${SDK}/devices/MIMXRT1052/system_MIMXRT1052.h include/
cp ${SDK}/devices/MIMXRT1052/xip/fsl_flexspi_nor_boot.c nxp/devices/
↪MIMXRT1052/xip/fsl_flexspi_nor_boot.c
cp ${SDK}/devices/MIMXRT1052/xip/fsl_flexspi_nor_boot.h include

Update #4180
```

Author: Trac Migrate 2020-11-20T07:54:56.000Z

Original author: Christian Mauderer

In [changeset:"8abf858cf583f535b7e44c63ea40f1d30bbb5e7b/rtems" 8abf858c/rtems]:

```
bsp/imxrt: Fix warnings for imported files

Update #4180
```

Author: Trac Migrate 2020-11-20T07:54:59.000Z

Original author: Christian Mauderer

In [changeset:"57b5b29ce41c093c527e757335c85293b436b366/rtems" 57b5b29c/rtems]:

```
bsp/imxrt: Adapt imported files

Update #4180
```

Author: Trac Migrate 2020-11-20T07:55:03.000Z

Original author: Christian Mauderer

In [changeset:"7141afbb0ea41675ef8cf7e60f398aaf900defd9/rtems" 7141afbb/rtems]:

```
bsp/imxrt: Add new BSP

Update #4180
```

Author: Trac Migrate 2020-11-20T08:07:53.000Z

Original author: Christian Mauderer

In [changeset:"e95d992e3c5bdb733f3cf317a5684b94390659cb/rtems-docs" e95d992/rtems-docs]:

```
user/bsps: Add imxrt

Update #4180
```

Author: Trac Migrate 2020-12-14T11:54:55.000Z

Original author: Christian Mauderer

In [changeset:"b63a187ec021f084ad2240ae8ff533e82644a740/rtems" b63a187/rtems]:

```
bsps/imxrt: Split up dts.

This allows simpler creation of own dts files for custom boards.
```

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```
4
5 Update #4180
```

Author: Trac Migrate 2020-12-14T11:54:59.000Z

Original author: Christian Mauderer

In [changeset:"9b3def237addd99154817f85c6c1a7ef62e444f1/rtems" 9b3def2/rtems]:

```
1 bsps/arm/imx*: Fix location of shared headers
2
3 When moving the headers from the imx BSP to the shared area, the wrong
4 directory has been selected. This patch fixes that problem.
5
6 Update #4180
```

Author: Trac Migrate 2020-12-14T11:55:02.000Z

Original author: Christian Mauderer

In [changeset:"eb2b91560943065ae6297018d69076ac7b0c6c35/rtems" eb2b915/rtems]:

```
1 cpu/armv7m: Fix table based init for ARMV7M_MPU
2
3 Somehow the table index has been missing in the latest patch version.
4 With that, the configuration for the first region has been applied
5 multiple times.
6
7 Update #4180
```

Author: Trac Migrate 2020-12-14T11:55:29.000Z

Original author: Christian Mauderer

In [changeset:"2cf307632080fab9561b13616f5d744f23f869b2/rtems-docs" 2cf3076/rtems-docs]:

```
1 user/bsp/imxrt: Information for custom FDT
2
3 Update #4180
```

Author: Trac Migrate 2021-01-21T09:26:38.000Z

Original author: Christian Mauderer

In [changeset:"22e9dafb7499769780be17c493d301bfdeb88ef5/rtems" 22e9dafb/rtems]:

```
bsps/imxrt: Use standard names to avoid warnings

If spi or i2c slaves are "connected" to the spi or i2c bus, the device
tree compiler complains if the busses are not named spi or i2c.

Update #4180
```

Author: Trac Migrate 2021-01-21T09:26:42.000Z

Original author: Christian Mauderer

In [changeset:"301bbc3a4d80ab26fe0ac09a139d9c6ea0f997ee/rtems" 301bbc3/rtems]:

```
bsps/shared: Copy fsl-edma from mpc55xx

This is a preparation for making the driver universal.

Update #4180
```

Author: Trac Migrate 2021-01-21T09:26:45.000Z

Original author: Christian Mauderer

In [changeset:"a434cc80cb00e2f15a51205d6b813fc8c58803ac/rtems" a434cc8/rtems]:

```
bsps/shared: Adapt fsl-edma driver for imxrt

Note: The changes have been done with portability in mind. The driver
should (in theory) be able to replace the original one in the MPC BSPs
too. For full compatibility an adaption layer and especially a test
would be necessary. Because both are missing, don't integrate it into
the MPC BSP now.

Update #4180
```

Author: Trac Migrate 2021-01-21T09:26:48.000Z

Original author: Christian Mauderer

In [changeset:"d9794a1f97a48545582d28617ee76fb8176fa1cd/rtems" d9794a1/rtems]:

```
bsps/imxrt: Add DMA numbers to dtsi

```

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```
Also currently no driver uses these numbers, it is usefull for
applications that want to use the DMA.

Update #4180
```

Author: Trac Migrate 2021-01-21T09:26:55.000Z

Original author: Christian Mauderer

In [changeset:"36b4e8c394cd891e3e8bddefd9eb21ff17cbff46/rtems" 36b4e8c/rtems]:

```
bsps/imxrt: Add ioctl to LPSPI to get registers

This allows an application to get the registers of the LPSPI. That is
usefull for applications that want to use DMA for a very specialized and
highly optimized communication.

Update #4180
```

Author: Trac Migrate 2021-05-17T07:13:13.000Z

Original author: Christian Mauderer

In [changeset:"08e4e6f2bb82ca07d67e9930f6b07de09cedd5a8/rtems" 08e4e6f2/rtems]:

```
bsps/imxrt: Fix documentation error

Update #4180
```

Author: Trac Migrate 2021-05-17T07:13:16.000Z

Original author: Christian Mauderer

In [changeset:"c30566667deb96f3abde167968c1a0db90b74792/rtems" c3056666/rtems]:

```
bsps/imxrt: Reduce devicetree size

Remove symbols that would be necessary for overlays and decrease padding
that would be necessary for adding stuff during run-time.

Update #4180
```

Author: Trac Migrate 2021-05-17T07:13:20.000Z

Original author: Christian Mauderer

In [changeset:"988cc1a795ec63350ce700efd86c7437b4b0801c/rtems" 988cc1a/rtems]:

```
bsps/imxrt: Add addresses and interrupts to dts

Add addresses and interrupts for most internal peripherals to the dts.
The additional aliases make it possible for an application to easily
access these informations.

Update #4180
```

Author: Trac Migrate 2021-05-17T07:13:23.000Z

Original author: Christian Mauderer

In [changeset:"691fec407a0faae379cab23679ec8456ace9fb06/rtems" 691fec40/rtems]:

```
bsps/imxrt: Fix OCRAM, ITCM and DTCM sizes

The sizes are configurable via fuses or per software via some registers.
At the moment the registers are not changed. Changing the registers
destroys data stored in the RAM areas (like application code or data).
So either the fuses or some bootloader should be used to set them before
the application starts.

This also adds an OCRAM only linker command file.

Update #4180
```

Author: Trac Migrate 2021-05-17T07:13:27.000Z

Original author: Christian Mauderer

In [changeset:"15e26f4d7f808368362fbe82888fe66485d082dd/rtems" 15e26f4/rtems]:

```
bsps/imxrt: Enable DMA clock

The EDMA is intialized so make sure the the clock is initialized too.

Update #4180
```

Author: Trac Migrate 2021-05-28T06:27:33.000Z

Original author: Christian Mauderer

In [changeset:"a3ebe17994beceef137acb0b240af185ed1b5768/rtems-docs" a3ebe17/rtems-docs]:

```
bsps/imxrt: Remove superfluous options from dtc

The -@ option adds symbols that are used when applying an overlay. RTEMS
doesn't support overlays or re-parsing of device trees. So the symbols
only increase the size of the binary.

The same is true for the padding. It would be useful if the device tree
is changed during run time which is not supported in RTEMS.

Update #4180
```

Author: Trac Migrate 2021-07-02T11:51:06.000Z

Original author: Christian Mauderer

In [changeset:"95a38dd3f10000ad05e22b4870b8b53ec8d549a0/rtems" 95a38dd/rtems]:

```
bsps/imxrt: Allow different ARM PLL setting

Update #4180
```

Author: Trac Migrate 2021-07-02T11:51:10.000Z

Original author: Christian Mauderer

In [changeset:"0d3453a47e522fbb13b211e44ce4007b666686f3/rtems" 0d3453a4/rtems]:

```
bsps/imxrt: Simplify linkcmds and make it flexible

Calling the memory FLASH and EXTRAM instead of FLEXSPI and SDRAM makes
it simpler to support other types of external RAM. This patch also
removes some of the calculations and improves names and documentation to
avoid pitfalls. It removes a unnecessary memory definition.

Update #4180
```

Author: Trac Migrate 2021-07-02T11:53:08.000Z

Original author: Christian Mauderer

In [changeset:"72ae964c5a88baddfb67483a0cb88dd736e06766/rtems-docs" 72ae964/rtems-docs]:

```
user/bsps/imxrt: Info about ARM PLL frequency

Update #4180
```

Author: Trac Migrate 2021-09-02T06:38:40.000Z

Original author: Christian Mauderer

In [changeset:"e495633887265c51dbfbd00a349e9b0da620d0ae/rtems" e495633/rtems]:

```
bsps/imxrt: Improve SPI driver

It wasn't possible to keep the CS line low between multiple message
descriptors in one transfer. This patch reworks the driver so that it is
possible.

Update #4180
```

Author: Trac Migrate 2021-12-17T07:39:50.000Z

Original author: Christian Mauderer

The base BSP works since quite some time now. Further changes to this BSP are improvements. Therefore closing this ticket now.

Author: Trac Migrate 2021-12-17T07:40:16.000Z

Original author: Christian Mauderer

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

3.9.1.591 3698 - libdl failure on many PowerPC BSPs

Id	3698
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2019-02-21T16:14:30.000Z
Updated	2021-12-16T22:18:34.000Z
Milestone	6.1
Labels	priority::normal, resolution::worksforme, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3698
Merges	0

The following BSPs do not build dl09:

powerpc-beatnik powerpc-brs5l powerpc-brs6l powerpc-dp2 powerpc-haleakala powerpc-icecube powerpc-mcp750 powerpc-mpc8260ads powerpc-mtx603e powerpc-mvme2100 powerpc-mvme2307 powerpc-mvme3100 powerpc-mvme5500 powerpc-pm520_cr825 powerpc-pm520_ze30 powerpc-qemuprep-altivec powerpc-qemuprep powerpc-qoriq_e6500_64 powerpc-ss555 powerpc-virtex4 powerpc-virtex5

They fail with this:

```
gmake[5]: Entering directory `/home/joel/rtems-work/rtems-testing/rtems/build-powerpc-qemuprep-rtems/powerpc-rtems5/c/qemuprep/testsuites/libtests'
powerpc-rtems5-gcc -mcpu=powerpc -mmultiple -mstring -mstrict-align -O2 -g -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs  -Wl,--gc-sections  -mcpu=powerpc -mmultiple -mstring -mstrict-align  -B./../../lib/libbsp/powerpc/motorola_powerpc -B/home/joel/rtems-work/rtems-testing/rtems/rtems/bsps/powerpc/motorola_powerpc/start -specs bsp_specs -qrtems -L./../../cpukit -L/home/joel/rtems-work/rtems-testing/rtems/rtems/bsps/powerpc/shared/start -Wl,--wrap=printf -Wl,--wrap=puts -Wl,--wrap=putchar -o dl01.pre dl01/dl01-init.o dl01/dl01-dl-load.o dl01-dl01-tar.o ../../lib/libbsp/powerpc/motorola_powerpc/librtemsbsp.a ../../cpukit/librtemscpu.a
/home/joel/rtems-work/tools/5/lib/gcc/powerpc-rtems5/7.4.0/../../../../powerpc-rtems5/bin/ld: ../../cpukit/librtemscpu.a(rtl-mdreloc-powerpc.o): in function `get_sdata_libdl_size':
/home/joel/rtems-work/rtems-testing/rtems/build-powerpc-qemuprep-rtems/powerpc-rtems5/c/qemuprep/cpukit/../../../../../rtems/c/src/../../cpukit/libdl/rtl-mdreloc-powerpc.c:73: undefined reference to `bsp_section_sdata_libdl_begin'
/home/joel/rtems-work/tools/5/lib/gcc/powerpc-rtems5/7.4.0/../../../../powerpc-rtems5/bin/ld: /home/joel/rtems-work/rtems-testing/rtems/build-powerpc-qemuprep-rtems/powerpc-rtems5/c/qemuprep/cpukit/../../../../../rtems/c/src/../../cpukit/libdl/rtl-mdreloc-powerpc.c:73: undefined reference to `bsp_section_sdata_libdl_begin'
/home/joel/rtems-work/tools/5/lib/gcc/powerpc-rtems5/7.4.0/../../../../powerpc-rtems5/bin/ld: /home/joel/rtems-work/rtems-testing/rtems/build-powerpc-qemuprep-rtems/powerpc-rtems5/c/qemuprep/cpukit/../../../../../rtems/c/src/../../cpukit/libdl/rtl-mdreloc-powerpc.c:74: undefined reference to `bsp_section_sdata_libdl_end'
/home/joel/rtems-work/tools/5/lib/gcc/powerpc-rtems5/7.4.0/../../../../powerpc-rtems5/bin/ld: /home/joel/rtems-work/rtems-testing/rtems/build-powerpc-qemuprep-rtems/powerpc-rtems5/c/qemuprep/cpukit/../../../../../rtems/c/src/../../cpukit/libdl/rtl-mdreloc-powerpc.c:74: undefined reference to `bsp_section_sdata_libdl_end'
/home/joel/rtems-work/tools/5/lib/gcc/powerpc-rtems5/7.4.0/../../../../powerpc-rtems5/bin/ld: ../../cpukit/librtemscpu.a(rtl-mdreloc-powerpc.o): in function `get_sdata_sbss_size':
/home/joel/rtems-work/rtems-testing/rtems/build-powerpc-qemuprep-rtems/powerpc-rtems5/c/qemuprep/cpukit/../../../../../rtems/c/src/../../cpukit/libdl/rtl-mdreloc-powerpc.c:63: undefined reference to `bsp_section_sdata_begin'
/home/joel/rtems-work/tools/5/lib/gcc/powerpc-rtems5/7.4.0/../../../../powerpc-rtems5/bin/ld: /home/joel/rtems-work/rtems-testing/rtems/build-powerpc-qemuprep-rtems/powerpc-rtems5/c/qemuprep/cpukit/../../../../../rtems/c/src/../../cpukit/libdl/rtl-mdreloc-powerpc.c:63: undefined reference to `bsp_section_sdata_begin'
```

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```
11 /home/joel/rtems-work/tools/5/lib/gcc/powerpc-rtems5/7.4.0/../../../../powerpc-
   ↪rtems5/bin/ld: /home/joel/rtems-work/rtems-testing/rtems/build-powerpc-qemuprep-
   ↪rtems/powerpc-rtems5/c/qemuprep/cpukit/../../../../../rtems/c/src/../../cpukit/
   ↪libdl/rtl-mdreloc-powerpc.c:64: undefined reference to `bsp_section_sbss_end'
12 /home/joel/rtems-work/tools/5/lib/gcc/powerpc-rtems5/7.4.0/../../../../powerpc-
   ↪rtems5/bin/ld: /home/joel/rtems-work/rtems-testing/rtems/build-powerpc-qemuprep-
   ↪rtems/powerpc-rtems5/c/qemuprep/cpukit/../../../../../rtems/c/src/../../cpukit/
   ↪libdl/rtl-mdreloc-powerpc.c:64: undefined reference to `bsp_section_sbss_end'
13 collect2: error: ld returned 1 exit status
```

Author: Chris Johns 2019-02-21T21:35:03.000Z

Why do we have `linkcmds.base` and `linkcmds.share` in this arch and what are there differences? Why are the names similar?

I cannot find a any local readme type files explaining the reason there are two files. The git log entry for the addition of this file offers no insight.

At a guess the addition of `mpc55xx` as a new BSP required a new linkcmd file, which is fine, however an explanation on difference and rational would be helpful to me at this point.

Author: Trac Migrate 2019-02-22T10:04:59.000Z

The reason for this is excessive use of copy and paste in the past combined with the long history of the PowerPC port.

The bsps/powerpc/shared/start/linkcmds.base is similar to the bsps/arm/shared/start/linkcmds.base or bsps/riscv/shared/start/linkcmds.base. It uses memory regions and should be used for new BSPs.

The 64-bit PowerPC ELFv2 ABI has no small data area.

Author: Chris Johns 2019-02-23T23:32:17.000Z

I now see there are a couple of other BSP specific linkcmds files all of which need to be modified.

I am now seeing:

```
1 gmake[5]: Entering directory '/opt/work/chris/rtems/kernel/bsps/psim/
  ↪powerpc-rtems5/c/mpc5643l_dpu/testsuites/sptests'
2 powerpc-rtems5-gcc  -mcpu=8540 -meabi -msdata=sysv -fno-common -msoft-
  ↪float -mno-spe -mstrict-align -O2 -g -fno-keep-inline-functions -
  ↪ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -
  ↪Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -
  ↪B./../../lib/libbsp/powerpc/mpc55xxevb -B/opt/work/chris/rtems/kernel/
  ↪rtems.git/bsps/powerpc/mpc55xxevb/start -specs bsp_specs -qrtems -L./.
  ↪./../cpukit -L/opt/work/chris/rtems/kernel/rtems.git/bsps/powerpc/
```

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```
↪shared/start -Wl,--wrap=printf -Wl,--wrap=puts -Wl,--wrap=putchar -Wl,
↪--gc-sections -o sp47.exe sp47/sp47-init.o ./../../lib/libbsp/powerpc/
↪mpc55xxevb/librtemsbsp.a ./../../cpukit/librtemscpu.a
/opt/work/rtems/5/lib/gcc/powerpc-rtems5/7.4.0/../../../../powerpc-
↪rtems5/bin/ld:linkcmds.mpc55xx:18 cannot move location counter␣
↪backwards (from 00000000400165c0 to 0000000040010000)
collect2: error: ld returned 1 exit status
gmake[5]: *** [Makefile:5229: sp47.exe] Error 1
```

and this does not look related to what I have been working on. Is this test too big for this target?

Author: Chris Johns 2019-02-23T23:59:32.000Z

Further investigation of the `mpc5643l_dpu` BSP I see a lot of tests are failing to link. I think this BSP should have all tests disabled, sorry I have no capacity to maintaining this stuff.

What has changed in RTEMS to cause the tests to overflow the memory area? Is a bisect needed?

I will now look at adding regx support to the `.tcfg` files so wildcards can be supported. To exclude all tests:

```
rexclude *
```

can be used as a simple way to disable all tests. I may consider `rexclude` and `rinclude` as an order set of filters so:

```
rexclude *
rinclude samples/*
```

This syntax introduces the `/` delimiter so specific groups can be filtered.

Author: Trac Migrate 2019-02-25T06:16:13.000Z

The reason for the recent link-time errors on some small memory BSPs is the change from workspace initialization to static allocation for the objects. I work on this already, but is a bit tedious. My approach is to add some general *.tcfg files like this:

testsuites/testdata/disable-256k-data-or-more-tests.tcfg testsuites/testdata/disable-128k-data-or-more-tests.tcfg testsuites/testdata/disable-64k-data-or-more-tests.tcfg testsuites/testdata/disable-32k-data-or-more-tests.tcfg

Author: Chris Johns 2020-02-26T03:53:03.000Z

- **Milestone** changed from %”5.1” to %”6.1”

Author: Chris Johns 2021-02-07T22:11:02.000Z

What is the status of this ticket?

Author: Chris Johns	2021-02-07T22:11:42.000Z

- **Status** changed from *assigned* to *new*

Author: Trac Migrate	2021-12-16T22:18:11.000Z

Test built for the beatnik BSP

Author: Trac Migrate	2021-12-16T22:18:34.000Z

- **Resolution** set to ~"worksforme"
- **Status** changed from *new* to *closed*

3.9.1.592 4098 - All BSP bsets fail to build on master

Id	4098
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-09-28T20:59:40.000Z
Updated	2021-12-16T16:50:18.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4098
Merges	0

On the master building for RTEMS 6, all of the BSP bsets fail like this:

```
RTEMS Source Builder - Set Builder, 6 (ed5030bc24db)
Build Set: 6/bsps/xilinx_zynq_zedboard
error: no build set file found: 6/bsps/xilinx_zynq_zedboard.bset
Mailing report: build@rtems.org
Traceback (most recent call last):
File "../source-builder/sb-set-builder", line 25, in <module>
sb.setbuilder.run()
File "/home/joel/rtems-cron-6/rtems-source-builder/source-builder/sb/setbuilder.py
↪", line 735, in run
b.build(deps, mail = mail)
File "/home/joel/rtems-cron-6/rtems-source-builder/source-builder/sb/setbuilder.py
↪", line 633, in build
if sizes_valid:
UnboundLocalError: local variable 'sizes_valid' referenced before assignment
```

Author: Trac Migrate 2021-12-16T16:50:18.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

3.9.1.593 4437 - powerpc/shared/sbrk.c: Do not reference errno

Id	4437
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2021-05-21T21:24:50.000Z
Updated	2021-12-16T16:32:43.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4437
Merges	0

Using errno implicitly references the newlib reentrancy structure. Changing this eliminates one reason the reentrancy code may be pulled into minimum.exe.

Author: Kinsey Moore 2021-12-16T16:32:43.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

This should have been closed by 402a206a1b1ff984b14c3321f0bc1340c4873147 but the close tag was malformed.

3.9.1.594 4192 - bsp/xilinx_zynq: Enable support for small MMU pages

Id	4192
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-11-27T13:34:57.000Z
Updated	2021-12-16T16:11:44.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4192
Merges	0

Original author: soja

Enable the xilinx_zynq based BSPs to support the configuration of the MMU to use small 4 kiB pages.

By default 1 MB pages will be used. The 4 kiB pages have to be enabled with the ARM_MMU_USE_SMALL_PAGES configuration option.

Author: Trac Migrate 2020-11-27T13:45:49.000Z

Original author: soja

Patch submitted: https://lists.rtems.org/pipermail/devel/2020-November/063517.html

Author: Kinsey Moore 2021-12-16T16:11:44.000Z

Original author: soja

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

This should have been closed with commit cadbd7d15086b76dc4e5dd199e47b68d40006e6d

3.9.1.595 4375 - Add futimens() and utimensat()

Id	4375
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2021-04-05T17:59:27.000Z
Updated	2021-12-16T15:54:33.000Z
Milestone	6.1
Labels	filesystem, priority::normal, resolution::fixed, tickettype::defect, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4375
Merges	0

RTEMS currently only supports utimes() which is marked as Legacy in the POSIX standard. Support needs to be added for futimens() and utimensat() per the following specification:

https://pubs.opengroup.org/onlinepubs/9699919799/functions/futimens.html

utimes() only has second granularity on its times. The newer methods greatly improve on that even if many of the RTEMS file systems do not support nanosecond times on the file access, create, etc timestamps.

The following changes have been identified:

- The utimes file handler entry will need to be replaced with a handler geared to the futimens() API.
- File systems will have to be updated to account for the new handler.

- Existing methods like utimes() will have to be adjusted to be implemented in terms of the futimens() style method.
- File system test cases will have to be added to the fstests.

Author: Joel Sherrill 2021-12-16T15:54:33.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

This was implemented and this ticket should have been closed.

3.9.1.596 1712 - Add LWIP Support to RTEMS

Id	1712
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Created	2010-10-28T15:14:22.000Z
Updated	2021-12-16T15:53:06.000Z
Milestone	6.1
Labels	network::legacy, priority::normal, resolution::fixed, resolution::wontfix, tickettype::enhancement, version::4.11, version::HEAD
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/1712
Merges	0

This port was done by Marcello Presulli <m.presulli@embed-it.com> and has been in my inbox for a while. I think I have merged most of their BSP specific work but the lwip has been pending. They managed to run LWIP+SNMP and an application in something like 128K RAM

Here are some email fragments about it.

For now we have just finished to port the latest lwip-1.3.2 based on the latest rtems 4.9.4 version successfully including a test_app for pings.

We have stressed the stack with ping floods (packetsize 1400 Bytes interval ~150ms) about 250.000 sequences or more without packet losses and an average latency of 2ms.

Additional we have adopted a new bsp target for the mcf5225x platform.

To lwip now:

we integrated it directly via the autoconfigure/automake process under the rtems cpukit/liblwip subtree and therefore it gets built with rtems when u configure it with –enable-networking=lwip appropriately. The driver on the other side we put it in libcpu/m68k/mcf5225x and it got built in the library context of the librtemsbsp.a. The driver has only 2 references on lwip headers . . .

To the bsp:

The bsp we have adopted from mcf52223 and have created it as a own bsp-target=mcf5225x also via the autoconfig/automake mechanism. In the bsp itself i have modified the

bsp_get_CPU_clock_speed() and some improvements in the console driver and PIT2 timer interrupt. The bsp_start() we have defined as weak symbol so we don't have to touch the "empty" bsp_start() of rtems coz it's platform-circuit specific you know.

- mcf5225x+lwip.zip

Author: Joel Sherrill 2010-10-28T15:14:22.000Z

- **Attachment** mcf5225x+lwip.zip added

LWIP + BSP modifications as received

Author: Trac Migrate 2010-11-02T23:41:51.000Z

- **Cc** added @sebastian.huber
- **Cc** added @@chrisj
- **Cc** added @thomas.doerfler
- **Cc** added @ralf.corsepius

Replying to comment:8:

> Sebastian, others, I have had second thoughts about putting this in RTEMS. I agree that it would be better to submit the port to LWIP and let it live there. IMO, this proposal is non-applicable, because a network stack's interactions are deeply woven with the OS.
>
> Considering this, using an external networking stack introduces bootstrapping problems (== problems building rtems).
>
> That said, to me, LWIP is a binary decision: Switch from BSD or LWIP rsp. to forget about it - I am very strongly leaning towards the latter and consider all proposal so far to be beyond reason.

Author: Gedare Bloom 2014-11-22T14:28:21.000Z

- **Description** changed

```
This port was done by Marcello Presulli <m.presulli@embed-it.com> and␣
↪has been in my inbox for a while.  I think I have merged most of␣
↪their BSP specific work but the lwip has been pending.  They managed␣
↪to run LWIP+SNMP and an application in something like 128K RAM

Here are some email fragments about it.



For now we have just finished to port the latest lwip-1.3.2 based on␣
↪the latest rtems 4.9.4 version successfully including
a test_app for pings.

We have stressed the stack with ping floods (packetsize 1400 Bytes␣
```

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```
↪interval ~150ms) about 250.000 sequences or more without
packet losses and an average latency of 2ms.

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To lwip now:

we integrated it directly via the autoconfigure/automake process under␣
↪the
rtems cpukit/liblwip subtree and therefore it gets built with rtems
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↪got
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The bsp we have adopted from mcf52223 and have created it as a own
bsp-target=mcf5225x also via the autoconfig/automake mechanism.
In the bsp itself i have modified the bsp_get_CPU_clock_speed() and some
improvements in the console driver and PIT2 timer interrupt.
The bsp_start() we have defined as weak symbol so we don't have to touch
the "empty" bsp_start() of rtems coz it's platform-circuit
specific you know.
```

- **Owner** set to @joel
- **Status** changed from *new* to *assigned*
- **Version** changed from ~"HEAD" to ~"4.11"

Author: Gedare Bloom 2014-11-22T14:28:41.000Z

- **Resolution** set to ~"wontfix"
- **Status** changed from *assigned* to *closed*

Author: Gedare Bloom 2014-11-22T14:29:10.000Z

- **Milestone** changed from %"4.11" to %"5.0"
- **Resolution** ~"wontfix" deleted
- **Status** changed from *closed* to *reopened*

Author: Trac Migrate 2016-03-20T01:17:10.000Z

Some more LwIP pointers and ideas are expressed at next Wiki page

https://devel.rtems.org/wiki/Packages/LWIP

Author: Trac Migrate 2017-11-09T06:26:42.000Z

- **Milestone** changed from %"5.0" to %"6.1"

Milestone renamed

Author: Joel Sherrill 2021-12-16T15:53:06.000Z

- **Description** changed

```
This port was done by Marcello Presulli <m.presulli@embed-it.com> and␣
↪has been in my inbox for a while.  I think I have merged most of␣
↪their BSP specific work but the lwip has been pending.  They managed␣
↪to run LWIP+SNMP and an application in something like 128K RAM

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improvements in the console driver and PIT2 timer interrupt.
The bsp_start() we have defined as weak symbol so we don't have to touch
```

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```
the "empty" bsp_start() of rtems coz it's platform-circuit
specific you know.
```

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

lwip is currently in its own repo and has better support. Closing.

3.9.1.597 3878 - rtems06: All BSPs Fail to build with BSP Builder on rtems 6

Id	3878
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-02-20T14:12:10.000Z
Updated	2021-12-16T15:48:27.000Z
Milestone	6.1
Labels	priority::normal, resolution::worksforme, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3878
Merges	0

I think there are a couple of places in an rtems6 build of RTEMS itself where rtems5 is being used from some hard-coded. Not sure what's up but here's the message to the build@ list.

https://lists.rtems.org/pipermail/build/2020-February/010431.html

From the post above, you only see that all failed. Looking at the build log from a single BSP, I see is early which doesn't cause a visible failure

gmake[4]: Entering directory `/home/joel/rtems-cron-6/b-jmr3904/mips-rtems6/c/jmr3904/make' sed -e "s|[@]prefix[@]|/home/joel/rtems-cron-6/tools/6/bsp-install|" -e "s|[@]exec_prefix[@]|/home/joel/rtems-cron-6/tools/6/bsp-install/mips-rtems6|" -e "s|[@]pkgdatadir[@]|/home/joel/rtems-cron-6/tools/6/bsp-install/share/rtems5|"

and this one which is error inducing.

: error trying to exec 'mips-rtems5-gcc': execvp: No such file or directory error: compiling wrapper: Compiler error gmake[5]: *** [dl08-sym.o] Error 10

The first looks like a typo that isn't breaking anything but needs to be fixed.

The latter is some issue during the dl tests using rtems5 or it is hard-coded in a tool somewhere.

Author: Joel Sherrill 2021-12-16T15:48:27.000Z

- **Resolution** set to ~"worksforme"
- **Status** changed from *assigned* to *closed*

3.9.1.598 4194 - RSB failed with mail subject: Build Linux: PASSED 6/rtems-arm on x86_64-linux-gnu

Id	4194
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-12-01T18:17:15.000Z
Updated	2021-12-16T15:47:03.000Z
Milestone	6.1
Labels	priority::normal, resolution::worksforme, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4194
Merges	0

Original author: sebastian.huber

```
error: config error: gdb-common-1.cfg:99: "gdb: python: header file not found:␣
↪python2.7/Python.h, please install"
Build FAILED
Mailing report: build@rtems.org
```

The mail subject should indicated that the build failed.

Author: Joel Sherrill 2021-12-16T15:47:03.000Z

Original author: sebastian.huber

- **Resolution** set to ~"worksforme"
- **Status** changed from *new* to *closed*

Haven't seen a failed build with an incorrect header recently.

3.9.1.599 4070 - RISC-V Multiple Definition Error (many BSPs)

Id	4070
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-09-06T17:56:32.000Z
Updated	2021-12-16T15:40:50.000Z
Milestone	6.1
Labels	arch:riscv, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4070
Merges	0

This error appears to occur on all RISC-V BSPs which do not fail at the dynamic loading rap section 0 error. I assume that eventually they may all hit this. List of BSPs failing below message.

/home/joel/rtems-cron-6/tools/6/lib/gcc/riscv-rtems6/10.2.1/../../../../riscv-rtems6/bin/ld: ./../../lib/libbsp/riscv/riscv/librtemsbsp.a(htif.o):/home/joel/rtems-cron-6/rtems/bsps/riscv/riscv/include/dev/serial/htif.h:48: multiple definition of `htif_console_handler'; ./../../lib/libbsp/riscv/riscv/librtemsbsp.a(console-config.o):/home/joel/rtems-cron-6/rtems/bsps/riscv/riscv/include/dev/serial/htif.h:48: first defined here /home/joel/rtems-cron-6/tools/6/lib/gcc/riscv-rtems6/10.2.1/../../../../riscv-rtems6/bin/ld: ./../../lib/libbsp/riscv/riscv/librtemsbsp.a(htif.o):/home/joel/rtems-cron-6/rtems/bsps/riscv/riscv/include/dev/serial/htif.h:48: multiple definition of `htif_console_handler'; ./../../lib/libbsp/riscv/riscv/librtemsbsp.a(console-config.o):/home/joel/rtems-cron-6/rtems/bsps/riscv/riscv/include/dev/serial/htif.h:48: first defined here mv -f cdtest/.deps/cdtest-init.Tpo cdtest/.deps/cdtest-init.Po

rv32iac_spike rv32imac_spike rv32imafc_spike rv32imafdc_spike rv32imafd_spike rv32im_spike rv32i_spike rv64imac_medany_spike rv64imac_spike rv64imafdc_medany_spike rv64imafdc_spike rv64imafd_medany_spike rv64imafd_spike

Author: Joel Sherrill 2021-12-16T15:40:50.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Works now

3.9.1.600 4204 - Make Termination Handler which Prints Exit Information Less Scary

Id	4204
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-12-09T23:54:18.000Z
Updated	2021-12-16T15:39:48.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4204
Merges	0

This task is change the default termination handler to print successful exit when the cause was exit(0). It scares users to see it and requires explanation.

Author: Joel Sherrill 2021-12-16T15:39:48.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

This was implemented by Chris Johns.

3.9.1.601 4543 - cannot build multiprocessor application on eclipse

Id	4543
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-11-03T14:22:44.000Z
Updated	2021-12-16T15:38:53.000Z
Milestone	6.1
Labels	arch:aarch64, priority::high, resolution::worksforme, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4543
Merges	0

Original author: mohamedosama94

Hi,

hope my mail finds you well, i have an issue as i am using rtems6 for zinq a53_lp64 i downloaded the source and installed the toolchain aarch64-rtems6 and i built the bsp successfully by using waf and i used the qemu to run the test samples exe files successfully , so i installed the eclipse and added rtems plugin to it and i built the sample rtems example successfully but when i try to build an application task has test_begin() or test_end() the make is uncomplete and error (.text.Init+0x50): relocation truncated to fit: R_AARCH64_CALL26 against undefined symbol `rtems_test_begin' always appear i tried open declaration and i found the reference prototype int rtems_test_begin(const char* name, const RTEMS_TEST_STATE state); on test-info.h so eclipse refuse to build as cannot see the source code of the function and this also for rtems_test_end so what i have to do to make the eclipse build the rtems-application, kindly check the logs

/home/mohamed/quick-starts/rtems/6/lib/gcc/aarch64-rtems6/10.3.1/../../../../aarch64-rtems6/bin/ld: o-optimize/init.o: in function `Init': /home/mohamed/eclipse-ground/rtems/rtems-app//init.c:64: undefined reference to `rtems_test_begin' /home/mohamed/eclipse-ground/rtems/rtems-app//init.c:64:(.text.Init+0x50): relocation truncated to fit: R_AARCH64_CALL26 against undefined symbol `rtems_test_begin' /home/mohamed/quick-starts/rtems/6/lib/gcc/aarch64-rtems6/10.3.1/../../../../aarch64-rtems6/bin/ld: /home/mohamed/eclipse-ground/rtems/rtems-app//init.c:66: undefined reference to `locked_print_initialize' /home/mohamed/eclipse-ground/rtems/rtems-app//init.c:66:(.text.Init+0x54): relocation truncated to fit: R_AARCH64_CALL26 against undefined symbol `locked_print_initialize' /home/mohamed/quick-starts/rtems/6/lib/gcc/aarch64-rtems6/10.3.1/../../../../aarch64-rtems6/bin/ld: o-optimize/init.o: in function `success': /home/mohamed/eclipse-ground/rtems/rtems-app//init.c:31: undefined reference to `rtems_test_end' /home/mohamed/eclipse-ground/rtems/rtems-app//init.c:31:(.text.Init+0x5c): relocation truncated to fit: R_AARCH64_CALL26 against undefined symbol `rtems_test_end' /home/mohamed/quick-starts/rtems/6/lib/gcc/aarch64-rtems6/10.3.1/../../../../aarch64-rtems6/bin/ld: /home/mohamed/eclipse-ground/rtems/rtems-app//init.c:32: undefined reference to `rtems_test_exit' /home/mohamed/eclipse-ground/rtems/rtems-app//init.c:32:(.text.Init+0x64): relocation truncated to fit: R_AARCH64_CALL26 against undefined symbol `rtems_test_exit' /home/mohamed/quick-starts/rtems/6/lib/gcc/aarch64-rtems6/10.3.1/../../../../aarch64-

rtems6/bin/ld: o-optimize/init.o:(.rodata._User_extensions_Initial_extensions+0x80): undefined reference to `rtems_test_fatal_extension' collect2: error: ld returned 1 exit status

best regards, Mohamed

Author: Joel Sherrill 2021-11-03T16:11:38.000Z

Original author: mohamedosama94

Those symbols are part of the RTEMS test support and would not have been included in whatever test directory you copied. They may be in a test support library. I don't know if it is installed.

I hope you mean SMP and not multiprocessor. Those are different configurations in RTEMS terminology.

Which test did you copy?

Author: Trac Migrate 2021-11-04T10:43:20.000Z

Original author: mohamedosama94

Replying to Joel Sherrill:

> Those symbols are part of the RTEMS test support and would not have been included in whatever test directory you copied. They may be in a test support library. I don't know if it is installed. I hope you mean SMP and not multiprocessor. Those are different configurations in RTEMS terminology. Which test did you copy? Dear Joel Sherrill,
>
> thanks for your reply, yes I mean SMP, and this issue happens when I use any test suites samples that have test_begin() and test_end() functions like: "base_mp "test, "base_sp" test but test like "hello" that doesn't have these functions build normally on eclipse so how can I install the support library and make the eclipse can reach them

Author: Joel Sherrill 2021-11-04T13:29:30.000Z

Original author: mohamedosama94

Replace test_begin() and test_end() with a print to denote beginning and end of the test.

base_mp is for the distributed multiprocessing model in RTEMS. You want to build with SMP not multiprocessing (confusing I know). And I don't think there is an SMP sample. You may have to look at one of the tests smptest directory. These all use test support functions also but smpschedaffinity01 and smpschedaffinity01 are not large and show how to do affinity. smpthreadpin01 shows pinning but is a bit more complicated than just demonstrating that a collection of threads were properly assigned to the desired core.

Author: Joel Sherrill 2021-12-16T15:38:53.000Z

Original author: mohamedosama94

- **Resolution** set to ~"worksforme"
- **Status** changed from *new* to *closed*

3.9.1.602 4126 - Remove legacy networking stack from rtems.git and place in a new repo

Id	4126
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2020-10-06T23:58:25.000Z
Updated	2021-12-16T15:36:46.000Z
Milestone	6.1
Labels	network::legacy, priority::normal, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4126
Merges	0

Remove the legacy networking stack from `rtems.git` and place it in new top level repo `rtems-legacy-network.git`.

The initial tasks are:

1. Move the code to a new repo
2. Add `rtems_waf` support to build it
3. Clean out BSP references to network interfaces or drivers
4. Merge in the network demos repo

Author: Chris Johns 2020-10-07T00:08:03.000Z

- **Description** changed

```
Remove the legacy networking stack from `rtems.git` and place it in new top level repo `rtems-legacy-network.git`.

The initial tasks are:

1. Move the code to a new repo

2. Add `rtems_waf` support to build it

3. Clean out BSP references to network interfaces or drivers
+
+ 4. Merge in the network demos repo
```

Author: Joel Sherrill 2021-12-16T15:36:46.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Already done.

3.9.1.603 4501 - TraceConverter.cc: Uncaught exception issue spotted by Coverity

Id	4501
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-19T19:21:36.000Z
Updated	2021-12-15T16:35:20.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4501
Merges	0

Original author: rlong

CID 1471639: Uncaught exception

```
CID 1471639 (#1-9 of 9): Uncaught exception (UNCAUGHT_EXCEPT)root_function: In function main(int, char **) an exception of type rld::error is thrown and never caught.
.
.
.
fun_call_w_exception: Called function throws an exception of type rld::error. [show details]
144    executableInfo = new Coverage::ExecutableInfo(
145      executable,
146      "",
147      false,
148      symbolsToAnalyze
149    );
```

Author: Trac Migrate	2021-10-08T13:58:46.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"234c19e847611c7514198e0d9b091e92eb868a89/rtems-tools" 234c19e/rtems-tools]:

```
TraceConverter.cc: Add catch for exception

CID 1471639: Uncaught exception

Closes #4501
```

Author: Trac Migrate 2021-10-08T19:17:21.000Z

Original author: rlong

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

Author: Trac Migrate 2021-10-13T17:05:08.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

In [changeset:"958aa5b805616d2f06a839c113a2c6cf64537603/rtems-tools" 958aa5b/rtems-tools]:

```
TraceConverter.cc: Add catch for exception

CID 1471639: Add catch for exception

Closes #4501
```

Author: Trac Migrate 2021-10-18T15:32:48.000Z

Original author: rlong

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

Author: Trac Migrate 2021-11-04T15:43:20.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

In [changeset:"d1df4f6e02fe22d2cb542adbd6ba4248ee077892/rtems-tools" d1df4f6/rtems-tools]:

```
TraceConverter.cc: Add catch for exception

CID 1471639: Add catch for exception

Closes #4501
```

Author: Trac Migrate 2021-11-15T20:13:41.000Z

Original author: rlong

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

Author: Trac Migrate 2021-11-30T16:00:21.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

In [changeset:"59ca889149470477955e8842a95f64850dc33101/rtems-tools" 59ca889/rtems-tools]:

```
TraceConverter.cc: Add final catch for exceptions

CID 1471639: Add catch for exception

Closes #4501
```

Author: Trac Migrate 2021-12-13T13:34:03.000Z

Original author: rlong

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

Author: Trac Migrate 2021-12-15T16:35:20.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

In [changeset:"c9aefbba45ec19085e6f668c3da7d617d21ce181/rtems-tools" c9aefbb/rtems-tools]:

```
TraceConverter.cc: Fix Uncaught exception issue

CID 1471639: Uncaught exception

Closes #4501
```

3.9.1.604 4569 - aarch64 cache support does not provide rtems_cache_disable_data()

Id	4569
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2021-12-10T13:52:44.000Z
Updated	2021-12-12T17:58:14.000Z
Milestone	6.1
Labels	arch:aarch64, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4569
Merges	0

Original author: sebastian.huber

The aarch64 cache support defines:

bsps/aarch64/shared/cache/cache.c:#define CPU_CACHE_SUPPORT_PROVIDES_DISABLE_DATA

However, it does not provide rtems_cache_disable_data().

Author: Kinsey Moore 2021-12-10T15:31:20.000Z

Original author: sebastian.huber

You are correct, while the AArch64 cache code provides _CPU_cache_disable_data(), it does not provide rtems_cache_disable_data(). I'll submit a patch to remove this define since the existing support via _CPU_cache_disable_data should be sufficient given that CPU_DATA_CACHE_ALIGNMENT is defined.

Author: Trac Migrate 2021-12-12T17:58:14.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"68b0db358c81a7f770a44ceb819197bdc320bc99/rtems" 68b0db35/rtems]:

```
bsps/aarch64: Remove erroneous cache feature

The AArch64 cache implementation does not define
rtems_cache_disable_data(), but declares that it does via
CPU_CACHE_SUPPORT_PROVIDES_DISABLE_DATA. The existing implementation of
_CPU_cache_disable_data() is sufficient to enable this functionality
without the erroneous cache feature flag.

Closes #4569
```

3.9.1.605 4081 - Remove Autoconf/Automake based build system

Id	4081
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-09-17T06:05:47.000Z
Updated	2021-11-29T15:00:03.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::build, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4081
Merges	0

Original author: sebastian.huber

Remove Autoconf/Automake based build system after a testing phase of the waf based build system. The planned date to remove the old build system is 1st November 2020.

For a status of the new build system see:

https://devel.rtems.org/wiki/Release/6/Waf%20BSP%20Checklist

Author: Chris Johns 2020-09-17T06:11:14.000Z

Original author: sebastian.huber

What will happen to https://git.rtems.org/rtems/tree/c/ACKNOWLEDGEMENTS ?

Author: Trac Migrate 2020-09-17T06:13:04.000Z

Original author: sebastian.huber

Move it to the top-level or the documentation?

Author: Chris Johns 2020-09-17T06:15:26.000Z

Original author: sebastian.huber

Sorry, I do not know. It is out of date but historically important. I think this is one for Joel.

I could not see anything else in the `c` tree.

Author: Chris Johns 2021-02-26T07:18:57.000Z

Original author: sebastian.huber

The `motorola_powerpc` bootloader is looks like it is linking in some fake rom code and in the autoconf build system that is conditional on it being a qemu build.

Author: Joel Sherrill 2021-09-13T21:42:26.000Z

Original author: sebastian.huber

- **Summary** changed from *Remove Autoconf/Aotomake based build system* to *Remove Autoconf/Automake based build system*

Author: Joel Sherrill 2021-09-13T21:45:41.000Z

Original author: sebastian.huber

Any objections to removing this now? :)

The RTEMS kernel recipe is still broken but that's about the end of it.

Author: Trac Migrate 2021-09-19T16:42:08.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"a178eba2a4a1c08faf938376ac948bb5d2cb8a78/rtems-source-builder" a178eba/rtems-source-builder]:

```
Remove automake/autoconf from rtems 6 tools

These are unneeded with the waf build system.

Closes #4081.
```

Author: Trac Migrate 2021-09-21T08:25:58.000Z

Original author: sebastian.huber

In [changeset:"db8f598d56951cf43f22a5e325e0d23c8f7559f9/rtems" db8f598/rtems]:

```
build: Remove old build system

Close #3250.
Close #4081.
```

Author: Trac Migrate 2021-11-29T15:00:03.000Z

Original author: sebastian.huber

In [changeset:"e945e3fc4d6a6a74789c9a348120ec7d06e19231/rtems" e945e3fc/rtems]:

```
*/aclocal/*: Remove remnants of autoconf/automae build system

Updates #4081.
```

3.9.1.606 4527 - Add new directives to get all time values provided by the timehands

Id	4527
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-10-11T14:01:01.000Z
Updated	2021-11-19T08:54:28.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4527
Merges	0

Original author: sebastian.huber

Add directives for all time values provided by the timehands to the Clock Manager.

Author: Trac Migrate 2021-11-17T08:11:55.000Z

Original author: sebastian.huber

In [changeset:"ccbcfb679da0a6c07878d3ae4ff0f91cb1c3caee/rtems" ccbcfb6/rtems]:

```
rtems: Add new clock manager directives

Update #4527.
```

Author: Trac Migrate 2021-11-19T08:54:28.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"38ec48d2927d76d77442584d5325ef49d4774baa/rtems-docs" 38ec48d/rtems-docs]:

```
c-user: Document new clock manager directives

Add new clock manager directives to get all times provided by the
timehands.

Close #4527.
```

3.9.1.607 4221 - dtc recipe issue – dependency on yaml.h

Id	4221
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2021-01-22T19:52:32.000Z
Updated	2021-11-18T17:05:44.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4221
Merges	0

This shows up on FreeBSD and may just be a matter of me not knowing the right package to install. Which yaml development package should be loaded. But it does fail.

```
CC fstree.o
CC livetree.o
CC treesource.o
gmake: *** No rule to make target 'yaml.h', needed by 'yamltree.o'.  Stop.
shell cmd failed: /bin/sh -ex  /usr/home/joel/rtems-cron-6/rtems-source-builder/
↪rtems/build/dtc-1.6.0-x86_64-freebsd12.2-1/do-build
error: building dtc-1.6.0-x86_64-freebsd12.2-1

Suggestions appreciated.
See error report: rsb-report-dtc-1.6.0-x86_64-freebsd12.2-1.txt
```

Author: Chris Johns 2021-01-23T23:32:28.000Z

```
$ find /usr/local/include -name yaml.h
/usr/local/include/yaml.h
$ pkg which /usr/local/include/yaml.h
/usr/local/include/yaml.h was installed by package libyaml-0.2.2
```

A patch to the user manual would be welcome

Author: Chris Johns 2021-01-23T23:33:27.000Z

- **Description** changed

```
This shows up on FreeBSD and may just be a matter of me not knowing the right package to install. Which yaml development package should be loaded. But it does fail.
-
+ {{{
CC fstree.o
CC livetree.o
CC treesource.o
gmake: *** No rule to make target 'yaml.h', needed by 'yamltree.o'. Stop.
shell cmd failed: /bin/sh -ex  /usr/home/joel/rtems-cron-6/rtems-source-builder/rtems/build/dtc-1.6.0-x86_64-freebsd12.2-1/do-build
error: building dtc-1.6.0-x86_64-freebsd12.2-1

Suggestions appreciated.
See error report: rsb-report-dtc-1.6.0-x86_64-freebsd12.2-1.txt
+ }}}
```

Author: Trac Migrate 2021-01-25T05:44:59.000Z

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"c709017efba6de38225afc697a5ed2381cc12071/rtems" c709017/rtems]:

```
Fix RTEMS_LINKER_ROSET_ITEM_ORDERED_DECLARE()

Add "extern" similar to RTEMS_LINKER_RWSET_ITEM_ORDERED_DECLARE().

Close #4221.
```

Author: Trac Migrate 2021-01-25T05:46:44.000Z

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

Sorry, wrong number in commit.

Author: Trac Migrate 2021-11-13T11:45:48.000Z

- **Owner** set to kgardas

- **Status** changed from *reopened* to *accepted*

This is a bug in dtc 1.6.0 which shows when yaml library is installed on FreeBSD. I already created a patch for it just to realize that 1.6.1 contains the same fix. Working on dtc-1.6.0 -> 1.6.1 update patch.

Author: Trac Migrate 2021-11-18T17:05:44.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"f2a89731ce258b524f6a5570000f6950f0d928c4/rtems-source-builder" f2a8973/rtems-source-builder]:

```
RSB: update dtc 1.6.0 -> dtc 1.6.1

Fixes #4221

Note: the patch updates only dtc 1.6.0 occurrences. It leaves all other
dtc (1.4.x) usages as they are just to not break anything which depends
on older dtc versions.
```

3.9.1.608 4145 - rtems-source-builder: Update RTEMS Kernel Recipe to Use waf for RTEMS

Id	4145
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-10-14T16:57:11.000Z
Updated	2021-11-09T17:06:43.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4145
Merges	0

kernel configuration builds using autoconf-based build system. Needs to be switched to waf. Hopefully contained to rtems-kernel-common.cfg.

Author: Joel Sherrill 2020-10-14T17:17:25.000Z

- **Summary** changed from *rtems-source-builder: RTEMS Kernel Recipe* to *rtems-source-builder: Update RTEMS Kernel Recipe to Use waf for RTEMS*

Author: Chris Johns 2020-11-09T04:54:19.000Z

This is not as easy as I thought it might be. Let me explain . . .

The `config.ini` file hides some important detail the RSB needs. The RSB currently names the package as:

```
rtems-%{rtems_version}-%{_target}-%{rtems_bsp}-%{_host}-%{release}
```

The target and BSP are in the build config file and a config file could build a mix of architectures breaking this naming.

The simplest approach is to take the arguments provided to the RSB and create a `config.ini` file but this would be limiting where complex BSP options are needed.

I could check if the `--with-rtems-bspopts` option is a path and that could be a list of specific BSP options appended into the BSP specific area.

Should the following options print a depreciate warning: `--with-rtems-legacy-network` `--with-rtems-cxx` I am not sure about `--with-rtems-posix`. I think it should be removed and POSIX always be enabled.

Author: Trac Migrate 2021-11-09T17:06:43.000Z

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"def934785d4ae3c4b90733e8d5c443d61368268f/rtems-source-builder" def9347/rtems-source-builder]:

```
rtems-kernel: Implement kernel recipe using waf

Closes #4145
```

3.9.1.609 4533 - libdebugger should only build for archs with a backend

Id	4533
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2021-10-21T02:04:25.000Z
Updated	2021-10-25T02:55:00.000Z
Milestone	6.1
Labels	cpukit::debugger, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4533
Merges	0

Libdebugger has limited backend support however the generic parts are bring built for all architectures and `libdebugger.a` is being install however it will never link because of the missing backend support.

LibBSD has been fixed to correctly detect `libdebugger.a` and enable the test. This now fails to build.

Author: Trac Migrate 2021-10-25T02:55:00.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"3f0ad2b3b70d62bee6b2effb4ff9b31650aff726/rtems" 3f0ad2b/rtems]:

```
spec/libdebugger: Only enable for supported architectures

Closes #4533
```

3.9.1.610 4218 - aarch64 as internal error with spconfig01

Id	4218
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2021-01-20T18:11:24.000Z
Updated	2021-10-19T13:49:43.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::binutils, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4218
Merges	0

This is to track https://sourceware.org/bugzilla/show_bug.cgi?id=27217 where there are more details on the actual failure.

This impacts spconfig01 and spmisc01 on all aarch64 BSPs.

Author: Joel Sherrill 2021-01-22T15:23:01.000Z

- **Description** changed

```
This is to track https://sourceware.org/bugzilla/show_bug.cgi?id=27217␣
↪where there are more details on the actual failure.
+
+ This impacts spconfig01 and spmisc01 on all aarch64 BSPs.
```

Author: Trac Migrate 2021-10-19T13:49:43.000Z

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"

- **Status** changed from *new* to *closed*

In [changeset:"e04fddccf9ecf187c6b66b7caf61f64af24c4f0a/rtems-source-builder" e04fddc/rtems-source-builder]:

```
rtems-binutils: Update to 2.37 and update head

Update to binutils 2.37 for RTEMS 6 to fix an issue when building tests
for AArch64. Also updated the commit and hash for binutils in
rtems-binutils-head.

Closes #4218
```

3.9.1.611 4525 - rtems-tld.cpp: Logically dead code error spotted by Coverity

Id	4525
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-10-08T17:23:48.000Z
Updated	2021-10-12T14:40:44.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4525
Merges	0

Original author: rlong

CID 1399595: Logically dead code in generate_traces().

```
1263            if (sig.has_ret () && !generator_.ret_trace.empty ())
1264            {
1265              if (ds_added)
1266                ds += " + ";
1267              else
1268                ds_added = true;
const: At condition drs_added, the value of drs_added must be equal to 0.
dead_error_condition: The condition drs_added cannot be true.
1269              if (drs_added)
CID 1399595 (#1 of 1): Logically dead code (DEADCODE)dead_error_line: Execution␣
↪cannot reach this statement: drs += " + ";.
1270                drs += " + ";
1271              else
1272                drs_added = true;
1273              ds += "sizeof(" + sig.ret + ')';
1274              drs += "sizeof(" + sig.ret + ')';
1275            }
```

Author: Trac Migrate	2021-10-12T14:40:44.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"0acb4d08ed825b39de2ca674c8a9468f76b0b10e/rtems-tools" 0acb4d0/rtems-tools]:

```
rtems-tld.cpp: Remove logically dead code

CID 1399595: Logically dead code in generate_traces().

Closes #4525
```

3.9.1.612 4502 - rld-rap.cpp: Uncaught exception issue spotted by Coverity

Id	4502
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-19T19:26:56.000Z
Updated	2021-10-08T13:58:49.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4502
Merges	0

Original author: rlong

CID 1471643: Uncaught exception

```
CID 1471643 (#1 of 1): Uncaught exception (UNCAUGHT_EXCEPT)exn_spec_violation: An␣
↪exception of type rld::error is thrown but the throw list noexcept doesn't␣
↪allow it to be thrown. This will cause a call to unexpected() which usually␣
↪calls terminate().
724     section_merge::~section_merge ()
725     {
726       if (rld::verbose () >= RLD_VERBOSE_FULL_DEBUG)
fun_call_w_exception: Called function throws an exception of type rld::error.␣
↪[show details]
727         std::cout << "rap:section-merge: " << sec.name
728                   << " size=" << sec.size ()
729                   << " offset=" << sec.offset
730                   << " " << obj.obj.name ().full ()  << std::endl;
731     }
```

Author: Trac Migrate	2021-10-08T13:58:49.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"5519a635fd3d0754ce7387ebde2c677b4e2e495a/rtems-tools" 5519a63/rtems-tools]:

```
rld-rapp.cpp: Add catch for exception

CID 1471643: Uncaught exception

Closes #4502
```

3.9.1.613 4519 - record-main-lttng.cc: Out-of-bounds access

Id	4519
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-09-30T19:55:28.000Z
Updated	2021-10-07T14:25:10.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4519
Merges	0

Original author: rlong

CID 1503017: Out-of-bounds access in CopyThreadName().

```
1. Condition api_index < 3, taking false branch.
298  if (api_index < THREAD_API_COUNT) {
299    name = thread_names_[api_index][GetObjIndexOfID(item.
↪data)](GetObjIndexOfID(item.data));
300  } else {
2. alias: Assigning: name = kEmptyThreadName. name now points to byte 0 of␣
↪kEmptyThreadName (which consists of 3 bytes).
301    name = kEmptyThreadName;
302  }
303
CID 1503017 (#1 of 1): Out-of-bounds access (OVERRUN)3. overrun-buffer-arg:␣
↪Overrunning buffer pointed to by name of 3 bytes by passing it to a function␣
↪which accesses it at byte offset 15 using argument 16UL.
304  std::memcpy(dst, name, THREAD_NAME_SIZE);
```

Author: Trac Migrate	2021-10-07T14:25:10.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"83b3d58c4d10cad13cdf9130936ad245c332b741/rtems-tools" 83b3d58/rtems-tools]:

```
record-main-lttng.cc: Change size of empty string

CID 1503017: Out-of-bounds access in CopyThreadName().

Change size of kEmptyThreadName from THREAD_API_COUNT to
THREAD_NAME_SIZE.

Closes #4519
```

3.9.1.614 4492 - ObjdumpProcessor.cc: Uninitialized pointer field

Id	4492
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-11T18:37:57.000Z
Updated	2021-09-30T13:10:54.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4492
Merges	0

Original author: rlong

CID 1506210: Uninitialized pointer field

```
125  ObjdumpProcessor::ObjdumpProcessor(
126    DesiredSymbols&     symbolsToAnalyze,
127    std::shared_ptr<Target::TargetBase>& targetInfo
128  ): symbolsToAnalyze_m( symbolsToAnalyze ),
129     targetInfo_m( targetInfo )
130  {
CID 1506210 (#1 of 1): Uninitialized pointer field (UNINIT_CTOR)2. uninit_member:␣
↪Non-static class member inputBuffer_m is not initialized in this constructor␣
↪nor in any functions that it calls.
131  }
```

Author: Trac Migrate	2021-09-30T13:10:54.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

3.9.1.615 4434 - record-filter-zlib.cc: Uninitialized pointer field error spotted by Coverity

Id	4434
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-19T16:29:34.000Z
Updated	2021-09-27T22:18:30.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4434
Merges	0

Original author: rlong

CID 1503020: Uninitialized pointer field in ZlibFilter().

```
36ZlibFilter::ZlibFilter() : buffer_(65536)
37{
CID 1503013: Unchecked return value from library (CHECKED_RETURN) [select issue]
38  inflateInit(&stream_);
2. uninit_member: Non-static class member stream_.next_in is not initialized in this constructor nor in any functions that it calls.
4. uninit_member: Non-static class member stream_.avail_in is not initialized in this constructor nor in any functions that it calls.
6. uninit_member: Non-static class member stream_.total_in is not initialized in this constructor nor in any functions that it calls.
8. uninit_member: Non-static class member stream_.next_out is not initialized in this constructor nor in any functions that it calls.
10. uninit_member: Non-static class member stream_.avail_out is not initialized in this constructor nor in any functions that it calls.
12. uninit_member: Non-static class member stream_.total_out is not initialized in this constructor nor in any functions that it calls.
14. uninit_member: Non-static class member stream_.msg is not initialized in this constructor nor in any functions that it calls.
16. uninit_member: Non-static class member stream_.zalloc is not initialized in this constructor nor in any functions that it calls.
18. uninit_member: Non-static class member stream_.zfree is not initialized in this constructor nor in any functions that it calls.
20. uninit_member: Non-static class member stream_.opaque is not initialized in this constructor nor in any functions that it calls.
22. uninit_member: Non-static class member stream_.data_type is not initialized in this constructor nor in any functions that it calls.
24. uninit_member: Non-static class member stream_.adler is not initialized in this constructor nor in any functions that it calls.
CID 1503020 (#1 of 1): Uninitialized pointer field (UNINIT_CTOR)26. uninit_
```

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```
↪member: Non-static class member stream_.reserved is not initialized in this␣
↪constructor nor in any functions that it calls.
39}
```

Author: Trac Migrate 2021-09-27T22:18:30.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"7b5dc22c5d5f82354365bab10e9ae8e269b6b438/rtems-tools" 7b5dc22/rtems-tools]:

```
record-filter-zlib.cc: Initialize stream_'s fields

CID 1503020: Uninitialized pointer field

Closes #4434
```

3.9.1.616 4433 - DesiredSymbols.h: Uninitialized pointer field error spotted by coverity

Id	4433
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-19T16:13:54.000Z
Updated	2021-09-27T22:18:26.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4433
Merges	0

Original author: rlong

CID 1399637: Uninitialized pointer field in SymbolInformation().

```
176    SymbolInformation() :
177      baseAddress( 0 ),
178      uncoveredBranches( NULL ),
179      uncoveredRanges( NULL ),
180      unifiedCoverageMap( NULL )
181    {
CID 1399637 (#1 of 1): Uninitialized pointer field (UNINIT_CTOR)2. uninit_member:␣
↪Non-static class member sourceFile is not initialized in this constructor nor␣
```

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```
↪in any functions that it calls.
182    }
```

Author: Trac Migrate	2021-09-27T22:18:26.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"06a39db587cf5c980ee2bd56d5f634859781b075/rtems-tools" 06a39db/rtems-tools]:

```
DesiredSymbols.h: Initialize symbolInfo

CID 1399627: Uninitialized pointer field

Closes #4433
```

3.9.1.617 4488 - TraceWriterQEMU.cc: Uninitialized scalar variable issue spotted by Coverity

Id	4488
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-04T18:55:42.000Z
Updated	2021-09-27T22:18:24.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4488
Merges	0

Original author: rlong

CID 1506204: Uninitialized scalar variable

```
115    header.machine[1] = 0; // XXX ??
CID 1506204 (#1 of 1): Uninitialized scalar variable (UNINIT)4. uninit_use_in_
↪call: Using uninitialized value header. Field header._pad is uninitialized when␣
↪calling fwrite.
116    status = ::fwrite( &header, sizeof(trace_header), 1, traceFile );
```

Author: Trac Migrate	2021-09-27T22:18:24.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"70088f6f87381a45c523fedf50f4904c099907ce/rtems-tools" 70088f6/rtems-tools]:

```
TraceWriterQEMU.cc: Initialize header._pad

CID 1506204: Uninitialized scalar variable

Closes #4488
```

3.9.1.618 4491 - TraceWriterQEMU.cc: Buffer not null terminated issue spotted by Coverity

Id	4491
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-10T14:57:35.000Z
Updated	2021-09-27T22:18:21.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4491
Merges	0

Original author: rlong

CID 1506207: Buffer not null terminated

```
CID 1506207 (#1 of 1): Buffer not null terminated (BUFFER_SIZE)3. buffer_size:␣
↪Calling strncpy with a source string whose length (12 chars) is greater than or␣
↪equal to the size argument (12) will fail to null-terminate header.magic.
109    strncpy( header.magic, QEMU_TRACE_MAGIC, sizeof(header.magic) );
```

Author: Trac Migrate	2021-09-27T22:18:21.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"a06f48a6cd5567e6e173f275127dbaa26da7cfcb/rtems-tools" a06f48a/rtems-tools]:

```
TraceWriterQEMU.cc: Change strncpy to memcpy

CID 1506207: Buffer not null terminated

Closes #4491
```

3.9.1.619 4518 - RTEMS and LibBSD both provide competing pipe() interfaces

Id	4518
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2021-09-23T05:29:15.000Z
Updated	2021-09-24T00:07:33.000Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4518
Merges	0

RTEMS provides a `pipe()` call in `cpukit/libfs/src/pipe/pipe.c` and LibBSD also provides a call in `rtemsbsd/rtems/rtems-bsd-syscall-api.c`. We should not have competing interfaces.

The selection of the version you get depends on the link order and the linker version. The RTEMS 6 linker seems to have a different preference to RTEMS 5. Apart from this fragility LibBSD should not be providing this interface.

A LibBSD `pipe()` is problematic for a number of reasons and so I am going to remove the call from it.

If LibBSD support is needed it needs to be via a file system op handles like all other file system interfaces for descriptor based access. I will not be adding this support.

The removal of `pipe()` from LibBSD removes the `kqueue` support for pipes. See the test `selectpollkqueue01`. If this support is needed please contact the RTEMS developers.

Author: Chris Johns 2021-09-23T05:32:50.000Z

- **Description** changed

```
RTEMS provides a `pipe()` call in `cpukit/libfs/src/pipe/pipe.c` and␣
↪LibBSD also provides a call in `rtemsbsd/rtems/rtems-bsd-syscall-api.
↪c`. We should have competing calls.

- The selection of the version you get depends on the link order and␣
↪the linker version. The RTEMS 6 linker seems to have a different␣
↪preference to RTEMS 5. Apart from this fragility LibBSD should be␣
↪providing this interface.
+ The selection of the version you get depends on the link order and␣
↪the linker version. The RTEMS 6 linker seems to have a different␣
```

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```
↪preference to RTEMS 5. Apart from this fragility LibBSD should not be␣
↪providing this interface.
?                                                                      ␣
↪                                                                      ␣
↪                                                    ++++


A LibBSD `pipe()` is problematic for a number of reasons and so I am␣
↪going to remove the call from it.

If LibBSD support is needed it needs to be via a file system op handles␣
↪like all other file system interfaces for descriptor based access. I␣
↪will not be adding this support.
```

Author: Chris Johns 2021-09-23T05:34:24.000Z

- **Description** changed

```
- RTEMS provides a `pipe()` call in `cpukit/libfs/src/pipe/pipe.c` and␣
↪LibBSD also provides a call in `rtemsbsd/rtems/rtems-bsd-syscall-api.
↪c`. We should have competing calls.
+ RTEMS provides a `pipe()` call in `cpukit/libfs/src/pipe/pipe.c` and␣
↪LibBSD also provides a call in `rtemsbsd/rtems/rtems-bsd-syscall-api.
↪c`. We should not have competing calls.
?                                                                      ␣
↪                                                                      ␣
↪            ++++


The selection of the version you get depends on the link order and the␣
↪linker version. The RTEMS 6 linker seems to have a different␣
↪preference to RTEMS 5. Apart from this fragility LibBSD should not be␣
↪providing this interface.

A LibBSD `pipe()` is problematic for a number of reasons and so I am␣
↪going to remove the call from it.

If LibBSD support is needed it needs to be via a file system op handles␣
↪like all other file system interfaces for descriptor based access. I␣
↪will not be adding this support.
```

Author: Chris Johns 2021-09-23T09:16:00.000Z

- **Description** changed

```
RTEMS provides a `pipe()` call in `cpukit/libfs/src/pipe/pipe.c` and␣
↪LibBSD also provides a call in `rtemsbsd/rtems/rtems-bsd-syscall-api.
↪c`. We should not have competing calls.
```

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```
2
3 The selection of the version you get depends on the link order and the␣
  ↪linker version. The RTEMS 6 linker seems to have a different␣
  ↪preference to RTEMS 5. Apart from this fragility LibBSD should not be␣
  ↪providing this interface.
4
5 A LibBSD `pipe()` is problematic for a number of reasons and so I am␣
  ↪going to remove the call from it.
6
7 If LibBSD support is needed it needs to be via a file system op handles␣
  ↪like all other file system interfaces for descriptor based access. I␣
  ↪will not be adding this support.
8 +
9 + The removal of `pipe()` from LibBSD removes the `kqueue` support for␣
  ↪pipes. See the test `selectpollkqueue01`. If this support is needed␣
  ↪please contact the RTEMS developers.
```

Author: Chris Johns 2021-09-24T00:03:48.000Z

- **Description** changed

```
1 - RTEMS provides a `pipe()` call in `cpukit/libfs/src/pipe/pipe.c` and␣
  ↪LibBSD also provides a call in `rtemsbsd/rtems/rtems-bsd-syscall-api.
  ↪c`. We should not have competing calls.
2 ?                                                                    ␣
  ↪                                                                    ␣
  ↪                                  ^^^
3
4 + RTEMS provides a `pipe()` call in `cpukit/libfs/src/pipe/pipe.c` and␣
  ↪LibBSD also provides a call in `rtemsbsd/rtems/rtems-bsd-syscall-api.
  ↪c`. We should not have competing interfaces.
5 ?                                                                    ␣
  ↪                                                                    ␣
  ↪                                  +++++++ ^
6
7
8 The selection of the version you get depends on the link order and the␣
  ↪linker version. The RTEMS 6 linker seems to have a different␣
  ↪preference to RTEMS 5. Apart from this fragility LibBSD should not be␣
  ↪providing this interface.
9
10 A LibBSD `pipe()` is problematic for a number of reasons and so I am␣
  ↪going to remove the call from it.
11
12 If LibBSD support is needed it needs to be via a file system op handles␣
  ↪like all other file system interfaces for descriptor based access. I␣
  ↪will not be adding this support.
13
```

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```
The removal of `pipe()` from LibBSD removes the `kqueue` support for␣
↪pipes. See the test `selectpollkqueue01`. If this support is needed␣
↪please contact the RTEMS developers.
```

- **Summary** changed from *RTEMS and LibBSD both provide pipe()* to *RTEMS and LibBSD both provide competing pipe() interfaces*

Author: Chris Johns 2021-09-24T00:06:48.000Z

The removal of `pipe()` from LibBSD does effect the `kqueue` support but it also lets the RTEMS version get linked in and do it's work. Pipe for `libio` descriptors and `libmisc/redirector` work nicely well before LibBSD is initialised and this is important in some applications. Especially ones that capture the console early to implement a `dmesg` type of support.

I am happy to see a file op added for ``pip``e however I view RTEMS as having priority over the same call signature in LibBSD if there is a clash and there is.

I have an app that crashes because of this. I have no idea why on RTEMS 5 the RTEMS one is linked in and the same app and build system now results the LibBSD one. Having 2 interfaces is wrong.

Author: Trac Migrate 2021-09-24T00:07:33.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"2e5f808b09459e5287b39135f06a79f05c1194c9/rtems-libbsd" 2e5f808/rtems-libbsd]:

```
rtemsbsd/syscalls: Remove pipe()

- This call is provided by RTEMS and that is preferred

Closes #4518
```

3.9.1.620 4507 - mount call retruns error number and it should return -1

Id	4507
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2021-08-28T08:04:31.000Z
Updated	2021-09-23T23:57:21.000Z
Milestone	6.1
Labels	filesystem, priority::normal, resolution::wontfix, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4507
Merges	0

The `mount` call should return `-1` for an any error with the `errno` set. Some paths in the `mount` do this and others so not.

The implementation needs to be changed to only return `-1` when there is an error.

Author: Joel Sherrill 2021-08-28T22:31:05.000Z

- **Description** changed

```
The `mount` call should return `-1` for an any error with the `errno` set. Some paths in the `mount` do this and others so not.

The implementation needs to be changed to only return `-1` when there is an error.
+
+ mount() is not defined by POSIX but returning -1 and setting errno is consistent with [FreeBSD](FreeBSD)(https://www.freebsd.org/cgi/man.cgi?query=mount&sektion=2&format=html) and [Linux](https://man7.org/linux/man-pages/man2/mount.2.html).
```

Author: Chris Johns 2021-09-23T23:57:21.000Z

- **Description** changed

```
The `mount` call should return `-1` for an any error with the `errno` set. Some paths in the `mount` do this and others so not.

The implementation needs to be changed to only return `-1` when there is an error.
-
- mount() is not defined by POSIX but returning -1 and setting errno is consistent with [FreeBSD](FreeBSD)(https://www.freebsd.org/cgi/man.cgi?query=mount&sektion=2&format=html) and [Linux](https://man7.org/linux/man-pages/man2/mount.2.html).
```

- **Resolution** set to ~"wontfix"
- **Status** changed from *assigned* to *closed*

The current behavior is correct. The NFS mounter is not correct.

3.9.1.621 4506 - posix_devctl() should return the errno directly not -1 and set errno

Id	4506
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2021-08-20T19:24:23.000Z
Updated	2021-09-20T18:37:56.000Z
Milestone	6.1
Labels	api::posix, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4506
Merges	0

The RTEMS implementation of posix_devctl() from POSIX 1003.26 does not return error codes as required by the standard.

"Upon successful completion, posix_devctl() shall return zero; otherwise an error number shall be returned to indicate the error. The value returned via the dev_info_ptr argument is driver dependent."

It should return the errno value and not -1 and set the errno variable. The current behavior is wrong but understandable because the implementation is a wrapper for close() and ioctl() which do set errno and return -1.

Author: Joel Sherrill 2021-08-21T19:25:36.000Z

- **Description** changed

```
- The RTEMS implementation posix_devctl() from POSIX 1003.26 does not return error codes as required by the standard.
+ The RTEMS implementation of posix_devctl() from POSIX 1003.26 does not return error codes as required by the standard.
?                           +++


"Upon successful completion, posix_devctl() shall return zero; otherwise an error number shall be returned to indicate the error. The value returned via the dev_info_ptr argument is driver dependent."

It should return the errno value and not -1 and set the errno variable. The current behavior is wrong but understandable because the implementation is a wrapper for close() and ioctl() which do set errno and return -1.
```

Author: Trac Migrate 2021-09-20T18:37:56.000Z

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"3951d4da6fc4885dd450e5257d7273ab6a392492/rtems" 3951d4d/rtems]:

```
pxcdevctl: Adjust for standard

psxdevctl is supposed to return the value in errno. Before, it was
returning -1 and setting errno. Changed the tests to reflect these
changes. Added code from RRADE's posix_devctl.c.

Closes #4506
```

3.9.1.622 4451 - DesiredSymbols: Implement move assignment operator

Id	4451
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-06-08T13:49:28.000Z
Updated	2021-09-16T17:30:05.000Z
Milestone	6.1
Labels	priority::normal, resolution::wontfix, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4451
Merges	0

Original author: rlong

CID 1505133: Missing move assignment operator for SymbolInformation class.

```
128   */
CID 1505133 (#1 of 1): Missing move assignment operator (MISSING_MOVE_
↪ASSIGNMENT)missing_move_assignment: Class Coverage::SymbolInformation may␣
↪benefit from adding a move assignment operator. See other events which show the␣
↪copy assignment operator being applied to rvalues, where a move assignment may␣
↪be faster.
129  class SymbolInformation {
```

Author: Trac Migrate 2021-09-16T17:30:05.000Z

Original author: rlong

- **Resolution** set to ~"wontfix"

- **Status** changed from *new* to *closed*

3.9.1.623 4500 - rld-dwarf.cpp: Uninitialized scalar field

Id	4500
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-18T15:12:11.000Z
Updated	2021-09-01T15:31:07.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4500
Merges	0

Original author: rlong

CID 1503019: Uninitialized scalar field

```
677    function::function (file& debug, debug_info_entry& die)
678      : debug (debug),
679        machine_code_ (false),
680        external_ (false),
681        declaration_ (false),
682        inline_ (DW_INL_not_inlined),
683        entry_pc_ (0),
684        has_entry_pc_ (false),
685        pc_low_ (0),
686        pc_high_ (0),
687        ranges_ (debug),
688        call_line_ (0)
CID 1503019 (#1 of 1): Uninitialized scalar field (UNINIT_CTOR)14. uninit_member:␣
↪Non-static class member prototyped_ is not initialized in this constructor nor␣
↪in any functions that it calls.
```

Author: Trac Migrate 2021-08-18T15:14:11.000Z

Original author: rlong

CID 1503021: Uninitialized scalar field

```
817    function::function (const function& orig)
818      : debug (orig.debug),
819        machine_code_ (orig.machine_code_),
820        external_ (orig.external_),
821        declaration_ (orig.declaration_),
822        inline_ (orig.inline_),
823        entry_pc_ (orig.entry_pc_),
824        has_entry_pc_ (orig.has_entry_pc_),
```

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```
825         pc_low_ (orig.pc_low_),
826         pc_high_ (orig.pc_high_),
827         ranges_ (orig.ranges_),
828         name_ (orig.name_),
829         linkage_name_ (orig.linkage_name_),
830         call_file_ (orig.call_file_),
831         call_line_ (orig.call_line_)
832     {
2. uninit_member: Non-static class member prototyped_ is not␣
↪initialized in this constructor nor in any functions that it calls.
CID 1503021 (#1 of 1): Uninitialized scalar field (UNINIT_CTOR)4.␣
↪uninit_member: Non-static class member decl_line_ is not initialized␣
↪in this constructor nor in any functions that it calls.
833     }
```

Author: Trac Migrate 2021-09-01T15:31:07.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"2cf693aee9e8575ff693c8833b639237e12f61b2/rtems-tools" 2cf693a/rtems-tools]:

```
rld-dwarf.cpp: Initialize member variables

Initialize member variables not listed.

CID 1503019: Uninitialized scalar field.

Closes #4500
```

3.9.1.624 4487 - GcovData.cc: Uninitialized scalar field error spotted by Coverity

Id	4487
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-04T18:39:53.000Z
Updated	2021-09-01T15:31:05.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4487
Merges	0

Original author: rlong

CID 1506206: Uninitialized scalar field

```
22  GcovData::GcovData( Coverage::DesiredSymbols& symbolsToAnalyze ):
23    numberOfFunctions( 0 ),
24    symbolsToAnalyze_m( symbolsToAnalyze )
25  {
2. uninit_member: Non-static class member gcnoPreamble.magic is not initialized␣
↪in this constructor nor in any functions that it calls.
4. uninit_member: Non-static class member gcnoPreamble.version is not initialized␣
↪in this constructor nor in any functions that it calls.
CID 1506206 (#1 of 1): Uninitialized scalar field (UNINIT_CTOR)6. uninit_member:␣
↪Non-static class member gcnoPreamble.timestamp is not initialized in this␣
↪constructor nor in any functions that it calls.
26  }
```

Author: Trac Migrate 2021-09-01T15:31:05.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"7ccbcd897ca13be3d63b66abfff9d148a1f1b28a/rtems-tools" 7ccbcd89/rtems-tools]:

```
GcovData.cc: Initialize gcnoPreamble

CID 1506206: Uninitialized scalar field

Closes #4487
```

3.9.1.625 4499 - rtems-exeinfo.cpp: Uninitialized scalar field error spotted by Coverity

Id	4499
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-18T13:40:17.000Z
Updated	2021-09-01T15:31:02.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4499
Merges	0

Original author: rlong

CID 1471637: Uninitialized scalar field

```
211    section::section (const section& orig)
212      : sec (orig.sec),
213        data (orig.data)
214    {
CID 1471637 (#1 of 1): Uninitialized scalar field (UNINIT_CTOR)2. uninit_member:␣
↪Non-static class member byteorder is not initialized in this constructor nor in␣
↪any functions that it calls.
215    }
```

Author: Trac Migrate 2021-09-01T15:31:02.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"1d4edfb2ecf54141d20f20dca35dfdb29a658579/rtems-tools" 1d4edfb/rtems-tools]:

```
rtems-exeinfo.cpp: Initialize byteorder

CID 1471637: Uninitialized scalar field

Closes #4499
```

3.9.1.626 4468 - waf build system does not generate the same bspopts.h

Id	4468
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2021-07-14T04:28:20.000Z
Updated	2021-08-30T09:03:04.000Z
Milestone	6.1
Labels	priority::high, resolution::fixed, rtems::build, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4468
Merges	0

Building with `autoconf` and the command line of:

```
$ ../rtems.git/configure --target=powerpc-rtems6 --enable-rtemsbsp=mvme2307
```

gives:

```
$ grep BSP_CONSOLE_BAUD `find . -name bspopts.h`
#define BSP_CONSOLE_BAUD 9600
```

Building with `waf` and a config of ...

```
[DEFAULT]
BUILD_TESTS = True
RTEMS_POSIX_API = True

[powerpc/mvme2307]
```

gives:

```
$ grep BSP_CONSOLE_BAUD `find . -name bspopts.h`
#define BSP_CONSOLE_BAUD 115200
```

The default should be 9600 and the `motorola_powerpc` BSP is listed in the options under 9600. Something is broken in the waf BSP opts handling.

Author: Chris Johns 2021-07-14T04:44:57.000Z

The options code is not being passed the variant, it is passed the BSP ....

```
def default_value(self, variant):
value = self.data["default"]
for default in self.data["default-by-variant"]:
print(']] %s %r' % (variant, default), OptionItem._is_variant(default[
↪"variants"], variant))
if OptionItem._is_variant(default["variants"], variant):
```

gives:

```
]] powerpc/mvme2307 {'value': 9600, 'variants': ['m68k/m5484FireEngine',
↪ 'powerpc/hsc_cm01', 'powerpc/beatnik', 'powerpc/haleakala', 'powerpc/
↪motorola_powerpc', 'powerpc/mvme3100', 'powerpc/mvme5500']} False
```

Author: Chris Johns 2021-07-14T05:01:02.000Z

The `optconsolebaud.yml` file lists `powerpc/motorola_powerpc` as a variant and it is a family. The ability to specify a family for default is something I think is needed. I do not like needing to list all BSPs is something we should require we do?

Are BSPs that `INHERIT` supported?

I wonder how you take a family given the variant?

Author: Chris Johns 2021-07-14T06:38:28.000Z

Hmmm it seems the options are all required to have a `default-by-variant`. I am

not sure if this is by design and for a reason, a hang over from the path to these spec files or it could be optional?

I will make it optional and I will make `default-by-family` optional.

Author: Trac Migrate 2021-07-15T00:03:15.000Z

- **Owner** set to Chris Johns <chrisj@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"6f2aa8ad36e3aaffc9fa2cb8c744b04da7339ee2/rtems" 6f2aa8ad/rtems]:

```
build: Use BSP family for options

- Optionally add support for 'default-by-family' to allow
option to be set by a family and so all related BSPs

Close #4468
```

Author: Trac Migrate 2021-07-15T06:07:50.000Z

In [changeset:"61071489ff37df682be89a56f29d2941fcc7cc28/rtems" 6107148/rtems]:

```
build: Add missing default-by-family

Update #4468.
```

Author: Trac Migrate 2021-07-15T06:07:54.000Z

In [changeset:"b6092cb82c530c309bc0c48003453f53be830e02/rtems" b6092cb/rtems]:

```
build: Fix bsp_defaults command

Update #4468.
```

Author: Trac Migrate 2021-07-15T06:10:06.000Z

In [changeset:"6c1928caed28183c2abe405963602a2d4a3116d0/rtems" 6c1928c/rtems]:

```
build: Prefer variant default value over family

Update #4468.
```

Author: Trac Migrate 2021-08-18T09:26:43.000Z

In [changeset:"ebdfa24bff814134b8f42efc7ed386afcfa90eff/rtems" ebdfa24b/rtems]:

```
build: Merge default-by-family into by-variant

Prefix the BSP family name with "bsps/" to make it distinct to the BSP
variant names.

Update #4468.
```

Author: Trac Migrate 2021-08-30T09:03:04.000Z

In [changeset:"d223ec99ae7f84f49844e9421d831f3690b2b93a/rtems-docs" d223ec9/rtems-docs]:

```
eng: Document use of BSP family for defaults

Update #4468.
```

3.9.1.627 4486 - TraceWriterQEMU.cc: String not null terminated issue spotted by Coverity

Id	4486
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-04T18:31:34.000Z
Updated	2021-08-20T17:47:03.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4486
Merges	0

Original author: rlong

CID 1506203: String not null terminated

```
CID 1506203 (#1 of 1): String not null terminated (STRING_NULL)6. string_null:␣
↪Passing unterminated string header.magic to operator <<, which expects a null-
↪terminated string. [Note: The source code implementation of the function has␣
↪been overridden by a builtin model.]
124       std::cerr << "magic = " << header.magic << std::endl
125                 << "version = " << header.version << std::endl
126                 << "kind = " << header.kind << std::endl
127                 << "sizeof_target_pc = " << header.sizeof_target_pc <<␣
```

(continues on next page)

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```
↪std::endl
128                 << "big_endian = " << header.big_endian << std::endl
129                 << std::hex << std::setfill('0')
130                 << "machine = " << std::setw(2) << header.machine[0]
131                 << ':' << header.machine[1]
132                 << std::dec << std::setfill(' ')
133                 << std::endl;
```

Author: Trac Migrate 2021-08-20T17:47:03.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"f316d1607ff6f31bb39b9c62a057fc57374b8bd5/rtems-tools" f316d16/rtems-tools]:

```
TraceWriterQEMU.cc: Remove unterminated string

Replaced header.magic with QEMU_TRACE_MAGIC to get rid of "String not
null terminated" Coverity issue.

CID 1506203: String not null terminated

Closes #4486
```

3.9.1.628 4485 - GcovData.cc: Out-of-bounds acces errors spotted by Coverity

Id	4485
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-04T18:22:36.000Z
Updated	2021-08-20T17:47:01.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4485
Merges	0

Original author: rlong

CID 1506208: Out-of-bounds access

```
CID 1506208 (#1 of 1): Out-of-bounds access (OVERRUN)2. overrun-buffer-arg:␣
↪Overrunning struct type _ZN4Gcov13gcov_preambleE of 12 bytes by passing it to a␣
↪function which accesses it at byte offset 47 using argument 48L.
132    gcdaFile.write( (char *) &preamble , 4 * sizeof( preamble ) );
133    if ( gcdaFile.fail() ) {
134      std::cerr << "Error while writing gcda preamble to a file "
135                << gcdaFileName << std::endl;
136    }
```

CID 1506209: Out-of-bounds access

```
CID 1506209 (#1 of 1): Out-of-bounds access (OVERRUN)1. overrun-buffer-arg:␣
↪Overrunning buffer pointed to by (char *)&preamble of 8 bytes by passing it to␣
↪a function which accesses it at byte offset 47 using argument 48L.
400    gcovFile.read( (char *) &preamble, 4 * sizeof( gcov_preamble ) );
401    if ( gcovFile.gcount() != 4 * sizeof( gcov_preamble ) ) {
402      std::cerr << "Error while reading file preamble" << std::endl;
403      return -1;
404    }
```

Author: Trac Migrate 2021-08-20T17:47:01.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"0ab060ff2c52159d2fd7aba7ea58454ee7491973/rtems-tools" 0ab060f/rtems-tools]:

```
GcovData.cc: Fix out-of-bounds access errors

Adjusted number of bytes to be read, removed length variable

CID 1506208: Out-of-bounds access
CID 1506209: Out-of-bounds access

Closes #4485
```

3.9.1.629 4471 - ReportsHtml.cc: Not restoring ostream format error spotted by Coverity

Id	4471
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-07-15T14:50:47.000Z
Updated	2021-08-13T19:57:26.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4471
Merges	0

Original author: rlong

CID 1505939: Not restoring ostream format in PutSymbolSummaryLine().

```
5. format_changed: fixed changes the format state of report for category␣
↪floatfield.
6. format_changed: setprecision changes the format state of report for category␣
↪precision.
782         report << "<td class=\\"covoar-td\\" align=\\"center\\">"
783                << std::fixed << std::setprecision( 2 )
784                << ( symbolInfo.stats.uncoveredInstructions * 100.0 ) /
785                     symbolInfo.stats.sizeInInstructions
786                << "</td>" << std::endl;
```

Author: Trac Migrate 2021-07-27T18:42:11.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"f7887ec5c3d478e66efbf0604a2ad4c46dba4ff4/rtems-tools" f7887ec/rtems-tools]:

```
ReportsHtml.cc: Restore ostream format

CID 1505939: Not restoring ofstream format

Save format of stream before changing it, and change it back before␣
↪returning.

Closes #4471
```

Author: Trac Migrate 2021-07-29T14:43:09.000Z

Original author: rlong

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

Author: Trac Migrate	2021-08-13T19:57:26.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

3.9.1.630 4470 - CoverageMapBase.cc: Not restoring ostream format error spotted by Coverity

Id	4470
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-07-15T14:49:11.000Z
Updated	2021-08-13T19:56:40.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4470
Merges	0

Original author: rlong

CID 1503022: Not restoring ostream format in dump().

```
1. format_changed: hex changes the format state of out for category basefield.
2. format_changed: setfill changes the format state of out for category fill.
78    out << std::hex << std::setfill('0')
79        << "Address range: low = " << std::setw(8) << lowAddress
80        << " high = " << std::setw(8) << highAddress
81        << std::endl;
```

Author: Trac Migrate	2021-07-27T18:42:08.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"d4179186465ea7700176c128bf5856bf5ec1e0df/rtems-tools" d417918/rtems-tools]:

```
CoverageMapBase.cc: Restore ostream format

CID 1503022: Not restoring ostream format

Save format of stream before changing it, and change it back before␣
↪returning.

Closes #4470
```

Author: Trac Migrate	2021-07-29T14:43:37.000Z

Original author: rlong

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

Author: Trac Migrate	2021-08-13T19:56:40.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

3.9.1.631 4469 - rtems-exeinfo.cpp: Not restoring ostream format errors spotted by Coverity

Id	4469
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-07-15T14:46:52.000Z
Updated	2021-08-13T19:55:51.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4469
Merges	0

Original author: rlong

CID 1503006: Not restoring ostream format in output_compilation_unit().

```
185. format_changed: left changes the format state of std::cout for category␣
↪adjustfield.
478             std::cout << "   | "
479                       << std::setw (source_max + 1) << std::left
480                       << rld::path::basename (s.source);
```

CID 1503007: Not restoring ostream format in output_tls().

```
11. format_changed: right changes the format state of std::cout for category␣
↪adjustfield.
12. format_changed: hex changes the format state of std::cout for category␣
↪basefield.
13. format_changed: setfill changes the format state of std::cout for category␣
↪fill.
14. format_restored: dec changes the format state of std::cout for category␣
↪basefield.
15. format_restored: setfill changes the format state of std::cout for category␣
↪fill.
704      std::cout << "    data size : " << tls_data_size->value () << std::endl
705                << "     bss size : " << tls_bss_size->value () << std::endl
706                << "    alignment : " << tls_alignment->value () << std::endl
707                << std::right << std::hex << std::setfill ('0')
708                << "    data addr : 0x" << std::setw (8) << tls_data_begin->
↪value ()
709                << std::endl
710                << std::dec << std::setfill (' ')
711                << std::endl;
```

Author: Trac Migrate 2021-07-27T18:42:06.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"e1469279a7a8b7e9bfdd47587bd8a1956752233c/rtems-tools" e146927/rtems-tools]:

```
rtems-exeinfo.cpp: Restore ostream format

CID 1503006: Not restoring ostream format
CID 1503007: Not restoring ostream format

Used a variable to store the format of the ostream before any changes,
and copied what was originally there back into the stream before
returning from the function.

Closes #4469
```

Author: Trac Migrate 2021-07-29T14:43:57.000Z

Original author: rlong

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

Author: Trac Migrate 2021-08-13T19:55:51.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

3.9.1.632 4472 - ReportsText.cc: Not restoring ostream format error spotted by Coverity

Id	4472
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-07-15T14:52:45.000Z
Updated	2021-08-13T19:02:01.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4472
Merges	0

Original author: rlong

CID 1505940: Not restoring ostream format in PutSymbolSummaryLine().

```
5. format_changed: fixed changes the format state of report for category␣
↪floatfield.
6. format_changed: setprecision changes the format state of report for category␣
↪precision.
231    report << "=========================================" << std::endl
232           << "Symbol                          : "
233           << symbolName << std::endl
234           << "Total Size in Bytes             : "
235           << symbolInfo.stats.sizeInBytes << std::endl
236           << "Total Size in Instructions      : "
237           << symbolInfo.stats.sizeInInstructions << std::endl
238           << "Total number Branches           : "
239           << symbolInfo.stats.branchesNotExecuted +
240              symbolInfo.stats.branchesExecuted
241           << std::endl
242           << "Total Always Taken              : "
243           << symbolInfo.stats.branchesAlwaysTaken << std::endl
244           << "Total Never Taken               : "
245           << symbolInfo.stats.branchesNeverTaken << std::endl
246           << std::fixed << std::setprecision( 2 )
247           << "Percentage Uncovered Instructions : "
248           << uncoveredInstructions << std::endl
249           << "Percentage Uncovered Bytes      : "
250           << uncoveredBytes << std::endl;
```

Author: Trac Migrate 2021-07-27T18:42:13.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"df484a50c072aa8ae318c2cf974e0878d696684b/rtems-tools" df484a5/rtems-tools]:

```
ReportsText.cc: Restore ostream format

CID 1505940: Not restoring ostream format

Save format of stream before changing it, and change it back before␣
↪returning.

Closes #4472
```

Author: Trac Migrate 2021-07-29T14:42:40.000Z

Original author: rlong

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

Author: Trac Migrate 2021-08-13T19:02:01.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

In [changeset:"632414dc0f2976cc3ce0267d0c51aeb7c4de1e14/rtems-tools" 632414d/rtems-tools]:

```
ReportsText.cc: Add ostream_guard

CID 1505940: Not restoring ostream format

Closes #4472
```

3.9.1.633 4484 - GcovFunctionData.cc: Not restoring ostream format error spotted by Coverity

Id	4484
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-04T18:14:25.000Z
Updated	2021-08-13T19:01:59.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4484
Merges	0

Original author: rlong

CID 1506205: Not restoring ostream format

```
1. format_changed: hex changes the format state of textFile for category␣
↪basefield.
360     textFile << " > BLOCK " << std::setw( 3 ) << block->id
361              << " from " << block->sourceFileName << std::endl
362              << "    -counter: " << std::setw( 5 ) << block->counter <<␣
↪std::endl
363              << "    -flags: 0x" << std::hex << block->flags << std::endl
364              << "    -lines: ";
```

Author: Trac Migrate 2021-08-13T19:01:59.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"dc5e1fcdb10aae866894803192475b8177544001/rtems-tools" dc5e1fc/rtems-tools]:

```
GcovFunctionData.cc: Add ostream_guard

CID 1506205: Not restoring ostream format

Closes #4484
```

3.9.1.634 4483 - GcovData.cc: Not restoring ostream format error spotted by Coverity

Id	4483
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-08-04T18:08:56.000Z
Updated	2021-08-13T19:01:57.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4483
Merges	0

Original author: rlong

CID 1506202: Not restoring ostream format

```
3. format_changed: hex changes the format state of std::cerr for category basefield.
407       std::cerr << "File is not a valid *.gcno output (magic: 0x"
408                 << std::hex << std::setw( 4 ) << preamble->magic
409                 << ")" << std::endl;
CID 1506202 (#1 of 1): Not restoring ostream format (STREAM_FORMAT_STATE)4. end_of_path: Changing format state of stream std::cerr for category basefield without later restoring it.
```

Author: Trac Migrate	2021-08-13T19:01:57.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"415a2b629dceaa5abdf14ae200bceb3e0c32dca5/rtems-tools" 415a2b6/rtems-tools]:

```
GcovData.cc: Add ostream_guard

CID 1506202: Not restoring ostream format

Closes #4483
```

3.9.1.635 4473 - AddressToLineMapper.h: Pointer to local outside scope error spotted by Coverity

Id	4473
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-07-16T17:58:03.000Z
Updated	2021-07-20T18:27:12.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4473
Merges	0

Original author: Alex

CID 1505281: Pointer to local outside scope

```
SourceLine()
28     : address(0),

CID 1505281 (#1 of 1): Pointer to local outside scope (RETURN_LOCAL)
1. escape_local_addr: Returning, through this->path_, the address of stack␣
↪variable <temporary>.
29       path_("unknown"),
30       line_num(-1),
31       is_end_sequence(true)
32     {
2. return: Returning here.
33     }
```

Author: Trac Migrate 2021-07-16T17:58:23.000Z

Original author: Alex

- **Owner** set to Alex
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-07-20T18:27:12.000Z

Original author: Alex

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"23808864e3bd4683d80cfcb6553c6cd4c3fbdcdd/rtems-tools" 2380886/rtems-tools]:

```
AddressToLineMapper.h: Remove pointer to temporary string

CID 1505281: Pointer to local outside scope

Closes #4473
```

3.9.1.636 2330 - nios2 missing atomics, fails to link C++

Id	2330
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2015-04-18T15:19:25.000Z
Updated	2021-06-18T08:47:00.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2330
Merges	0

nios2-rtems4.11-g++ -B../../../../../nios2_iss/lib/ -specs bsp_specs -qrtems -mno-hw-mul -mno-hw-div -O0 -g -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -mno-hw-mul -mno-hw-div -o cxx_iostream.exe init.o /users/joel/rtems-4.11-work/tools/lib/gcc/nios2-rtems4.11/4.9.2/libstdc++.a(ios-inst.o): In function `__atomic_add': /users/joel/rtems-4.11-work/rtems-source-builder/rtems/build/nios2-rtems4.11-gcc-4.9.2-newlib-2.2.0.20150323-x86_64-linux-gnu-1/build/nios2-rtems4.11/libstdc++-v3/include/ext/atomicity.h:53: undefined reference to `__sync_fetch_and_add_4' /users/joel/rtems-4.11-work/rtems-source-builder/rtems/build/nios2-rtems4.11-gcc-4.9.2-newlib-2.2.0.20150323-x86_64-linux-gnu-1/build/nios2-rtems4.11/libstdc++-v3/include/ext/atomicity.h:53: undefined reference to `__sync_fetch_and_add_4' /users/joel/rtems-4.11-work/tools/lib/gcc/nios2-rtems4.11/4.9.2/libstdc++.a(ios_init.o): In function `__exchange_and_add_dispatch': /users/joel/rtems-4.11-work/rtems-source-builder/rtems/build/nios2-rtems4.11-gcc-4.9.2-newlib-2.2.0.20150323-x86_64-linux-gnu-1/build/nios2-rtems4.11/libstdc++-v3/include/ext/atomicity.h:49: undefined reference to `__sync_fetch_and_add_4' /users/joel/rtems-4.11-work/tools/lib/gcc/nios2-rtems4.11/4.9.2/libstdc++.a(ios_init.o): In function `__atomic_add_dispatch': /users/joel/rtems-4.11-work/rtems-source-builder/rtems/build/nios2-rtems4.11-gcc-4.9.2-newlib-2.2.0.20150323-x86_64-linux-gnu-1/build/nios2-rtems4.11/libstdc++-v3/include/ext/atomicity.h:53: undefined reference to `__sync_fetch_and_add_4' /users/joel/rtems-4.11-work/tools/lib/gcc/nios2-rtems4.11/4.9.2/libstdc++.a(ios_init.o): In function `__exchange_and_add_dispatch': /users/joel/rtems-4.11-work/rtems-source-builder/rtems/build/nios2-rtems4.11-gcc-4.9.2-newlib-2.2.0.20150323-x86_64-linux-gnu-1/build/nios2-rtems4.11/libstdc++-v3/include/ext/atomicity.h:49: undefined reference to `__sync_fetch_and_add_4' /users/joel/rtems-4.11-work/tools/lib/gcc/nios2-rtems4.11/4.9.2/libstdc++.a(locale-inst.o):/users/joel/rtems-4.11-work/rtems-source-builder/rtems/build/nios2-rtems4.11-gcc-4.9.2-newlib-2.2.0.20150323-x86_64-linux-gnu-1/build/nios2-rtems4.11/libstdc++-v3/include/ext/atomicity.h:49: more undefined references to `__sync_fetch_and_add_4' follow

Author: Joel Sherrill 2016-11-14T17:46:06.000Z

Still happens on

nios2-rtems4.12-gcc (GCC) 6.2.1 20161110 (RTEMS 4.12, RSB 5469a486e1b67532e20c48e154c7263c59047be4, Newlib 2.4.0.20161025)

This is the only target left with this issue. Help would be appreciated in resolving this.

Author: Trac Migrate 2016-11-15T06:36:42.000Z

From my point of view this is a GCC bug:

https://gcc.gnu.org/bugzilla/show_bug.cgi?id=78357

Author: Trac Migrate 2016-11-18T07:00:52.000Z

Problem fixed in GCC 7. I wait for a back port to GCC 6.

Author: Trac Migrate 2017-01-26T07:16:00.000Z

- **Milestone** changed from %"4.11.1" to %"4.11.2"

Author: Trac Migrate 2017-02-15T13:37:51.000Z

- **Milestone** changed from %"4.11.2" to %"Indefinite"
- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2021-06-18T08:47:00.000Z

- **Milestone** changed from %"Indefinite" to %"6.1"
- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

3.9.1.637 2301 - cpukit is built in BSP, and BSP custom, specific part of build tree but isnt built using BSP's spec file

Id	2301
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2015-03-13T01:23:20.000Z
Updated	2021-06-18T08:42:56.000Z
Milestone	6.1
Labels	priority::normal, resolution::wontfix, rtems::build, ticket-type::enhancement, version::4.10
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2301
Merges	0

Original author: johill

The nios2 soft-core processor is probably a bit of a different beast because it has many options when the FPGA programming is configured. It is probably therefore not a good context for the use of multilibs, although it is possible to enable them.

For the nios2 RTEMS automated system configuration I must interrogate the Altera sopcinfo file to properly specify some of the nios2 cpu instance specific compiler flags such as {-mhw-div, -mhw-mul, -mhw-mulx}.

An easy way to do this is to build some custom tools that need to run _only_on_the_host_ during the build. The source code for these BSP instance custom tools are easy to write if they include header files from the Altera generated HAL {system.h, linker.h}, when they are built. The Altera HAL needs to also be generated, but not installed, during the gnu build. It seems that this is the way that Altera intends for users to learn about system configuration based on how often their file formats evolve, and also based on lack of documentation for their sopcinfo file. Nevertheless, for many reasons we don't include Altera generated header files into any RTEMS BSP or cpukit source code.

Currently this approach is difficult to fully implement because I must finish the interrogation for the CPU flags during the gnu build system configure phase when CFLAGS_OPTIMIZE_V and CPU_FLAGS are fetched from the custom .cfg file, and so I am unable to build some custom tools that need to run _only_on_the_host_ during the build at that time.

However, during the preinstall phase it is easy to create a custom "bsp_specs_cpu" file like this.

*[cpuspecs]: *[cpuspecs]: %(cpuspecs) -mhw-div *[cpuspecs]: %(cpuspecs) -mhw-mul *[cpuspecs]: %(cpuspecs) -mhw-mulx

Which could be used in "bsp_specs" like this.

%rename cc1 old_cc1 %rename cc1plus old_cc1plus %rename lib old_lib %rename endfile old_endfile %rename startfile old_startfile %rename link old_link

%include <bsp_specs_cpu>

cc1: %{!qrtems: %{old_cc1} } *%{qrtems*: %{old_cc1} %{cpuspecs} }

cc1plus: %{!qrtems: %{old_cc1plus} } *%{qrtems*: %{old_cc1plus} %{cpuspecs} }

*lib: %{!qrtems: %(old_lib)} %{!nostdlib: %{qrtems: –start-group -lrtemsbsp -lrtemscpu -lc -lgcc –end-group %{!qnolinkcmds: -T linkcmds%s}}}

*startfile: %{!qrtems: %(old_startfile)} %{!nostdlib: %{qrtems: start0.o%s start1.o%s crti.o%s crtbegin.o%s -e __start -u __exception_vector }}

*link: %{!qrtems: %(old_link)} %{qrtems: -dc -dp -N}

*endfile: %{!qrtems: %(old_endfile)} %{qrtems: crtend.o%s crtn.o%s}

This works very nicely excepting that the cpukit isn't built specifying a spec file and so it could use the wrong instructions when generating code. Therefore its tempting to modify the RTEMS build like this.

cpukit/aclocal/gcc-specs.m4 | 20 ++++++++++++++++++++++ cpukit/aclocal/prog-cc.m4 | 8 ++++++++ cpukit/automake/compile.am | 5 +++++ 3 files changed, 33 insertions(+)

diff –git a/cpukit/aclocal/gcc-specs.m4 b/cpukit/aclocal/gcc-specs.m4 new file mode 100644 index 0000000..dd49bb9 — /dev/null +++ b/cpukit/aclocal/gcc-specs.m4 @@ -0,0 +1,20 @@ +dnl +dnl Id +dnl +dnl Check whether the target compiler accepts -specs +dnl + +AC_DEFUN([RTEMS_GCC_SPECS], +[AC_REQUIRE([RTEMS_PROG_CC]) +AC_CACHE_CHECK(whether $CC accepts -specs,rtems_cv_gcc_specs, +[+rtems_cv_gcc_specs=no +if test x"$GCC" = x"yes"; then +touch confspec +echo 'void f(){}' >conftest.c +if test -z "`${CC} -specs confspec -c conftest.c 2>&1`";then +rtems_cv_gcc_specs=yes +fi +fi +rm -f confspec conftest* +])]) diff –git a/cpukit/aclocal/prog-cc.m4 b/cpukit/aclocal/prog-cc.m4 index e8b27b5..8dae5de 100644 — a/cpukit/aclocal/prog-cc.m4 +++ b/cpukit/aclocal/prog-cc.m4 @@ -27,6 +27,14 @@ dnl check if the target compiler may use –pipe RTEMS_GCC_PIPE test "$rtems_cv_gcc_pipe" = "yes" && CC="$CC –pipe"

+dnl check if the compiler supports –specs +RTEMS_GCC_SPECS + +AS_IF([test x"$rtems_cv_gcc_specs" = xyes],[+GCCSPECS="-B$(PROJECT_ROOT)/lib/ -B$(PROJECT_ROOT)/$RTEMS_BSP/lib/" +GCCSPECS="${GCCSPECS} -specs bsp_specs -qrtems_cpukit"]) +AC_SUBST(GCCSPECS) +

Append warning flags if CFLAGS wasn't set.

AS_IF([test "$GCC" = yes && test "$rtems_cv_CFLAGS_set" != set], [CFLAGS="$CFLAGS -Wall"]) diff –git a/cpukit/automake/compile.am b/cpukit/automake/compile.am index 3d81426..0e43494 100644 — a/cpukit/automake/compile.am +++ b/cpukit/automake/compile.am @@ -2,6 +2,11 @@

3.9.1.637.1.1 Id

+CC = `@CC <https://gitlab.rtems.org/rtems/rtos/rtems/-/commit/CC>`_@ $(GCCSPECS) +CXX = @CXX@ $(GCCSPECS) +CPP = @CPP@ $(GCCSPECS) +CCAS = @CCAS@ $(GCCSPECS) + AM_CPPFLAGS = @RTEMS_CPPFLAGS@ AM_CFLAGS = AM_CCASFLAGS = @RTEMS_CCASFLAGS@

I am thinking that hopefully this wont break any existing CPU architecture and or BSP because of several reasons.

1) Perhaps typical BSPs included in RTEMS are only modifying the way that executables are linked, and we probably don't create executables during the cpukit build.

2) Probably most of the spec files are noop implementation if qrtems isnt specified, and for the cpu kit I specify -qrtems_cpukit

3) I am specifying -qrtems_cpukit so its easy to write a spec file that does different things when it is and isnt a cpukit build. We could I suppose also define -qrtems_cpukit_multilib in that specific situation, if it were important to break that situation out.

In any case this is what I currently have implemented and I will need to look for plan B before I can merge my nios2 support if this type of change looks like a bad idea.

I am therefore writing to the relevant RTEMS wizards for some guidance.

Thanks for your consideration.

Author: Trac Migrate 2017-01-26T07:16:00.000Z

Original author: johill

- **Milestone** changed from %"4.11.1" to %"4.11.2"

Author: Trac Migrate 2017-02-15T13:37:51.000Z

Original author: johill

- **Milestone** changed from %"4.11.2" to %"Indefinite"
- **Owner** set to Needs Funding
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2021-06-18T08:42:56.000Z

Original author: johill

- **Milestone** changed from %"Indefinite" to %"6.1"
- **Resolution** set to ~"wontfix"
- **Status** changed from *assigned* to *closed*

BSP variants may be added in the new build system for each multilib.

3.9.1.638 2000 - Re-add removed LINK_OBJS to MP tests

Id	2000
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2012-01-06T14:20:38.000Z
Updated	2021-06-18T08:39:30.000Z
Milestone	6.1
Labels	priority::low, priority::normal, resolution::wontfix, rtems::build, ticket-type::defect, version::4.11, version::HEAD
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2000
Merges	0

Original author: marta.rybczynska

PR1589 commit: 2011-12-08 Joel Sherrill <joel.sherrill@oarcorp.com>

PR 1589/build * base_mp/node1/Makefile.am, base_mp/node2/Makefile.am, base_sp/Makefile.am, capture/Makefile.am, cdtest/Makefile.am, fileio/Makefile.am, hello/Makefile.am, iostream/Makefile.am, loopback/Makefile.am, minimum/Makefile.am, nsecs/Makefile.am, paranoia/Makefile.am, pppd/Makefile.am, ticker/Makefile.am, unlimited/Makefile.am: Remove obsolete optional manager capability.

and 2011-12-08 Joel Sherrill <joel.sherrill@oarcorp.com>

PR 1589/build * mp01/node1/Makefile.am, mp01/node2/Makefile.am, mp02/node1/Makefile.am, mp02/node2/Makefile.am, mp03/node1/Makefile.am, mp03/node2/Makefile.am, mp04/node1/Makefile.am, mp04/node2/Makefile.am, mp05/node1/Makefile.am, mp05/node2/Makefile.am, mp06/node1/Makefile.am, mp06/node2/Makefile.am, mp07/node1/Makefile.am, mp07/node2/Makefile.am, mp08/node1/Makefile.am, mp08/node2/Makefile.am, mp09/node1/Makefile.am, mp09/node2/Makefile.am, mp10/node1/Makefile.am, mp10/node2/Makefile.am, mp11/node1/Makefile.am, mp11/node2/Makefile.am, mp12/node1/Makefile.am, mp12/node2/Makefile.am, mp13/node1/Makefile.am, mp13/node2/Makefile.am, mp14/node1/Makefile.am, mp14/node2/Makefile.am: Remove obsolete optional manager capability.

remove LINK_OBJS from the MP tests. They do no compile anymore. This patch re-adds them.

- build_patch.patch

Author: Trac Migrate 2012-01-06T14:20:38.000Z

Original author: marta.rybczynska

- **Attachment** build_patch.patch added

Fix in Makefile.am of MP tests.

Author: Trac Migrate 2012-01-06T14:20:38.000Z

Original author: marta.rybczynska

PR1589 commit: 2011-12-08 Joel Sherrill <joel.sherrill@oarcorp.com>

PR 1589/build * base_mp/node1/Makefile.am, base_mp/node2/Makefile.am, base_sp/Makefile.am, capture/Makefile.am, cdtest/Makefile.am, fileio/Makefile.am, hello/Makefile.am, iostream/Makefile.am, loopback/Makefile.am, minimum/Makefile.am, nsecs/Makefile.am, paranoia/Makefile.am, pppd/Makefile.am, ticker/Makefile.am, unlimited/Makefile.am: Remove obsolete optional manager capability.

and 2011-12-08 Joel Sherrill <joel.sherrill@oarcorp.com>

PR 1589/build * mp01/node1/Makefile.am, mp01/node2/Makefile.am, mp02/node1/Makefile.am, mp02/node2/Makefile.am, mp03/node1/Makefile.am, mp03/node2/Makefile.am, mp04/node1/Makefile.am, mp04/node2/Makefile.am, mp05/node1/Makefile.am, mp05/node2/Makefile.am, mp06/node1/Makefile.am, mp06/node2/Makefile.am, mp07/node1/Makefile.am, mp07/node2/Makefile.am, mp08/node1/Makefile.am, mp08/node2/Makefile.am, mp09/node1/Makefile.am, mp09/node2/Makefile.am, mp10/node1/Makefile.am, mp10/node2/Makefile.am, mp11/node1/Makefile.am, mp11/node2/Makefile.am, mp12/node1/Makefile.am, mp12/node2/Makefile.am, mp13/node1/Makefile.am, mp13/node2/Makefile.am, mp14/node1/Makefile.am, mp14/node2/Makefile.am: Remove obsolete optional manager capability.

remove LINK_OBJS from the MP tests. They do no compile anymore. This patch re-adds them.

Author: Gedare Bloom 2014-11-24T18:58:28.000Z

Original author: marta.rybczynska

- **Cc** added @@joel
- **Cc** added @frederic.brault@kalray.eu
- **Version** changed from ~"HEAD" to ~"4.11"

Replace Version=HEAD with Version=4.11 for the tickets with Milestone >= 4.11

Author: Trac Migrate 2014-12-18T11:07:49.000Z

Original author: marta.rybczynska

Original author: sebastian.huber

- **Description** changed

```
PR1589 commit:
2011-12-08      Joel Sherrill <joel.sherrill@oarcorp.com>

PR 1589/build
* base_mp/node1/Makefile.am, base_mp/node2/Makefile.am,
base_sp/Makefile.am, capture/Makefile.am, cdtest/Makefile.am,
```

(continues on next page)

(continued from previous page)

```
fileio/Makefile.am, hello/Makefile.am, iostream/Makefile.am,
loopback/Makefile.am, minimum/Makefile.am, nsecs/Makefile.am,
paranoia/Makefile.am, pppd/Makefile.am, ticker/Makefile.am,
unlimited/Makefile.am: Remove obsolete optional manager capability.

and
2011-12-08      Joel Sherrill <joel.sherrill@oarcorp.com>

PR 1589/build
* mp01/node1/Makefile.am, mp01/node2/Makefile.am,
mp02/node1/Makefile.am, mp02/node2/Makefile.am,
mp03/node1/Makefile.am, mp03/node2/Makefile.am,
mp04/node1/Makefile.am, mp04/node2/Makefile.am,
mp05/node1/Makefile.am, mp05/node2/Makefile.am,
mp06/node1/Makefile.am, mp06/node2/Makefile.am,
mp07/node1/Makefile.am, mp07/node2/Makefile.am,
mp08/node1/Makefile.am, mp08/node2/Makefile.am,
mp09/node1/Makefile.am, mp09/node2/Makefile.am,
mp10/node1/Makefile.am, mp10/node2/Makefile.am,
mp11/node1/Makefile.am, mp11/node2/Makefile.am,
mp12/node1/Makefile.am, mp12/node2/Makefile.am,
mp13/node1/Makefile.am, mp13/node2/Makefile.am,
mp14/node1/Makefile.am, mp14/node2/Makefile.am: Remove obsolete
optional manager capability.

remove LINK_OBJS from the MP tests. They do no compile anymore. This␣
↪patch re-adds them.
```

- **Milestone** changed from %”4.11” to %”5.0”
- **Priority** changed from ~”normal” to ~”low”

Author: Chris Johns 2017-08-14T00:35:16.000Z

Original author: marta.rybczynska

- **Milestone** changed from %”5.0” to %”Indefinite”
- **Version** ~”4.11” deleted

Author: Trac Migrate 2021-06-18T08:39:30.000Z

Original author: marta.rybczynska

- **Milestone** changed from %”Indefinite” to %”6.1”
- **Resolution** set to ~”wontfix”
- **Status** changed from *new* to *closed*

Fixed by the new build system.

3.9.1.639 4391 - SPARC GCC no longer needs sysconf(515) (_SC_STACK_PROT)

Id	4391
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2021-04-23T20:22:39.000Z
Updated	2021-06-09T16:52:40.000Z
Milestone	6.1
Labels	api::posix, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4391
Merges	0

In reviewing Ryan's rework of psx13, Gedare asked why there was a test for sysconf(515) conditionally compiled for SPARC. The answer was GCC needed it. But investigated showed that GCC has not had code to call this for over 20 years. It was removed per this commit.

```
commit ac4904440b4733f461bcd2c45915f502b0345f80
Author: Alexandre Oliva <oliva@lsd.ic.unicamp.br>
Date:   Mon Jan 24 00:47:38 2000 +0000

sol2-sld-64.h (TRANSFER_FROM_TRAMPOLINE): Moved...

* config/sparc/sol2-sld-64.h (TRANSFER_FROM_TRAMPOLINE): Moved...
* config/sparc/sol2.h: ... here.

From-SVN: r31578
```

This ticket is to remove the code from posix/src/sysconf.c and update psx13 accordingly.

Author: Trac Migrate 2021-06-09T16:52:40.000Z

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"f83676d91f3c639c93097733f2b2ffa54ec10599/rtems" f83676d/rtems]:

```
sysconf: Remove sysconf(515)

GCC originally needed this 20 years ago. No longer needed, so it
is being removed.

Closes #4391
```

3.9.1.640 4445 - CID 1468684: Uninitialized scalar variable

Id	4445
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Gedare Bloom
Created	2021-05-26T23:20:54.000Z
Updated	2021-06-02T15:31:59.000Z
Milestone	6.1
Labels	cpukit::debugger, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4445
Merges	0

Original author: hgerber

In tcp_remote_connect: Use of an uninitialized variable (CWE-457)

Author: Trac Migrate 2021-06-02T15:31:59.000Z

Original author: hgerber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"9429115c8be99b33bceabefdb5f955dbaa9d5965/rtems" 9429115c/rtems]:

```
cpukit/libdebugger: Fix for sockaddr_in not being initialized

See also CID 1468684

Closes #4445
```

3.9.1.641 4444 - CID 1399727: Copy into fixed size buffer

Id	4444
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Gedare Bloom
Created	2021-05-26T22:21:33.000Z
Updated	2021-05-28T22:00:54.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4444
Merges	0

Original author: hgerber

In rtems_monitor_line_editor: A source buffer of statically unknown size is copied into a fixed-size destination buffer (CWE-120)

NOTE: Issue is more regarding source/dest overlapping with use of strcpy: needs change to use memory copy for overlapping source/dest

Author: Trac Migrate 2021-05-28T22:00:54.000Z

Original author: hgerber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"6a56fd9340e46766dc5b069f259e4c133c06f39a/rtems" 6a56fd9/rtems]:

```
cpukit/libmisc/monitor: Fix src/dest overlap of strcpy in mon-editor.c

See also CID 1399727

Closes #4444
```

3.9.1.642 4400 - Change filesystem utime_h to utimens_h to support nanosecond granularity

Id	4400
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-29T19:09:39.000Z
Updated	2021-05-28T21:29:25.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4400
Merges	0

Original author: rlong

Change utime_h to utimens_h for the new nanosecond granularity APIs

Author: Trac Migrate 2021-05-28T21:29:25.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"ea41722c92313e884368106832d3454114ba88b3/rtems" ea41722c/rtems]:

```
Change filesystem utime_h handler to utimens_h

Also updated licenses.

Closes #4400
Updates #3899
```

3.9.1.643 4399 - Add tests for futimens() and utimensat()

Id	4399
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-29T18:50:00.000Z
Updated	2021-05-28T21:29:21.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4399
Merges	0

Original author: rlong

Create tests to test the futimens() and utimensat() APIs

Author: Trac Migrate	2021-05-28T21:29:21.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"6171a88d9c7f90bac9a076edf3655f7c9e2efb94/rtems" 6171a88/rtems]:

```
psx13: Added tests for utimensat() and futimens()

Improved tests for utime() and utimes() and update license.

Close #4399
```

3.9.1.644 4398 - Make utimes() use utimensat()

Id	4398
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-29T18:31:18.000Z
Updated	2021-05-28T21:29:18.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4398
Merges	0

Original author: rlong

Make utimes use the utimensat API

Author: Trac Migrate 2021-05-28T21:29:18.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"ea881bf7a15721916d4adcc5f117ebf6acc6d2a3/rtems" ea881bf/rtems]:

```
libcsupport: Implement utimes() in terms of utimensat()

utimes() now calls utimensat() to update file access
and modification timestamps.

Updated license.

Closes #4398
```

3.9.1.645 4397 - Make utime() use utimensat()

Id	4397
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-29T18:30:34.000Z
Updated	2021-05-28T21:29:14.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4397
Merges	0

Original author: rlong

Make utime use the utimensat API

Author: Trac Migrate 2021-05-28T21:29:14.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"bb7041230639894a924221ceb454d02c1ea84f66/rtems" bb704123/rtems]:

```
libcsupport: Implement utime() in terms of utimensat()

utime() now calls utimensat() to update file access
and modification timestamps.

Updated license.

Closes #4397
```

3.9.1.646 4396 - Add futimens() and utimensat()

Id	4396
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-29T18:29:12.000Z
Updated	2021-05-28T21:29:11.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4396
Merges	0

Original author: rlong

Implement the futimens and utimensat APIs

Author: Trac Migrate 2021-05-28T21:29:11.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"335f7050822262f029e7945b31b0f2bb2d889bcc/rtems" 335f705/rtems]:

```
libcsupport: Added futimens() and utimensat()

Created futimens.c and utimensat.c to add support for the POSIX
methods futimens() and utimensat().

utime() and utimes() are considered obsolote by POSIX, but RTEMS
will continue to support them.

Closes #4396
```

3.9.1.647 4291 - main_help.c: Unchecked return value from library error spotted by Coverity

Id	4291
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-02T15:49:21.000Z
Updated	2021-05-28T17:29:48.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4291
Merges	0

Original author: rlong

CID 1437650: Unchecked return value from library in rtems_shell_help().

```
472         strcpy(priv->prefix, "/dev/gr740_0");
473         priv->prefix[11] += dev->minor_drv;
CID 1437630 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)2.␣
↪check_return: Calling mkdir(priv->prefix, 511U) without checking return value.␣
↪This library function may fail and return an error code. [Note: The source code␣
↪implementation of the function has been overridden by a builtin model.]
474         mkdir(priv->prefix, S_IRWXU | S_IRWXG | S_IRWXO);
475         priv->prefix[12] = '/';
476         priv->prefix[13] = '\\0';
```

Author: Trac Migrate 2021-03-02T18:31:51.000Z

Original author: rlong

Accidentally put in the wrong reference to the error in the source.

```
121     if (lines && (line > lines)) {
CID 1437650 (#2 of 2): Unchecked return value from library (CHECKED_
↪RETURN)7. check_return: Calling getchar() without checking return␣
↪value. This library function may fail and return an error code.
122       printf("Press any key to continue...");getchar();
123       printf("\\n");
```

Author: Trac Migrate 2021-03-08T20:56:27.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"fbab8325a9e15add0efd70dbb2f3e5537f615bf5/rtems" fbab832/rtems]:

```
main_help.c: Unchecked return value from library (CID #1437650)

CID 1437650: Unchecked return value from library in rtems_shell_help().

Closes #4291
```

Author: Trac Migrate 2021-03-10T17:49:17.000Z

Original author: rlong

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

Author: Trac Migrate 2021-03-30T15:11:17.000Z

Original author: rlong

Another issue was found at line 150 after submitting the first patch

```
150         printf("Press any key to continue...");
CID 1437650 (#1 of 1): Unchecked return value from library (CHECKED_
↪RETURN)29. check_return: Calling getchar() without checking return␣
↪value. This library function may fail and return an error code.
151         getchar();
```

Author: Trac Migrate 2021-05-28T17:29:48.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

In [changeset:"2deba0240e82408da5a59c98afd0304fac192fcc/rtems" 2deba02/rtems]:

```
main_help.c: Do not care what char is returned by getchar()

CID 1437650: Unchecked return value from library in rtems_shell_help().

Closes #4291
```

3.9.1.648 4365 - main_cp.c: Ignore return value from stat()

Id	4365
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-30T14:44:30.000Z
Updated	2021-05-28T17:29:44.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4365
Merges	0

Original author: rlong

CID 26051: Unchecked return value from library in main_cp().

```
257                         if (Rflag && (Lflag || Hflag))
CID 26051 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)34.␣
↪check_return: Calling stat(*argv, &tmp_stat) without checking return value.␣
↪This library function may fail and return an error code. [Note: The source code␣
↪implementation of the function has been overridden by a builtin model.]
258                                 stat(*argv, &tmp_stat);
```

Author: Trac Migrate	2021-05-28T17:29:44.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"f29b312ea4bcfe063d5fa443138df4508103fd82/rtems" f29b312e/rtems]:

```
main_cp.c: Ignore return value from stat()

CID 26051: Unchecked return value from library in main_cp().

Closes #4365
```

3.9.1.649 4280 - gen_uuid.c: Unchecked return value from library errors spotted by Coverity

Id	4280
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-02T14:26:44.000Z
Updated	2021-05-28T17:29:41.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4280
Merges	0

Original author: rlong

CID 1049146: Unchecked return value from library in get_clock(). CID 1049147: Unchecked return value from library in get_random_fd().

CID 1049146

```
427                 rewind(state_f);
428                 fl.l_type = F_UNLCK;
CID 1049146 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)18.␣
↪check_return: Calling fcntl(state_fd, 8, &fl) without checking return value.␣
↪This library function may fail and return an error code. [Note: The source code␣
↪implementation of the function has been overridden by a builtin model.]
429                 fcntl(state_fd, F_SETLK, &fl);
430         }
431
432         *clock_high = clock_reg >> 32;
```

CID 1049147

```
167                         if (i >= 0)
CID 1049147 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)5.␣
↪check_return: Calling fcntl(fd, 2, i | 1) without checking return value. This␣
↪library function may fail and return an error code. [Note: The source code␣
↪implementation of the function has been overridden by a builtin model.]
168                                 fcntl(fd, F_SETFD, i | FD_CLOEXEC);
169                 }
```

Author: Trac Migrate 2021-03-08T20:56:17.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"597e4f476568a225d14dfaff02074cf269ad62ac/rtems" 597e4f4/rtems]:

```
gen_uuid.c: Fix two Unchecked return value from library errors

CID 1049146: Unchecked return value from library in get_clock().
CID 1049147: Unchecked return value from library in get_random_fd().

Closes #4280
```

Author: Trac Migrate 2021-03-24T13:03:24.000Z

Original author: rlong

In [changeset:"62bbb0cc46f5015e757bae866e0b1aedd33d7d9d/rtems" 62bbb0c/rtems]:

```
gen_uuid.c: Revert previous patch␣
↪(597e4f476568a225d14dfaff02074cf269ad62ac)

The patch was:
gen_uuid.c: Fix two Unchecked return value from library errors

CID 1049146: Unchecked return value from library in get_clock().
CID 1049147: Unchecked return value from library in get_random_fd().

Reopen #4280
```

Author: Joel Sherrill 2021-03-24T13:06:13.000Z

Original author: rlong

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

The fix was incorrect. It did not include the rtems assert.h header. Assuming the paths were testable, it would be checking return values on fcntl() commands that RTEMS does not support.

A more likely approach is to ifndef rtems the unsupported fcntl's and see how that goes.

It is unclear if there was communication with the upstream project which would have been needed.

Author: Trac Migrate 2021-05-28T17:29:41.000Z

Original author: rlong

- **Resolution** set to ~"fixed"

- **Status** changed from *reopened* to *closed*

In [changeset:"a187b092288efdb1c55f77c6f785486e64895084/rtems" a187b09/rtems]:

```
gen_uuid.c: Ignore return values from fcntl()

CID 1049146: Unchecked return value from library in get_clock().
CID 1049147: Unchecked return value from library in get_random_fd().

Closes #4280
```

3.9.1.650 4388 - Copy improved mailer.py from rtems-tools

Id	4388
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-19T17:37:41.000Z
Updated	2021-05-26T21:34:44.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::build, ticket-type::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4388
Merges	0

Original author: Alex

The mailer.py script from rtems-tools has had various improvements made to it that have been left out of the mailer.py script in rtems-source-builder.

The mailer.py in rtems-source-builder should be made to mirror the mailer.py script in rtems-tools so that it incorporates the same improvements.

Author: Trac Migrate 2021-04-19T17:37:51.000Z

Original author: Alex

- **Owner** set to Alex
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-05-26T21:34:44.000Z

Original author: Alex

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"4e6dc6431435821a534da6307e72ecbd7e42b82a/rtems-source-builder" 4e6dc64/rtems-source-builder]:

```
sb: Merge mailer changes from rtems-tools

This adds the improved mailer.py script from rtems-tools.

Closes #4388
```

3.9.1.651 4124 - rtems-bsp-builder needs to be switched to waf builds

Id	4124
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-10-06T18:06:59.000Z
Updated	2021-05-25T17:41:39.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4124
Merges	0

rtems-bsp-tester depends on autoconf. It must be fixed to depend on waf BSP configuration information before we can switch from autoconf.

Author: Chris Johns 2020-10-07T00:21:02.000Z

Do you mean `rtems-bsp-builder`?

Author: Joel Sherrill 2021-05-18T14:19:30.000Z

- **Summary** changed from *rtems-bsp-tester needs to be switched to waf builds* to *rtems-bsp-builder needs to be switched to waf builds*

Author: Trac Migrate 2021-05-25T17:41:39.000Z

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"527848d5cc8b60c499e712153ac1f81a60e6a631/rtems-tools" 527848d/rtems-tools]:

```
rtems-bsp-builder: Change to waf build system

Closes #4124
```

3.9.1.652 4439 - Open of /dev/console should only be in SysInit List if Console Enabled

Id	4439
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2021-05-21T21:28:46.000Z
Updated	2021-05-25T13:33:57.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4439
Merges	0

The current code implicitly requires that the code to open /dev/console be included in the system initialization set anytime a dependency exists on the newlib reentrancy structure. This means that referencing errno pulls in at least open(), libio code, close(), atexit(), and unmount support.

This was shown to result in about 20K of text an 5K of data being included in powerpc/psim minimum.exe. A similar impact would happen on all BSPs.

Author: Trac Migrate 2021-05-25T13:33:57.000Z

- **Owner** set to Joel Sherrill <joel@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"76d5722b4a1adba2aa52043a83c7fa0fcff2a0d4/rtems" 76d5722b/rtems]:

```
sysinit: Do not open console when just referencing reentrancy structure.

This change eliminates a system initialization dependentcy which␣
↪resulted
in an application without a file system or console referencing errno␣
↪being
forced to include the code to open(/dev/console), close(), atexit(),
and the unmount infrastructure.

Closes #4439.
```

3.9.1.653 4438 - powerpc/shared/irq/ppc-irq-legacy.c: Use rtems_malloc() not malloc()

Id	4438
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2021-05-21T21:24:57.000Z
Updated	2021-05-25T13:33:50.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4438
Merges	0

malloc() is required to set errno which implicitly references the newlib reentrancy structure. Changing this eliminates one reason the reentrancy code may be pulled into minimum.exe.

Author: Trac Migrate 2021-05-25T13:33:50.000Z

- **Owner** set to Joel Sherrill <joel@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"f9d590753a844443e0981a520c9d672caf704244/rtems" f9d59075/rtems]:

```
ppc-irq-legacy.c: Use rtems_malloc() instead of malloc().

Closes #4438.
```

3.9.1.654 4403 - rtems_timer_fire_when() returns wrong status code when wall_time argument is NULL

Id	4403
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-06T14:16:59.000Z
Updated	2021-05-12T04:41:26.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4403
Merges	0

Original author: frank_k

The _RTEMS Classic API **Guide**_ (https://docs.rtems.org/branches/master/c-user/timer/directives.html#rtems-timer-fire-when) elaborates for rtems_timer_fire_when():

RTEMS_INVALID_ADDRESS The wall_time parameter was NULL. RTEMS_INVALID_CLOCK The time of day was invalid.

Yet, calling rtems_timer_fire_when() with wall_time = NULL and all other parameters valid results in RTEMS_INVALID_CLOCK. Have a look into cpukit/rtems/src/timercreate.c function _Timer_Fire_when() to see the cause for this behavior.

I attach two patches:

- sptimer_err01.patch – extends an existing test to reproduce this issue
- timercreate.patch – fixes the issue

There are at least two ways to handle this bug and I do not want to decide which way to choose:

1. Change the documentation
2. Change the code

For the records:

```
RTEMS_VERSION    = 6.0.0
remote origin    = git://git.rtems.org/rtems.git
commit HEAD      = 2c5199bb049efe8e29cd12461dc57bd6e30388e8  (HEAD ->␣
↪master, origin/master, origin/HEAD)
config.ini       =
[arm/realview_pbx_a9_qemu]
RTEMS_DEBUG = True
RTEMS_NETWORKING = True
RTEMS_POSIX_API = True
RTEMS_SMP = True
BUILD_TESTS = True
NEWLIB_VERSION   = 3.2.0
SOURCE_BUILDER   = Set Builder, 6 (5e449fb5c2cb)
GCC_VERSION      = arm-rtems6-gcc (GCC) 10.2.1 20210309 (RTEMS 6, RSB␣
↪5e449fb5c2cb6812a238f9f9764fd339cbbf05c2, Newlib d10d0d9)
BINUTILS_VERSION = GNU ld (GNU Binutils) 2.36.1.20210309
```

- sptimer_err01.patch
- timercreate.patch

Author: Trac Migrate 2021-05-06T14:18:12.000Z

Original author: frank_k

- **Attachment** sptimer_err01.patch added

Extends existing test to reproduce the issue.

Author: Trac Migrate 2021-05-06T14:19:12.000Z

Original author: frank_k

- **Attachment** timercreate.patch added

Patch which fixes the issue.

Author: Trac Migrate 2021-05-12T04:41:26.000Z

Original author: frank_k

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"3af2dc7802164d6c22dbef1f144c9bd945a35c30/rtems" 3af2dc7/rtems]:

```
_TOD_Validate(): Fix incorrect return code

This patch fixes bug #4403. Directives

* rtems_timer_fire_when()
* rtems_timer_server_fire_when()
* rtems_task_wake_when()

are documented to return RTEMS_INVALID_ADDRESS when their time-of-day
argument is NULL. But actually they return RTEMS_INVALID_CLOCK. To fix
the issue this patch changes _TOD_Validate() to return a
status code instead of just true/false.

Close #4403
```

3.9.1.655 4402 - rtemstoolkit/mailer.py option added twice

Id	4402
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-05-05T14:00:34.000Z
Updated	2021-05-10T16:47:35.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4402
Merges	0

Original author: Alex

In the `add_arguments` function, the intent is that the first two options are added to the arguments before the rest of them are iterated and added. The iteration of the remaining options, however, starts with the first option when it should start with the second.

Additionally, the order of keys in a dictionary cannot be relied on for all versions of Python we support. The dictionary should be changed to an `OrderedDict` to preserve key order to facilitate iteration.

Author: Trac Migrate 2021-05-05T14:00:46.000Z

Original author: Alex

- **Owner** set to Alex
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-05-10T16:47:35.000Z

Original author: Alex

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"f18e6d8e1573e9c924d43ed2e5966d5be41bfaa7/rtems-tools" f18e6d8/rtems-tools]:

```
rtemstoolkit/mailer.py: Fix option ordering for add_arguments

The ordering of keys cannot be guaranteed in a dictionary. This changes
the options iteration to no longer rely on key ordering.

Closes #4402
```

3.9.1.656 4329 - main_rtrace.c: Dereference after null check error spotted by Coverity

Id	4329
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-10T18:42:23.000Z
Updated	2021-04-29T15:27:12.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4329
Merges	0

Original author: rlong

CID 1399709: Dereference after null check in rtems_trace_buffering_shell_save().

```
6. var_compare_op: Comparing buf to null implies that buf might be null.
472  if (!buf)
473  {
474    close (out);
475    printf ("error: no memory\\n");
476  }
```

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```
477
CID 1399709 (#1 of 1): Dereference after null check (FORWARD_NULL)7. var_deref_
↪model: Passing null pointer buf to memset, which dereferences it.
478  memset (buf, 0, SAVE_BUF_SIZE);
```

Author: Trac Migrate 2021-04-29T15:27:12.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"8cf30c41d9336f61e37eeb29617e5a13532c7c3d/rtems" 8cf30c4/rtems]:

```
main_rtrace.c: Add error return when malloc fails

CID 1399709: Dereference after null check in
rtems_trace_buffering_shell_save().

Closes #4329
```

3.9.1.657 4326 - objectextendinformation.c: Dereference after null check error spotted by Coverity

Id	4326
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-10T13:56:34.000Z
Updated	2021-04-29T15:27:08.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::score, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4326
Merges	0

Original author: rlong

CID 26033: Dereference after null check in _Objects_Extend_information().

```
172    if ( old_maximum > extend_count ) {
173      /*
174       *  Copy each section of the table over. This has to be performed as
175       *  separate parts as size of each block has changed.
```

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```
176       */
CID 26033 (#1 of 1): Dereference after null check (FORWARD_NULL)11. var_deref_
↪model: Passing null pointer information->object_blocks to memcpy, which␣
↪dereferences it.
177      memcpy(
178        object_blocks,
179        information->object_blocks,
180        block_count * sizeof( *object_blocks )
181      );
```

Author: Trac Migrate 2021-04-29T15:27:08.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"cdf66529fd2dcbedc27f0ac9ac2f3e4737ea4d0b/rtems" cdf66529/rtems]:

```
objectextendinformation.c: Ensure information->object_blocks is not NULL

CID 26033: Dereference after null check in _Objects_Extend_
↪information().

Closes #4326
```

3.9.1.658 4395 - Workspace initialization is broken for arm/imx7 and arm/raspberrypi

Id	4395
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-29T11:38:47.000Z
Updated	2021-04-29T11:43:04.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4395
Merges	0

Original author: sebastian.huber

Cloned from #4394:

The ARMV7_CP15_START_WORKSPACE_ENTRY_INDEX has a wrong value. The bug was introduced by the fix for #4185.

Author: Trac Migrate 2021-04-29T11:43:04.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"263e00b26abc5eb8b67f73be458245cc798e93e9/rtems" 263e00b/rtems]:

```
bsps/arm: ARMV7_CP15_START_WORKSPACE_ENTRY_INDEX

Change the ARMV7_CP15_START_WORKSPACE_ENTRY_INDEX value to be in line
with the workspace entry in ARMV7_CP15_START_DEFAULT_SECTIONS.

Close #4395.
```

3.9.1.659 4384 - Add SMTP login to rtems-tools mailer

Id	4384
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-04-12T18:34:08.000Z
Updated	2021-04-14T14:32:23.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4384
Merges	0

Original author: Alex

The ability to provide a username and password to perform an SMTP login should be added so that rtems-test results can be mailed via an external SMTP server that requires authentication.

The following additional command line options should be enough to make it work: –smtp-port –smtp-user –smtp-password

The mail-related command line options should be filtered from the mailed logs so that credentials do not get leaked.

Author: Trac Migrate 2021-04-12T18:34:20.000Z

Original author: Alex

- **Owner** set to Alex

- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-04-12T18:36:29.000Z

Original author: Alex

Replying to Alex White:

> The following additional command line options should be enough to make it work: –smtp-port –smtp-user –smtp-password
>
> Additionally, a `--smtp-use-gitconfig` option to use the information found in `~/.gitconfig` would be nice.

Author: Trac Migrate 2021-04-13T21:45:02.000Z

Original author: Alex

In [changeset:"1a575af81717a74b9c927b47b20abb814595391b/rtems-tools" 1a575af/rtems-tools]:

```
rtemstoolkit/mailer.py: Return full smtp-host arg value

This fixes mail.smtp_host() so that it returns the full argument value
rather than just the second character.

Updates #4384
```

Author: Trac Migrate 2021-04-13T21:45:04.000Z

Original author: Alex

In [changeset:"92f7f67297b9053e6846760e6c8059be0fa1c86c/rtems-tools" 92f7f67/rtems-tools]:

```
rtemstoolkit: Filter mail options from log output

This filters mail-related options out before logging the command line
options. This is needed to prevent leaking potentially sensitive
information via logs and emails.

Updates #4384
```

Author: Trac Migrate 2021-04-13T21:45:06.000Z

Original author: Alex

In [changeset:"3b1407fb20299143ada0f0983aa16ac336234ee8/rtems-tools" 3b1407f/rtems-tools]:

```
rtemstoolkit/mailer.py: Add SMTP login options

This adds more options so that the user can authenticate with the SMTP
server.

Updates #4384
```

Author: Trac Migrate 2021-04-14T14:32:23.000Z

Original author: Alex

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"82b752a43851a59d5029b470057464f1b83155d9/rtems-tools" 82b752a/rtems-tools]:

```
rtemstoolkit/mailer.py: Add --use-gitconfig option

This adds the option to pull mail-related configuration values from the
user's git configuration.

Closes #4384
```

3.9.1.660 4342 - disp_hcms29xx.c: Unused value error spotted by Coverity

Id	4342
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-12T16:50:51.000Z
Updated	2021-04-08T23:02:16.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4342
Merges	0

Original author: rlong

CID 1399752: Unused value in disp_hcms29xx_update_task().

```
598       if (rc == RTEMS_SUCCESSFUL) {
CID 1399752 (#1 of 1): Unused value (UNUSED_VALUE)returned_value: Assigning value␣
↪from rtems_semaphore_release(softc_ptr->disp_param.trns_sema_id) to rc here,␣
↪but that stored value is overwritten before it can be used.
599         rc = rtems_semaphore_release(softc_ptr->disp_param.trns_sema_id);
600       }
```

Author: Trac Migrate 2021-04-08T23:02:16.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"3cd58bdf2c2a125a5dfb23d09037d9b5a592f2fd/rtems" 3cd58bd/rtems]:

```
disp_hcms29xx.c: Unused value (CID #1399752)

CID 1399752: Unused value in disp_hcms29xx_update_task().

Closes #4342
```

3.9.1.661 4341 - fastlz.c: Unused value error spotted by Coverity

Id	4341
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-12T16:47:57.000Z
Updated	2021-04-08T23:02:13.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4341
Merges	0

Original author: rlong

CID 1399751: Unused value in fastlz2_compress().

```
219    if(ip[0] == ip[-1] && FASTLZ_READU16(ip-1)==FASTLZ_READU16(ip+1))
220    {
221      distance = 1;
CID 1399751 (#1 of 1): Unused value (UNUSED_VALUE)assigned_pointer: Assigning␣
↪value from ip + 3 to ip here, but that stored value is overwritten before it␣
↪can be used.
222      ip += 3;
```

Author: Trac Migrate 2021-04-08T23:02:13.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"09d811b8a587b44556a6fea240ac636815d0295a/rtems" 09d811b/rtems]:

```
fastlz.c: Unused value (CID #1399751)

CID 1399751: Unused value in fastlz2_compress().

Closes #4341
```

3.9.1.662 4340 - print-ls.c: Unused value error spotted by Coverity

Id	4340
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-12T16:45:41.000Z
Updated	2021-04-08T23:02:09.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4340
Merges	0

Original author: rlong

CID 1255346: Unused value in rtems_shell_ls_printacol

```
327                 if (col >= numcols) {
CID 1255346 (#1 of 1): Unused value (UNUSED_VALUE)assigned_value: Assigning value␣
↪from col to chcnt here, but that stored value is overwritten before it can be␣
↪used.
328                         chcnt = col = 0;
329                         (void)putchar('\\n');
330                 }
value_overwrite: Overwriting previous write to chcnt with value from␣
↪printaname(globals, p, dp->s_inode, ((globals->f_humanize && 0) ? dp->s_size :␣
↪dp->s_block)).
331                 chcnt = printaname(globals, p, dp->s_inode,
```

Author: Trac Migrate	2021-04-08T23:02:09.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"0b2366024d1350b2defc27d5a8669da4dd7a56f1/rtems" 0b23660/rtems]:

```
print-ls.c: Unused value (CID #1255346)

CID 1255346: Unused value in rtems_shell_ls_printacol().

Closes #4340
```

3.9.1.663 4339 - main_cp.c: Unused value error spotted by Coverity

Id	4339
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-12T16:29:10.000Z
Updated	2021-04-08T23:02:06.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4339
Merges	0

Original author: rlong

CID 1255344: Unused value in copy().

```
315                 case FTS_DC:                        /* Warn, continue. */
316                         warnx("%s: directory causes a cycle", curr->fts_path);
CID 1255344 (#5 of 5): Unused value (UNUSED_VALUE)assigned_value: Assigning value␣
↪from rval to badcp here, but that stored value is overwritten before it can be␣
↪used.
317                         badcp = rval = 1;
318                         continue;
```

Author: Trac Migrate	2021-04-08T23:02:06.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"fbc764403f4436e1863a8a2a386a9a290dd14129/rtems" fbc76440/rtems]:

```
main_cp.c: Unused value (CID #1255344)

CID 1255344: Unused value in copy().
```

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```
4
5 Closes #4339
```

3.9.1.664 4380 - Update RTEMS POSIX Compliance Spreadsheet

Id	4380
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Created	2021-04-06T21:25:18.000Z
Updated	2021-04-07T18:58:39.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4380
Merges	0

There have been additions to RTEMS and the tracking spreadsheet now includes FACE Technical Standard, Edition 3.1

Author: Trac Migrate 2021-04-07T18:58:39.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"b43fe709af0130dd720b61aa505da2c23d9c3c81/rtems-docs" b43fe70/rtems-docs]:

```
1 posix-compliance: Update tracking spreadsheet to v12
2
3 The new version of the API tracking spreadsheet includes FACE
4 Technical Standard, Edition 3.1 as well as a few additions to
5 what RTEMS supports. The generation script and discussion of
6 standards was updated to reflect the inclusion of a new Edition
7 of the FACE Technical Standard.
8
9 Closes #4380.
```

3.9.1.665 3689 - bdbuf: Replace automatic read-ahead with rtems_bdbuf_peek()

Id	3689
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2019-02-11T10:49:25.000Z
Updated	2021-04-07T05:04:32.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3689
Merges	0

Original author: sebastian.huber

The block device cache (bdbuf) tries to deduce a read ahead opportunity from the read access pattern. Using real world FAT file systems showed that this is not very reliable and the read ahead seldom happens. One way to fix this issue is let file systems give a hint to the block device cache that they will likely read a certain block in the future, e.g. the next block in a sequential file read. Remove the existing read ahead logic and add a new function rtems_bdbuf_peek() instead.

- 0001-FIXME-bdbuf-Add-rtems_bdbuf_peek.patch

Author: Trac Migrate 2019-02-11T10:49:48.000Z

Original author: sebastian.huber

- **Attachment** 0001-FIXME-bdbuf-Add-rtems_bdbuf_peek.patch added

Prototoype implementation.

Author: Chris Johns 2019-02-11T11:03:03.000Z

Original author: sebastian.huber

Why is the status returned from the peek in `fat_file_read` not checked?

Author: Trac Migrate 2019-02-11T11:04:30.000Z

Original author: sebastian.huber

The data is not used yet. It is just a hint, maybe we should remove a return code from rtems_bdbuf_peek().

Author: Chris Johns 2019-02-11T11:09:51.000Z

Original author: sebastian.huber

I would not remove the return code, it may be used in another file system.

Author: Trac Migrate 2019-12-19T08:07:34.000Z

Original author: sebastian.huber

- **Milestone** changed from %"5.1" to %"6.1"

Author: Trac Migrate 2021-03-26T13:28:22.000Z

Original author: sebastian.huber

In [changeset:"6ae79e6df6fbc89ffbd6badb3f84d6a2b513fe83/rtems" 6ae79e6/rtems]:

```
libblock: Add rtems_bdbuf_peek()

Adds a peek function that allows (for example) a file system to suggest
the next blocks that should be used for read ahead. This can increase
the read speed of fragmented files.

Update #3689
```

Author: Trac Migrate 2021-03-26T13:28:26.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"fd639b8abf1b82a74d14fbfe0180d853bbb43855/rtems" fd639b8/rtems]:

```
dosfs: Use peek support

This speeds up reading fragmented files.

Fix #3689
```

Author: Trac Migrate 2021-04-07T05:04:32.000Z

Original author: sebastian.huber

In [changeset:"b3364fc6cb2d7566cf5771a96711cd37b99cd9a3/rtems" b3364fc6/rtems]:

```
libtests/block14: Fix warning

Fix warning:

```

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```
testsuites/libtests/block14/init.c:198:8: warning: 'sc' may be used
uninitialized in this function [-Wmaybe-uninitialized]

Update #3689.
```

3.9.1.666 4368 - rtems–tools tool kit temp file constructor does nothing

Id	4368
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Joel Sherrill
Created	2021-03-31T03:26:34.000Z
Updated	2021-04-01T17:43:50.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4368
Merges	0

A change to add an overloaded constructor . . .

https://git.rtems.org/rtems-tools/commit/?id=420d7a13672991a1480d06ac02190f2976b9253b

does not do anything. The body of the constructor is empty.

Thinking about this I think the change is not right because the code depends on `libiberty` make temp call to find the temp directory and that is designed to crate safe temp files.

I am now wondering how the code was tested? The files registered are not known to the clean up handler that runs on exit.

Author: Trac Migrate 2021-04-01T17:43:50.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

This patch set up the interfaces used in the "covoar: Add option to create named objdumps" patch that I sent. We determined that patch was not needed given its hacked-togetherness along with future speedups that we had in mind which would make it obsolete anyway.

This patch should have been removed from the set to be committed, but I forgot to send out a notice to exclude it. Sorry for the confusion.

This commit should be reverted.

3.9.1.667 4321 - Add spi driver for AXI SPI ip core from Xilinx

Id	4321
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-09T10:43:23.000Z
Updated	2021-03-30T15:03:39.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4321
Merges	0

Original author: soja

Add a spidev compatible driver for the xilinx axi quad spi ip core for standard SPI mode

Author: Trac Migrate 2021-03-09T10:43:36.000Z

Original author: soja

- **Owner** set to soja
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-03-30T15:03:14.000Z

Original author: soja

In [changeset:"70667b5527fa1a7398636f03ecc614d28702c8fc/rtems" 70667b55/rtems]:

```
bsps/xilinx_zynq: Add SPI driver for xilinx-axi-spi

Updates #4321
```

Author: Trac Migrate 2021-03-30T15:03:27.000Z

Original author: soja

In [changeset:"7a1edf11a1d6fbcabe660b34d93a2ed005cf6096/rtems" 7a1edf11/rtems]:

```
bsps/shared: Add Xilinx-AXI SPI driver to waf

Updates #4321
```

Author: Trac Migrate 2021-03-30T15:03:39.000Z

Original author: soja

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"33fd9155a1cd25c26ba5acdca93b9e7bd0aa73e8/rtems" 33fd915/rtems]:

```
bsps/xilinx_zynq: Add Xilinx AXI SPI driver to autotools build

Closes #4321
```

3.9.1.668 4355 - Remove leon3 test configurations which assume sis is built into gdb from rtems-test

Id	4355
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-23T15:55:39.000Z
Updated	2021-03-23T20:05:29.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4355
Merges	0

Original author: rlong

When trying to run the tests with rtems-test on leon3, every test was invalid except for minimum. rtems-test is still using sis through gdb when it should be using the dedicated sis executable.

Author: Trac Migrate 2021-03-23T20:05:29.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"64ad86c10b4ec8ecfc861dad39f0a51a69db6ca5/rtems-tools" 64ad86c/rtems-tools]:

```
bsps/sparc: Remove INI files using SIS in GDB

Removed the INI files that use the "target sim" option
since the SIS sparc simulator in GDB is no longer used
```

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```
with RTEMS. A newer version of SIS is built separately.

Closes #4355
```

3.9.1.669 4336 - Improve the workaround for the LEON3FT store-store errata: TN-0009 on master

Id	4336
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-11T15:16:45.000Z
Updated	2021-03-11T16:52:53.000Z
Milestone	6.1
Labels	arch:sparc, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4336
Merges	0

Original author: daniel

See also:

https://www.gaisler.com/doc/antn/GRLIB-TN-0009.pdf

Some areas were already fixed by #3057. RTEMS-5 branch ticket #4154.

Author: Trac Migrate 2021-03-11T16:51:40.000Z

Original author: daniel

In [changeset:"0cae482a454e4e554b8f391f2752eb40b5068cef/rtems" 0cae482a/rtems]:

```
sparc: Remove sequences that the B2BST scan script warns about

Update #4336.
```

Author: Trac Migrate 2021-03-11T16:52:50.000Z

Original author: daniel

In [changeset:"acad761b9c721b1d063698c57a2f4555460030a3/rtems" acad761/rtems]:

```
sparc,leon: avoid triggering TN-0009 bad sequence

Update #4336.
```

Author: Trac Migrate 2021-03-11T16:52:53.000Z

Original author: daniel

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"89d90c00198a469a0c197e53f58d7e1cef5839f7/rtems" 89d90c0/rtems]:

```
sparc,leon: avoid triggering LEON3FT errata TN-0009

Close #4336.
```

3.9.1.670 4324 - grlib,grcanfd: extend the GRCAN driver with GRCANFD support

Id	4324
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-09T14:31:37.000Z
Updated	2021-03-11T16:52:21.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::enhancement, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4324
Merges	0

Original author: daniel

The new GRCAN_FD IP supports CAN FD standard and is mostly backwards compatible with GRCAN SW interface. It introduces support for CAN-FD frames and a new bit-rate timing registers for new baud-rate.

The GRCAN driver have been extended to support the GRCANFD IP using the same API. Device IP-core specific functions are split into different files (grcanstd.c and grcanfd.c).

(this was fixed in 5 branch, see ticket #4307).

Author: Trac Migrate 2021-03-11T16:52:11.000Z

Original author: daniel

In [changeset:"b98d6b67f68b9c973c88f1452666477d19d6eafe/rtems" b98d6b67/rtems]:

```
grlib: added 64-bit read no-cache function

Update #4324.
```

Author: Trac Migrate 2021-03-11T16:52:14.000Z

Original author: daniel

In [changeset:"43c903a1dc0634d0df5db8c94c5b72ae338d3032/rtems" 43c903a1/rtems]:

```
leon,grcan: added support for GRCANFD

The new GRCAN_FD IP supports CAN FD standard and is mostly backwards
compatible with GRCAN SW interface. The GRCAN driver have been extended
to support the GRCANFD IP using the same driver.

Additional functions have been added that uses a new CAN FD frame
format and read/write/baud-rate functions that supports both GRCANFD
and GRCAN. To keep the SW API fully backwards compatible with GRCAN,
the old functions remain.

Update #4324.
```

Author: Trac Migrate 2021-03-11T16:52:18.000Z

Original author: daniel

In [changeset:"9c76ca0c0cbb68aabbf8bc9ba5557419f0989371/rtems" 9c76ca0/rtems]:

```
leon,grcanfd: split out GRCANFD specific support in separate file

Update #4324.
```

Author: Trac Migrate 2021-03-11T16:52:21.000Z

Original author: daniel

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"9bf8a9d14735511990213f004376f47d4c46ee44/rtems" 9bf8a9d/rtems]:

```
leon,grcan: split out GRCAN non-FD specific support in separate file

Close #4324.
```

3.9.1.671 4323 - grlib,can: introduce a new common CAN baud-rate timing calculating functions

Id	4323
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-09T14:30:14.000Z
Updated	2021-03-11T16:52:08.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4323
Merges	0

Original author: daniel

There is no point in having two different implementations specific per GRLIB CAN device driver (OCCAN and GRCAN). Instead we can use the common CAN timing definitions and translate that into the device specific parameters using a new common calculation function.

Author: Trac Migrate 2021-03-11T16:52:01.000Z

Original author: daniel

In [changeset:"cff99cf1fae2ff2b019c7f3b1827bb7fe8ee7d83/rtems" cff99cf/rtems]:

```
leon,can: introduce common CAN baud-rate calculation function

Reimplemented the baud-rate algorithm from scratch to cope with
GRCAN, GRCANFD and OC_CAN devices.

Update #4323.
```

Author: Trac Migrate 2021-03-11T16:52:05.000Z

Original author: daniel

In [changeset:"4d192207421d8f7918028fb069df0c6167b6b992/rtems" 4d192207/rtems]:

```
leon,grcan: use common CAN baud-rate calculation routine

Update #4323.
```

Author: Trac Migrate 2021-03-11T16:52:08.000Z

Original author: daniel

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"65237ba01d4fc49acd1781895a2a5ffc3591f524/rtems" 65237ba0/rtems]:

```
leon,occan: use common CAN baud-rate calculation routine

Close #4323.
```

3.9.1.672 4320 - Add driver for cadence-spi device for xilinx based BSPs

Id	4320
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-09T10:41:19.000Z
Updated	2021-03-10T19:14:17.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4320
Merges	0

Original author: soja

Implement a spidev compatible driver for using the cadence-spi device of the Zynq devices in standard SPI mode.

Author: Trac Migrate 2021-03-09T10:41:30.000Z

Original author: soja

- **Owner** set to soja
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-03-10T19:13:54.000Z

Original author: soja

In [changeset:"cc825d0322ecdf67d3254da97b37d69fe7b6519c/rtems" cc825d0/rtems]:

```
bsps/xilinx_zynq: Add SPI driver for cadence-spi

Updates #4320
```

Author: Trac Migrate 2021-03-10T19:14:06.000Z

Original author: soja

In [changeset:"06129897a9e616a3cfad0d9803d14da68b5cfe3e/rtems" 06129897/rtems]:

```
bsps/xilinx_zynq: Add SPI driver to waf

Updates #4320
```

Author: Trac Migrate 2021-03-10T19:14:17.000Z

Original author: soja

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"92239318b1524f10d68dc5f04b4b46dd714718a1/rtems" 9223931/rtems]:

```
bsps/xilinx_zynq: Add SPI driver to autotools build

Closes #4320
```

3.9.1.673 4264 - Activate ehci_pci in rtems-libbsd (cloned)

Id	4264
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-22T11:46:03.000Z
Updated	2021-03-09T10:36:41.000Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4264
Merges	0

Original author: GabrielMoyano

Cloned from #4263:

Import ehci_pci from freebsd-org using freebsd-to-rtems.py

Author: Trac Migrate 2021-03-09T10:35:11.000Z

Original author: GabrielMoyano

- **Owner** set to soja
- **Status** changed from *new* to *accepted*

Author: Trac Migrate	2021-03-09T10:36:22.000Z

Original author: GabrielMoyano

Fixed with https://git.rtems.org/rtems-libbsd/commit/?id=aee7b9291ca7f8cb2748dad94a89200326bbb17b and https://git.rtems.org/rtems-libbsd/commit/?h=6-freebsd-12&id=5b50a5181a6327db2613b010b0117a6286ff54a6

Author: Trac Migrate	2021-03-09T10:36:41.000Z

Original author: GabrielMoyano

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

3.9.1.674 4281 - main_chmod.c: Unchecked return value from library error spotted by Coverity

Id	4281
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-02T14:30:30.000Z
Updated	2021-03-08T20:56:21.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4281
Merges	0

Original author: rlong

CID 1063856: Unchecked return value from library in rtems_shell_main_chmod().

```
55  for (n=2 ; n < argc ; n++)
CID 1063856 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)4. check_return: Calling chmod(argv[n++], mode) without checking return value. This library function may fail and return an error code. [Note: The source code implementation of the function has been overridden by a builtin model.]
56    chmod(argv[n++], mode);
57
58  return 0;
59}
```

Author: Trac Migrate 2021-03-08T20:56:21.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"8e34aa3b7b6b536b0362bb31dfa30a17452a6bd0/rtems" 8e34aa3/rtems]:

```
main_chmod.c: Fix Unchecked return value from library (CID #1063856)

CID 1063856: Unchecked return value from library in
rtems_shell_main_chmod().

Closes #4281
```

3.9.1.675 4301 - grcan.c: Unused value error spotted by Coverity

Id	4301
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-04T18:43:12.000Z
Updated	2021-03-05T20:20:29.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4301
Merges	0

Original author: rlong

CID 1437613: Unused value in grcan_set_sfilter().

```
1788                /* disable TX/RX SYNC filtering */
CID 1437613 (#1 of 1): Unused value (UNUSED_VALUE)assigned_value: Assigning value␣
↪4294967295ULL to pDev->sfilter.mask here, but that stored value is overwritten␣
↪before it can be used.
1789                pDev->sfilter.mask = 0xffffffff;
value_overwrite: Overwriting previous write to pDev->sfilter.mask with value 0ULL.
1790                pDev->sfilter.mask = 0;
```

Author: Trac Migrate 2021-03-05T20:20:29.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"f762b7c2725374bee975f0c031e467fd92412566/rtems" f762b7c2/rtems]:

```
grcan.c: Fix Unused value (CID #1437613)

CID 1437613: Unused value in grcan_set_filter().
This fix was recommended by Daniel Hellstrom (daniel@gaisler.com).

Closes #4301
```

3.9.1.676 4295 - b1553brm.c: Unsigned compared against 0 error spotted by Coverity

Id	4295
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-04T15:08:42.000Z
Updated	2021-03-05T20:20:26.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4295
Merges	0

Original author: rlong

CID 1399773: Unsigned compared against 0 in brm_write().

```
983         rw_args->bytes_moved = count;
984
CID 1399773 (#1 of 1): Unsigned compared against 0 (NO_EFFECT)unsigned_compare: This greater-than-or-equal-to-zero comparison of an unsigned value is always true. count >= 0U.
985         if (count >= 0) {
986                 return RTEMS_SUCCESSFUL;
987         }
```

Author: Trac Migrate	2021-03-05T20:20:26.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"c57079a8149d779d487febbf9aa34037faa35fd0/rtems" c57079a/rtems]:

```
b1553brm.c: Fix Unsigned compared against 0 (CID #1399773)

CID 1399773: Unsigned compared against 0 in brm_write().

Closes #4295
```

3.9.1.677 4294 - satcan.c: Unsigned compared against 0 error spotted by Coverity

Id	4294
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-04T15:03:12.000Z
Updated	2021-03-05T20:20:23.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4294
Merges	0

Original author: rlong

CID 1399768: Unsigned compared against 0 in satcan_ioctl().

```
303                 DBG("SatCAN: ioctl: masking register %d, with value %x\\n\\r",
304                     regmod->reg, regmod->val);
unsigned_compare: This less-than-zero comparison of an unsigned value is never␣
↪true. regmod->reg < 0U.
305                 if (regmod->reg < 0)
306                         return RTEMS_INVALID_NAME;
307                 else if (regmod->reg <= SATCAN_FILTER_STOP)
```

Author: Trac Migrate 2021-03-05T20:20:23.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"1f29ee4528290cd516be551c0ff7e945d6567390/rtems" 1f29ee4/rtems]:

```
satcan.c: Fix Unsigned compared against 0 (CID #1399768)

CID 1399768: Unsigned compared against 0 in satcan_ioctl().

Closes #4294
```

3.9.1.678 4290 - gr_cpci_gr740.c: Unchecked return value from library error spotted by Coverity

Id	4290
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-02T15:41:07.000Z
Updated	2021-03-05T20:20:19.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4290
Merges	0

Original author: rlong

CID 1437630: Unchecked return value from library in gr_cpci_gr740_inti1().

```
472         strcpy(priv->prefix, "/dev/gr740_0");
473         priv->prefix[11] += dev->minor_drv;
CID 1437630 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)2.␣
↪check_return: Calling mkdir(priv->prefix, 511U) without checking return value.␣
↪This library function may fail and return an error code. [Note: The source code␣
↪implementation of the function has been overridden by a builtin model.]
474         mkdir(priv->prefix, S_IRWXU | S_IRWXG | S_IRWXO);
475         priv->prefix[12] = '/';
476         priv->prefix[13] = '\\0';
```

Author: Trac Migrate 2021-03-02T18:22:21.000Z

Original author: rlong

- **Summary** changed from *gr_cpi_gr740.c: Unchecked return value from library error spotted by Coverity* to *gr_cpci_gr740.c: Unchecked return value from library error spotted by Coverity*

Author: Trac Migrate 2021-03-05T20:20:19.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"f804778881334484724b42335cac5dedaa242ed7/rtems" f8047788/rtems]:

```
gr_cpci_gr740.c: Unchecked return value from library (CID #1437630)

CID 1437630: Unchecked return value from library in gr_cpci_gr740_
↪init1().

Closes #4290
```

3.9.1.679 4289 - gr_tmtc_1553.c: Unchecked return value from library error spotted by Coverity

Id	4289
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-02T15:38:33.000Z
Updated	2021-03-05T20:20:16.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4289
Merges	0

Original author: rlong

CID 1399785: Unchecked return value from library in gr_tmtc_1553_init1().

```
315         strcpy(priv->prefix, "/dev/tmtc1553_0");
316         priv->prefix[14] += dev->minor_drv;
CID 1399785 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)2.␣
↪check_return: Calling mkdir(priv->prefix, 511U) without checking return value.␣
↪This library function may fail and return an error code. [Note: The source code␣
↪implementation of the function has been overridden by a builtin model.]
317         mkdir(priv->prefix, S_IRWXU | S_IRWXG | S_IRWXO);
318         priv->prefix[15] = '/';
319         priv->prefix[16] = '\\0';
```

Author: Trac Migrate 2021-03-05T20:20:16.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"5f0a7ceb8100ea04d33474a408f49ab83401b845/rtems" 5f0a7ceb/rtems]:

```
gr_tmtc_1553.c: Unchecked return value from library (CID #1399785)

CID 1399785: Unchecked return value from library in gr_tmtc_1553_
↪init1().

Closes #4289
```

3.9.1.680 4288 - gr_701.c: Unchecked return value from library error spotted by Coverity

Id	4288
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-02T15:35:32.000Z
Updated	2021-03-05T20:20:13.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4288
Merges	0

Original author: rlong

CID 1399783: Unchecked return value from library in gr701_init1().

```
331         strcpy(priv->prefix, "/dev/gr701_0");
332         priv->prefix[11] += dev->minor_drv;
CID 1399783 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)2.␣
↪check_return: Calling mkdir(priv->prefix, 511U) without checking return value.␣
↪This library function may fail and return an error code. [Note: The source code␣
↪implementation of the function has been overridden by a builtin model.]
333         mkdir(priv->prefix, S_IRWXU | S_IRWXG | S_IRWXO);
334         priv->prefix[12] = '/';
335         priv->prefix[13] = '\\0';
```

Author: Trac Migrate 2021-03-05T20:20:13.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"4c0d9c5a57637ef2a97717dfb5b8acee9a210370/rtems" 4c0d9c5a/rtems]:

```
gr_701.c: Unchecked return value from library (CID #1399783)

```

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```
CID 1399783: Unchecked return value from library in gr701_init1().

Closes #4288
```

3.9.1.681 4287 - gr_rasta_adcdac.c: Unchecked return value from library error spotted by Coverity

Id	4287
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-02T15:29:21.000Z
Updated	2021-03-05T20:20:10.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4287
Merges	0

Original author: rlong

CID 1399780: Unchecked return value from library in gr_rasta_adcdac_init1().

```
396         strcpy(priv->prefix, "/dev/rastaadcdac0");
397         priv->prefix[16] += dev->minor_drv;
CID 1399780 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)2.␣
↪check_return: Calling mkdir(priv->prefix, 511U) without checking return value.␣
↪This library function may fail and return an error code. [Note: The source code␣
↪implementation of the function has been overridden by a builtin model.]
398         mkdir(priv->prefix, S_IRWXU | S_IRWXG | S_IRWXO);
399         priv->prefix[17] = '/';
400         priv->prefix[18] = '\\0';
```

Author: Trac Migrate 2021-03-05T20:20:10.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"91e38f8a8fab1cce4437578118f899bb22c4d455/rtems" 91e38f8/rtems]:

```
gr_rasta_adcdac.c: Fix Unchecked return value from library (CID
↪#1399780)

```

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```
CID 1399780: Unchecked return value from library in gr_rasta_adcdac_
↪init1().

Closes #4287
```

3.9.1.682 4286 - gr_rasta_tmtc.c: Unchecked return value from library error spotted by Coverity

Id	4286
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-02T15:23:14.000Z
Updated	2021-03-05T20:20:06.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4286
Merges	0

Original author: rlong

CID 1399771: Unchecked return value from library in gr_rasta_tmtc_init1().

```
588         strcpy(priv->prefix, "/dev/rastatmtc0");
589         priv->prefix[14] += dev->minor_drv;
CID 1399771 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)2.␣
↪check_return: Calling mkdir(priv->prefix, 511U) without checking return value.␣
↪This library function may fail and return an error code. [Note: The source code␣
↪implementation of the function has been overridden by a builtin model.]
590         mkdir(priv->prefix, S_IRWXU | S_IRWXG | S_IRWXO);
591         priv->prefix[15] = '/';
592         priv->prefix[16] = '\\0';
```

Author: Trac Migrate 2021-03-05T20:20:06.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"17d525b5840418ba134a37c39f230c849f4aec3d/rtems" 17d525b5/rtems]:

```
gr_rasta_tmtc.c: Fix Unchecked return value from library (CID #1399771)

```

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```
CID 1399771: Unchecked return value from library in gr_rasta_tmtc_
↪init1().

Closes #4286
```

3.9.1.683 4285 - gr_leon4_n2x.c: Unchecked return value error from library error spotted by Coverity

Id	4285
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-02T15:16:14.000Z
Updated	2021-03-05T20:20:03.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4285
Merges	0

Original author: rlong

CID 1399767: Unchecked return value error from library in gr_cpci_leon4_n2x_init1().

```
495         strcpy(priv->prefix, "/dev/leon4n2x0");
496         priv->prefix[13] += dev->minor_drv;
CID 1399767 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)2.␣
↪check_return: Calling mkdir(priv->prefix, 511U) without checking return value.␣
↪This library function may fail and return an error code. [Note: The source code␣
↪implementation of the function has been overridden by a builtin model.]
497         mkdir(priv->prefix, S_IRWXU | S_IRWXG | S_IRWXO);
498         priv->prefix[14] = '/';
499         priv->prefix[15] = '\\0';
```

Author: Trac Migrate 2021-03-05T20:20:03.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"570b558955690f8f78f89508faa5804ce8125dd7/rtems" 570b558/rtems]:

```
gr_leon4_n2x.c: Fix Unchecked return value from library (CID #1399767)

```

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```
CID 1399767: Unchecked return value error from library in gr_cpci_leon4_
↪n2x_init1().

Closes #4285
```

3.9.1.684 4279 - pci_cfg_read.c: Missing break in switch error spotted by Coverity

Id	4279
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-01T21:25:50.000Z
Updated	2021-03-05T20:20:00.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4279
Merges	0

Original author: rlong

CID 1399723: Missing break in switch in pci_read_addressable().

```
70          switch (type) {
71          case PCI_RES_IO:
72                  range0 = &bus->dev.resources[BRIDGE_RES_IO];
73                  break;
CID 1399723 (#1 of 1): Missing break in switch (MISSING_BREAK)unterminated_case:␣
↪The case for value 3 is not terminated by a break statement.
74          case PCI_RES_MEM:
75                  range1 = &bus->dev.resources[BRIDGE_RES_MEM];
fallthrough: The above case falls through to this one.
76          default:
77          case PCI_RES_MEMIO:
```

Author: Trac Migrate 2021-03-05T20:20:00.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"0d33d10613a1079f49414b0e2daa820cd59fe68a/rtems" 0d33d10/rtems]:

```
pci_cfg_read.c: Fix Missing break in switch (CID #1399723)

CID 1399723: Missing break in switch in pci_read_addressable().

Closes #4279
```

3.9.1.685 4284 - gr_rasta_io.c: Unchecked return value from library error spotted by Coverity

Id	4284
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-02T15:09:01.000Z
Updated	2021-03-05T20:19:56.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4284
Merges	0

Original author: rlong

CID 1399763: Unchecked return value from library in gr_rasta_io_init1().

```
575         strcpy(priv->prefix, "/dev/rastaio0");
576         priv->prefix[12] += dev->minor_drv;
CID 1399763 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)2.␣
↪check_return: Calling mkdir(priv->prefix, 511U) without checking return value.␣
↪This library function may fail and return an error code. [Note: The source code␣
↪implementation of the function has been overridden by a builtin model.]
577         mkdir(priv->prefix, S_IRWXU | S_IRWXG | S_IRWXO);
578         priv->prefix[13] = '/';
579         priv->prefix[14] = '\\0';
```

Author: Trac Migrate	2021-03-05T20:19:56.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"b84ce61aa38fb887b790d6ae162d181029cce629/rtems" b84ce61/rtems]:

```
gr_rasta_io.c: Fix Unchecked return value from library (CID #1399763)

CID 1399763: Unchecked return value from library in gr_rasta_io_init1().
```

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```
4
5 Closes #4284
```

3.9.1.686 4283 - gr_rasta_spw_router.c: Unchecked return value from library error spotted by Coverity

Id	4283
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-02T15:06:11.000Z
Updated	2021-03-05T20:19:53.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4283
Merges	0

Original author: rlong

CID 1399760: Unchecked return value from library in gr_rasta_spw_router_init1().

```
1 412         priv->prefix[14] += dev->minor_drv;
2 CID 1399760 (#1 of 1): Unchecked return value from library (CHECKED_RETURN)2.␣
  ↪check_return: Calling mkdir(priv->prefix, 511U) without checking return value.␣
  ↪This library function may fail and return an error code. [Note: The source code␣
  ↪implementation of the function has been overridden by a builtin model.]
3 413         mkdir(priv->prefix, S_IRWXU | S_IRWXG | S_IRWXO);
4 414         priv->prefix[15] = '/';
5 415         priv->prefix[16] = '\\0';
6 416
```

Author: Trac Migrate 2021-03-05T20:19:53.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"0443601356477666d2bef460cfd1173b6c3a2c51/rtems" 04436013/rtems]:

```
1 gr_rasta_spw_router.c: Fix Unchecked return value from library (CID
  ↪#1399760)
2
3 CID 1399760: Unchecked return value from library in gr_rasta_spw_router_
```

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```
↪init1().

Closes #4283
```

3.9.1.687 4278 - cpuusagetop.c: Missing break in switch errors spotted by Coverity

Id	4278
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-01T21:01:48.000Z
Updated	2021-03-05T20:19:50.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4278
Merges	0

Original author: rlong

CID 1399726: Missing break in switch in task_usage(). CID 1399728: Missing break in switch in task_usage(). CID 1399742: Missing break in switch in task_usage().

CID 1399726

```
233           continue;
CID 1399726 (#1 of 1): Missing break in switch (MISSING_BREAK)unterminated_case:␣
↪The case for value 2U is not terminated by a break statement.
234         case RTEMS_TOP_SORT_CURRENT_PRI:
235           if (
236             _Thread_Get_priority( thread )
237               > _Thread_Get_priority( data->tasks[j] )
238           ) {
239             continue;
240           }
fallthrough: The above case falls through to this one.
```

CID 1399728

```
230           continue;
CID 1399728 (#1 of 1): Missing break in switch (MISSING_BREAK)unterminated_case:␣
↪The case for value 1U is not terminated by a break statement.
231         case RTEMS_TOP_SORT_REAL_PRI:
232           if (thread->Real_priority.priority > data->tasks[j]->Real_priority.
↪priority)
233             continue;
fallthrough: The above case falls through to this one.
234         case RTEMS_TOP_SORT_CURRENT_PRI:
```

CID 1399742

```
226            continue;
CID 1399742 (#1 of 1): Missing break in switch (MISSING_BREAK)unterminated_case:
↪The case for value 3U is not terminated by a break statement.
227          case RTEMS_TOP_SORT_TOTAL:
228            if (CPU_usage_Equal_to(&usage, &data->zero) ||
229                CPU_usage_Less_than(&usage, &data->usage[j]))
230              continue;
fallthrough: The above case falls through to this one.
231          case RTEMS_TOP_SORT_REAL_PRI:
```

Author: Trac Migrate 2021-03-01T21:19:34.000Z

Original author: rlong

- **Summary** changed from *cpuusagetop.c* to *cpuusagetop.c: Missing break in switch errors spotted by Coverity*

Author: Trac Migrate 2021-03-05T20:19:50.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"c7eb89f82b4c0572917cc7bc31dfecb08a6685ee/rtems" c7eb89f8/rtems]:

```
cpuusagetop.c: Fix three Missing break in switch Coverity errors

CID 1399726: Missing break in switch in task_usage().
CID 1399728: Missing break in switch in task_usage().
CID 1399742: Missing break in switch in task_usage().

Closes #4278
```

3.9.1.688 4277 - grtc.c: Missing break in switch errors spotted by Coverity

Id	4277
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-03-01T20:22:13.000Z
Updated	2021-03-05T20:19:46.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4277
Merges	0

Original author: rlong

CID 1399761: Missing break in switch in process_dma(). CID 1399765: Missing break in switch in process_dma(). CID 1399766: Missing break in switch in process_dma(). CID 1399777: Missing break in switch in process_dma().

CID 1399761

```
1366                pDev->frm = NULL;
1367                pDev->frame_state = FRM_STATE_HDR;
1368
CID 1399761: Missing break in switch (MISSING_BREAK) [select issue]
fallthrough: The above case falls through to this one.
1369                case FRM_STATE_HDR:
1370                DBG2("FRAME_STATE_HDR\\n");
```

CID 1399765

```
1450                pDev->frame_state = FRM_STATE_PAYLOAD;
1451                pDev->frm = frm;
1452
1453                case FRM_STATE_PAYLOAD:
1454                DBG2("FRAME_STATE_PAYLOAD\\n");
```

CID 1399766

```
1450                pDev->frame_state = FRM_STATE_PAYLOAD;
1451                pDev->frm = frm;
1452
CID 1399766 (#1 of 1): Missing break in switch (MISSING_BREAK)unterminated_case:␣
↪The case for value FRM_STATE_PAYLOAD is not terminated by a break statement.
1453                case FRM_STATE_PAYLOAD:
1454                DBG2("FRAME_STATE_PAYLOAD\\n");
```

CID 1399767

```
1354        switch( pDev->frame_state ) {
CID 1399777 (#1 of 1): Missing break in switch (MISSING_BREAK)unterminated_case:␣
```

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```
↪The case for value FRM_STATE_NONE is not terminated by a break statement.
1355                case FRM_STATE_NONE:
1356                DBG2("FRAME_STATE_NONE\\n");
1357
1358                /* Find Start of next frame by searching for 0x01 */
1359                ret = grtc_hw_find_frm(pDev);
1360                if ( ret != 0 ) {
1361                        /* Frame start not found */
1362                        return 0;
1363                }
1364
1365                /* Start of frame found, Try to copy header */
1366                pDev->frm = NULL;
1367                pDev->frame_state = FRM_STATE_HDR;
```

Author: Trac Migrate 2021-03-01T20:48:04.000Z

Original author: rlong

- **Summary** changed from *grtc.c: Missing break in switch error spotted by Coverity* to *grtc.c: Missing break in switch errors spotted by Coverity*

Author: Trac Migrate 2021-03-05T20:19:46.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"13d6fae8dd495834d9d412b45da9c3deced7943a/rtems" 13d6fae/rtems]:

```
grtc.c: Fix four Missing break in switch Coverity errors

CID 1399761: Missing break in switch in process_dma().
CID 1399765: Missing break in switch in process_dma().
CID 1399766: Missing break in switch in process_dma().
CID 1399777: Missing break in switch in process_dma().

Closes #4277
```

3.9.1.689 4259 - grspw.c: Unchecked return value error spotted by Coverity

Id	4259
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-19T21:06:23.000Z
Updated	2021-03-05T20:19:43.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4259
Merges	0

Original author: rlong

CID 1399781: Unchecked return value in grspw_device_init().

```
551         if ( value )
552                 pDev->bd_dma_area = value->i;
553
13. Condition grspw_buffer_alloc(pDev), taking false branch.
554         if (grspw_buffer_alloc(pDev))
555                 return RTEMS_NO_MEMORY;
556
557         /* Create semaphores */
CID 1399781 (#2 of 2): Unchecked return value (CHECKED_RETURN)14. check_return:␣
↪Calling rtems_semaphore_create without checking return value (as is done␣
↪elsewhere 15 out of 17 times).
558         rtems_semaphore_create(
```

Author: Trac Migrate 2021-03-05T20:19:43.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"1eaf4e461f3800491040c8d1a51d6bba1ed9eab8/rtems" 1eaf4e46/rtems]:

```
grspw.c: Fix Unchecked return value (CID #1399781)

CID 1399781: Unchecked return value in grspw_device_init().

Closes #4259
```

3.9.1.690 4206 - aarch64/xilinx_zynqmp_lp64 does not run with RTEMS_DEBUG enabled

Id	4206
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2020-12-22T12:45:04.000Z
Updated	2021-03-05T14:06:35.000Z
Milestone	6.1
Labels	arch:aarch64, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4206
Merges	0

Original author: sebastian.huber

qemu-system-aarch64 -serial null -serial mon:stdio -machine xlnx-zcu102 -m 4096 -kernel build/aarch64/xilinx_zynqmp_lp64/testsuites/samples/ticker.exe -nographic

```
*** FATAL ***
fatal source: 7 (RTEMS_FATAL_SOURCE_ASSERT)
fatal code: 1074874896 (0x40114a10)
RTEMS version: 6.0.0.644cd68d8ce0044f78f095a648bfe4c1567f351b
RTEMS tools: 10.2.1 20201215 (RTEMS 6, RSB␣
↪6d0bff0eb6ed35d180491614b976277d5469a302, Newlib 6cc47c4)
executing thread ID: 0x08a010001
executing thread name: UI1
assertion "cpu_self->thread_dispatch_disable_level == 1" failed: file "/home/EB/
↪sebastian_h/src/rtems/cpukit/score/src/threadhandler.c", line 120, function: _
↪Thread_Handler
```

Author: Trac Migrate 2020-12-22T12:45:23.000Z

Original author: sebastian.huber

- **Owner** set to @joel

Author: Trac Migrate 2021-03-05T14:06:35.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"61d688bfcf191347af9b6a23f16176e6667d0bf5/rtems" 61d688bf/rtems]:

```
aarch64: Fix context switch

The Per_CPU_Control::isr_dispatch_disable is a 32-bit integer.

Close #4206.
```

3.9.1.691 4197 - testsuite: ts-validation-0 broken on AArch64 due to SIZE_MAX issues in the test design

Id	4197
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Created	2020-12-02T20:28:40.000Z
Updated	2021-03-04T08:12:53.000Z
Milestone	6.1
Labels	arch:aarch64, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4197
Merges	0

The ts-validation-0 test is broken on AArch64 LP64 ABI due to issues with unexpected values of SIZE_MAX. I was not familiar enough with the test architecture in use to debug it properly. This test passes under the ILP32 ABI due to the 32bit pointers and differing value of SIZE_MAX.

Author: Chris Johns 2021-02-15T06:51:39.000Z

Which test architecture are you referring too?

Author: Trac Migrate 2021-02-15T09:36:48.000Z

This is a general 64-bit issue.

Author: Kinsey Moore 2021-02-15T14:39:48.000Z

We actually found some time to dive into this recently and, as expected, it's just a one-line tweak to fix it. I'll post a patch shortly.

Chris, The test architecture I'm referring to is how the validation test sets up a large battery of repetitive checks.

Author: Trac Migrate 2021-03-04T08:12:53.000Z

- **Milestone** set to %"6.1"
- **Resolution** set to ~"fixed"

- **Status** changed from *new* to *closed*
- **Version** set to ~"6"

Fixed by 8fe59be236e7f2047adb6e393639bbf56bbd996d.

3.9.1.692 4262 - rtems-debugger-threads.c: Unchecked return value error spotted by Coverity

Id	4262
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2021-02-19T21:36:14.000Z
Updated	2021-02-26T22:56:29.000Z
Milestone	6.1
Labels	cpukit::debugger, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4262
Merges	0

Original author: rlong

CID 1468688: Unchecked return value in snapshot_thread().

```
262    else {
263      rtems_status_code sc;
264      sc = rtems_task_suspend(id);
265      if (sc != RTEMS_SUCCESSFUL && sc != RTEMS_ALREADY_SUSPENDED) {
266        rtems_debugger_printf("error: rtems-db: thread: suspend: %08" PRIx32
↪": %s\\n",
267                              id, rtems_status_text(sc));
268        r = -1;
269      }
270    }
271
272    /*
273     * Read the target registers into the thread register array.
274     */
CID 1468688 (#1 of 1): Unchecked return value (CHECKED_RETURN)17. check_return:␣
↪Calling rtems_debugger_target_read_regs without checking return value (as is␣
↪done elsewhere 4 out of 5 times).
275    rtems_debugger_target_read_regs(thread);
```

Author: Trac Migrate	2021-02-26T22:56:29.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"e200265936f6722f8c363bbdac968ee25c6c8ce1/rtems" e2002659/rtems]:

```
rtems-debugger-threads.c: Fix Unchecked return value error (CID
↪#1468688)

CID 1468688: Unchecked return value in snapshot_thread().

Closes #4262
```

3.9.1.693 4261 - getgrent.c: Unchecked return value error spotted by Coverity

Id	4261
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-19T21:24:15.000Z
Updated	2021-02-26T22:56:25.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4261
Merges	0

Original author: rlong

CID 1459004: Unchecked return value in endgrent().

```
102  if (ctx->fp != NULL) {
103    fclose(ctx->fp);
104  }
105
106  free(ctx);
CID 1459004 (#1 of 1): Unchecked return value (CHECKED_RETURN)3. check_return:␣
↪Calling pthread_setspecific without checking return value (as is done elsewhere␣
↪5 out of 6 times).
107  pthread_setspecific(grp_key, NULL);
```

Author: Trac Migrate	2021-02-26T22:56:25.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"e5e58da6dfbdfa78ad499c2f52ec53c88538aa1c/rtems" e5e58da/rtems]:

```
getgrent.c: Fix Unchecked return value error (CID #1459004)

CID 1459004: Unchecked return value in endgrent().

Closes #4261
```

3.9.1.694 4260 - record-client.c: Unchecked return value error spotted by Coverity

Id	4260
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-19T21:16:24.000Z
Updated	2021-02-26T22:56:22.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4260
Merges	0

Original author: rlong

CID 1456677: Unchecked return value in resolve_hold_back().

```
191    for ( index = begin_index; index < per_cpu->item_index; ++index ) {
192      const rtems_record_item_64 *item;
193
194      item = &per_cpu->items[ index ];
CID 1456677 (#1 of 1): Unchecked return value (CHECKED_RETURN)12. check_return:␣
↪Calling visit without checking return value (as is done elsewhere 4 out of 5␣
↪times).
195      visit( ctx, item->event, item->data );
```

Author: Trac Migrate 2021-02-26T22:56:22.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"be3b87d47186097c23ee79a2dd17af67ab82b7d5/rtems" be3b87d/rtems]:

```
record-client.c: Fix Unchecked return value (CID #1456677)

CID 1456677: Unchecked return value in resolve_hold_back().
```

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```
4
5 Closes #4260
```

3.9.1.695 4258 - printertask.c: Unchecked return value errors spotted by Coverity

Id	4258
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-19T20:55:06.000Z
Updated	2021-02-26T22:56:18.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4258
Merges	0

Original author: rlong

CID 1399710: Unchecked return value in printer_task().

```
138      switch ( buffer->action_kind ) {
139        case ACTION_WRITE:
140          write( fd, &buffer->data[ 0 ], buffer->action_data.size );
141          printer_task_append_buffer( ctx, &ctx->free_buffers, buffer );
4. Breaking from switch.
8. Breaking from switch.
15. Breaking from switch.
142          break;
143        case ACTION_DRAIN:
CID 1399710 (#1 of 1): Unchecked return value (CHECKED_RETURN)19. check_return:␣
↪Calling fsync without checking return value (as is done elsewhere 4 out of 5␣
↪times).
144          fsync(fd);
```

Author: Trac Migrate	2021-02-19T21:47:12.000Z

Original author: rlong

- **Summary** changed from *printertask.c: Unchecked return value spotted by Coverity* to *printertask.c: Unchecked return value errors spotted by Coverity*

CID 1472764: Unchecked return value in rtems_print_printer_task().

```
183  ctx->buffer_size -= sizeof( printer_task_buffer );
184
185  printer->context = ctx;
186  printer->printer = printer_task_printer;
```

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```
187
CID 1472764 (#1 of 1): Unchecked return value (CHECKED_RETURN)3. check_
↪return: Calling rtems_task_start without checking return value (as is␣
↪done elsewhere 22 out of 25 times).
188  rtems_task_start( ctx->task, printer_task, (rtems_task_argument)␣
↪ctx );
```

Author: Trac Migrate 2021-02-26T22:56:18.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"1b322a6b83990b9c8fc5ba05d78edf8bba533ca1/rtems" 1b322a6/rtems]:

```
printertask.c: Fix Unchecked return value (CID #1399710)

CID 1399710: Unchecked return value in printer_task().
CID 1472764: Unchecked return value in rtems_print_printer_task().

Closes #4258
```

3.9.1.696 4253 - grspw_pkt.c: Dereference before null check error spotted by Coverity

Id	4253
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-16T20:54:52.000Z
Updated	2021-02-19T20:06:24.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4253
Merges	0

Original author: rlong

CID 1399846: Dereference before null check in grspw_addr_ctrl().

```
657         struct grspw_priv *priv = d;
deref_ptr: Directly dereferencing pointer priv.
658         struct grspw_regs *regs = priv->regs;
659         unsigned int ctrl, nodeaddr;
```

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```
660         SPIN_IRQFLAGS(irqflags);
661         int i;
662
CID 1399846 (#1 of 1): Dereference before null check (REVERSE_INULL)check_after_
↪deref: Null-checking priv suggests that it may be null, but it has already been␣
↪dereferenced on all paths leading to the check.
663         if (!priv || !cfg)
```

Author: Trac Migrate 2021-02-19T20:06:24.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"fac1ff18203b4fcb53610244b066a427f88faa3a/rtems" fac1ff1/rtems]:

```
grspw_pkt.c: Fix Dereference before null check (CID #1399846)

CID 1399846: Dereference before null check in grspw_addr_ctrl().

Closes #4253
```

3.9.1.697 4252 - grtc.c: Dereference before null check error spotted by Coverity

Id	4252
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-16T20:50:40.000Z
Updated	2021-02-19T20:06:20.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4252
Merges	0

Original author: rlong

CID 1399840: Dereference before null check in grtc_ioctl().

```
1534         rtems_libio_ioctl_args_t *ioarg = (rtems_libio_ioctl_args_t *)arg;
deref_ptr: Directly dereferencing pointer ioarg.
1535         unsigned int *data = ioarg->buffer;
1536         int status,frm_len,i,ret;
```

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```
1537        struct grtc_ioc_buf_params *buf_arg;
1538        struct grtc_ioc_config *cfg;
1539        struct grtc_ioc_hw_status *hwregs;
1540        struct grtc_ioc_pools_setup *pocfg;
1541        struct grtc_ioc_assign_frm_pool *poassign;
1542        struct grtc_frame *frm, *frms;
1543        struct grtc_frame_pool *pool;
1544        struct grtc_list *frmlist;
1545        struct grtc_ioc_stats *stats;
1546        unsigned int mem;
1547        IRQ_LOCAL_DECLARE(oldLevel);
1548
1549        FUNCDBG();
1550
1551        if ( drvmgr_get_dev(&grtc_drv_info.general, minor, &dev) ) {
1552                return RTEMS_INVALID_NUMBER;
1553        }
1554        pDev = (struct grtc_priv *)dev->priv;
1555
CID 1399840 (#1 of 1): Dereference before null check (REVERSE_INULL)check_after_
↪deref: Null-checking ioarg suggests that it may be null, but it has already␣
↪been dereferenced on all paths leading to the check.
1556        if (!ioarg)
```

Author: Trac Migrate 2021-02-19T20:06:20.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"1fd56a96fcfb90ceae5eff2598a5ca375ff85109/rtems" 1fd56a96/rtems]:

```
grtc.c: Fix Dereference before null check (CID #1399840)

CID 1399840: Dereference before null check in grtc_ioctl().

Closes #4252
```

3.9.1.698 4251 - b1553rt.c: Dereference before null check error spotted by Coverity

Id	4251
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-16T20:46:40.000Z
Updated	2021-02-19T20:06:16.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4251
Merges	0

Original author: rlong

CID 1399830: Dereference before null check in rt_control().

```
621    rtems_libio_ioctl_args_t *ioarg = (rtems_libio_ioctl_args_t *) arg;
deref_ptr: Directly dereferencing pointer ioarg.
622    unsigned int *data = ioarg->buffer;
623
624    rt_priv *rt;
625    struct drvmgr_dev *dev;
626
627    FUNCDBG("rt_control[%d]: [%i,%i]\\n", minor, major, minor);
628
629    if ( drvmgr_get_dev(&b1553rt_drv_info.general, minor, &dev) ) {
630        return RTEMS_UNSATISFIED;
631    }
632    rt = (rt_priv *)dev->priv;
633
CID 1399830 (#1 of 1): Dereference before null check (REVERSE_INULL)check_after_
↪deref: Null-checking ioarg suggests that it may be null, but it has already␣
↪been dereferenced on all paths leading to the check.
634    if (!ioarg) {
```

Author: Trac Migrate 2021-02-19T20:06:16.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"4edcdf43c7c4d0ac2314ff3518643c2a80eb3e19/rtems" 4edcdf43/rtems]:

```
b1553rt.c: Fix Deference before null check (CID #1399830)

CID 1399830: Dereference before null check in rt_control().

Closes #4251
```

3.9.1.699 4250 - b1553brm.c: Dereference before null check error spotted by Coverity

Id	4250
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-16T20:43:31.000Z
Updated	2021-02-19T20:06:12.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4250
Merges	0

Original author: rlong

CID 1399829: Dereference before null check in brm_control().

```
rtems_libio_ioctl_args_t *ioarg = (rtems_libio_ioctl_args_t *) arg;
deref_ptr: Directly dereferencing pointer ioarg.
997         unsigned int *data = ioarg->buffer;
998         struct bc_msg *cmd_list = (struct bc_msg *) ioarg->buffer;
999         brm_priv *brm;
1000         struct drvmgr_dev *dev;
1001         rtems_device_driver ret;
1002         int len, msglen;
1003
1004         FUNCDBG("brm_control[%d]: [%i,%i]\\n", minor, major, minor);
1005
1006         if ( drvmgr_get_dev(&b1553brm_drv_info.general, minor, &dev) ) {
1007                 return RTEMS_UNSATISFIED;
1008         }
1009         brm = (brm_priv *)dev->priv;
1010
CID 1399829 (#1 of 1): Dereference before null check (REVERSE_INULL)check_after_
↪deref: Null-checking ioarg suggests that it may be null, but it has already␣
↪been dereferenced on all paths leading to the check.
1011         if (!ioarg) {
```

Author: Trac Migrate	2021-02-19T20:06:12.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"eff3d7c05f71a60e93a67b08168f5f64b747c56d/rtems" eff3d7c/rtems]:

```
b1553brm.c: Fix Dereference before null check (CID #1399829)

CID 1399829: Dereference before null check in brm_control().

Closes #4250
```

3.9.1.700 4229 - conf.py files need updated for sphinxcontrib-bibtex ver. 2.0.0 and greater

Id	4229
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-02T15:18:51.000Z
Updated	2021-02-18T20:03:47.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4229
Merges	0

Original author: rlong

I followed the instructions in the README, but I still ran across this error. I was able to get around it by specifying the version ofsphinxcontrib-bibtex to be 1.0.0. This fix might probably needs to be applied to the 5 release branch as well.

Command line output

```
Checking for 'sphinxcontrib.bibtex'      : not found (see README.txt)
The configuration failed
(complete log in /home/rlong/nta-workspace/nta-docs/build/config.log)
```

Output in ${TOP}/build/config.log

```
err: WARNING: Since v2.0, Sphinx uses "index" as master_doc by default. Please␣
↪add "master_doc = 'contents'" to your conf.py.

found
---------------------------------------
Checking for 'sphinxcontrib.bibtex'
[1/1] Processing ^[[01;34mbuild/.conf_check_70571fadfd25a3c4e29a4087f18cfa38/
↪testbuild/contents.rst^[[0m

```

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```
/home/rlong/nta-workspace/nta-docs/sphinx/bin/sphinx-build -b html -D
↪extensions=sphinxcontrib.bibtex -C . out
out: Running Sphinx v3.4.3
making output directory... done

err:
Extension error:
You must configure the bibtex_bibfiles setting

from /home/rlong/nta-workspace/nta-docs/user: Test does not build: Traceback
↪(most recent call last):
File "/home/rlong/nta-workspace/nta-docs/.waf3-2.0.19-
↪1f3c580272b15a03d2566843c5fe872a/waflib/Configure.py", line 333, in run_build
bld.compile()
File "/home/rlong/nta-workspace/nta-docs/.waf3-2.0.19-
↪1f3c580272b15a03d2566843c5fe872a/waflib/Build.py", line 176, in compile
raise Errors.BuildError(self.producer.error)
waflib.Errors.BuildError: Build failed
-> task in '' failed with exit status 2 (run with -v to display more information)
not found (see README.txt)
from /home/rlong/nta-workspace/nta-docs/user: The configuration failed
```

Author: Trac Migrate 2021-02-18T20:03:47.000Z

Original author: rlong

- **Owner** set to Gedare Bloom <gedare@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"4563bb6a8b5622b8502437929f6fde223d483c0c/rtems-docs" 4563bb6/rtems-docs]:

```
common: use bibtex_bibfiles for newer bibtex

Closes #4229.
```

3.9.1.701 4254 - shell.c: Dereference before null check error spotted by Coverity

Id	4254
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-16T21:00:54.000Z
Updated	2021-02-18T19:39:33.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4254
Merges	0

Original author: rlong

CID 1467420: Dereference before null check in rtems_shell_line_editor().

```
322  int          in_fileno = fileno(in);
deref_ptr_in_call: Dereferencing pointer out.
323  int          out_fileno = fileno(out);
324
325  /*
326   * Only this task can use this file descriptor because calling
327   * fileno will block if another thread call made a call on this
328   * descriptor.
329   */
CID 1467420 (#1 of 1): Dereference before null check (REVERSE_INULL)check_after_
↪deref: Null-checking out suggests that it may be null, but it has already been␣
↪dereferenced on all paths leading to the check.
330  output = (out && isatty(in_fileno));
```

Author: Trac Migrate 2021-02-18T19:39:33.000Z

Original author: rlong

- **Owner** set to Ryan Long <thisisryanlong@gmail.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"fa25b73ac191fd9e4664da3197aef874488cee0e/rtems" fa25b73/rtems]:

```
shell.c: Fix Dereference before null check (CID #1467420)

CID 1467420: Dereference before null check in rtems_shell_line_editor().

Closes #4254
```

3.9.1.702 4239 - PowerPC shared ISA IRQ support is broken

Id	4239
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2021-02-12T19:35:08.000Z
Updated	2021-02-15T21:14:33.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4239
Merges	0

The PowerPC shared ISA IRQ management in `i8259s.c` is broken. It fails to handle:

- Interrupt acknowledgements for the slave controller when the master has a lower priority pending interrupt acknowledge the slave and the master controllers
- The nesting support to suspend and resume an interrupt does not correctly handle the enable/disable
- The initialise of an interrupt does not handle any pending request
- Locks up when using with the IRQ server which is executing the handler in a task context

All these issues have been fixed in the `i386` BSP however the code between is not shared as the `i386` BSP has BSP specific IRQ management code as well.

Author: Chris Johns 2021-02-12T19:35:28.000Z

- **Owner** set to @chrisj
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-02-15T21:14:33.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"e1676c1a0ddcdecd45914485813d7518a40cab17/rtems" e1676c1/rtems]:

```
Update motorola_power to irq-generic interrupt management

- Add support to the BSP to enable irq-generic management

- Update the powerpc shared irq code to support irq-generic. This
is an opt in option for existing powerpc bsps. This change
should be simpler now

- Fix a number of issues in ISA IRQ controller handling by porting
```

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```
fixes from the i386 (PC) BSP

Closes #4238
Closes #4239
```

3.9.1.703 4238 - Change motorola_powerpc bsp to support irq-generic

Id	4238
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2021-02-12T19:27:53.000Z
Updated	2021-02-15T21:14:33.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4238
Merges	0

Update the `motorola_powerpc` to support `irq-generic` moving the IRQ management to the IRQ server. This enables libbsd support for interrupts.

Author: Trac Migrate 2021-02-15T21:14:33.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"e1676c1a0ddcdecd45914485813d7518a40cab17/rtems" e1676c1/rtems]:

```
Update motorola_power to irq-generic interrupt management

- Add support to the BSP to enable irq-generic management

- Update the powerpc shared irq code to support irq-generic. This
is an opt in option for existing powerpc bsps. This change
should be simpler now

- Fix a number of issues in ISA IRQ controller handling by porting
fixes from the i386 (PC) BSP

Closes #4238
Closes #4239
```

3.9.1.704 4241 - rtems-debugger-threads.c: Three Dereference before null check errors spotted by Coverity

Id	4241
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2021-02-12T21:29:34.000Z
Updated	2021-02-12T23:13:56.000Z
Milestone	6.1
Labels	cpukit::debugger, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4241
Merges	0

Original author: rlong

CID 1468681: Dereference before null check in rtems_debugger_thread_continue(). CID 1468690: Dereference before null check in rtems_debugger_thread_system_resume(). CID 1468694: Dereference before null check in rtems_debugger_thread_find_index().

```
430  rtems_debugger_threads* threads = rtems_debugger->threads;
431  rtems_debugger_thread*  current;
432  int                     r = 0;
deref_ptr_in_call: Dereferencing pointer threads. [show details]
433  current = rtems_debugger_thread_current(threads);
CID 1468681 (#1 of 1): Dereference before null check (REVERSE_INULL)check_after_
↪deref: Null-checking threads suggests that it may be null, but it has already␣
↪been dereferenced on all paths leading to the check.
434  if (threads != NULL && current != NULL) {
```

```
347  rtems_debugger_threads* threads = rtems_debugger->threads;
348  rtems_debugger_thread*  current;
349  int                     r = 0;
deref_ptr_in_call: Dereferencing pointer threads. [show details]
350  current = rtems_debugger_thread_current(threads);
CID 1468690 (#1 of 1): Dereference before null check (REVERSE_INULL)check_after_
↪deref: Null-checking threads suggests that it may be null, but it has already␣
↪been dereferenced on all paths leading to the check.
351  if (threads != NULL && current != NULL) {
```

```
150  rtems_debugger_threads* threads = rtems_debugger->threads;
deref_ptr_in_call: Dereferencing pointer threads. [show details]
151  rtems_debugger_thread*  current = rtems_debugger_thread_current(threads);
152  int                     r = -1;
CID 1468694 (#1 of 1): Dereference before null check (REVERSE_INULL)check_after_
↪deref: Null-checking threads suggests that it may be null, but it has already␣
↪been dereferenced on all paths leading to the check.
153  if (threads != NULL) {
```

Author: Trac Migrate 2021-02-12T23:13:56.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"f65d3384dd923c9ead9bcf264592bd879054f6dc/rtems" f65d3384/rtems]:

```
rtems-debugger-threads.c: Fix three Dereference before null check errors

CID 1468681: Dereference before null check in rtems_debugger_thread_
↪continue().
CID 1468690: Dereference before null check in rtems_debugger_thread_
↪system_resume().
CID 1468694: Dereference before null check in rtems_debugger_thread_
↪find_index().

Closes #4241.
```

3.9.1.705 4240 - rtems-debugger-target.c: Dereference before null check spotted by Coverity

Id	4240
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2021-02-12T20:55:29.000Z
Updated	2021-02-12T23:13:53.000Z
Milestone	6.1
Labels	cpukit::debugger, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4240
Merges	0

Original author: rlong

CID 1468682: swbreaks is assigned a value dereferenced from target before it has been verified that target is not null.

```
173  rtems_debugger_target*         target = rtems_debugger->target;
deref_ptr: Directly dereferencing pointer target.
174  rtems_debugger_target_swbreak* swbreaks = target->swbreaks.block;
175  size_t                         swbreak_size;
176  uint8_t*                       loc = (void*) addr;
177  size_t                         i;
178  int                            r;
179
```

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```
CID 1468682 (#1 of 1): Dereference before null check (REVERSE_INULL)check_after_deref: Null-checking target suggests that it may be null, but it has already been dereferenced on all paths leading to the check.
180  if (target == NULL || swbreaks == NULL || kind != target->breakpoint_size) {
181    errno = EIO;
182    return -1;
183  }
```

Author: Trac Migrate	2021-02-12T23:13:53.000Z

Original author: rlong

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"3f4cdd858923fc999ac7d815149af4c62b8e9c6e/rtems" 3f4cdd8/rtems]:

```
rtems-debugger-target.c: Fix Dereference before null check (CID #1468682)

CID 1468682: swbreaks is assigned a value dereferenced from target before
it has been verified that target is not null.

Closes #4240.
```

3.9.1.706 4237 - consolesimpletask.c: Two Unchecked Return Values Spotted by Coverity

Id	4237
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2021-02-12T18:19:32.000Z
Updated	2021-02-12T23:13:50.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4237
Merges	0

Original author: rlong

CID 1437625: Unchecked return value from call to rtems_task_create(). CID 1472765: Unchecked return value from call to rtems_task_start().

Snippet from Coverity output.

```
234  IMFS_add_node( "/dev", &cons->Node, NULL );
235
236
CID 1437625 (#1 of 1): Unchecked return value (CHECKED_RETURN)
1. check_return: Calling rtems_task_create without checking return value (as is done elsewhere 22 out of 25 times).
237  rtems_task_create(
238    rtems_build_name('C', 'O', 'N', 'S'),
239    RTEMS_MAXIMUM_PRIORITY - 1,
240    RTEMS_MINIMUM_STACK_SIZE,
241    RTEMS_DEFAULT_ATTRIBUTES,
242    RTEMS_DEFAULT_MODES,
243    &cons->task
244  );
245
CID 1472765: Unchecked return value (CHECKED_RETURN) [select issue]
246  rtems_task_start(
247    cons->task,
248    _Console_simple_task_Task,
249    (rtems_task_argument) cons
250  );
251}
```

Author: Joel Sherrill 2021-02-12T20:16:29.000Z

Original author: rlong

- **Description** changed

```
+ CID 1437625 (#1 of 1): Unchecked return value from call to rtems_task_create().
+
+ Snippet from Coverity output.
+
+ {{{
+ 234  IMFS_add_node( "/dev", &cons->Node, NULL );
+ 235
+
+ CID 1437625 (#1 of 1): Unchecked return value (CHECKED_RETURN)
- CID 1437625 (#1 of 1): Unchecked return value (CHECKED_RETURN)1. check_return: Calling rtems_task_create without checking return value (as is done elsewhere 22 out of 25 times).
? ------------------------------------------------------------

+ 1. check_return: Calling rtems_task_create without checking return value (as is done elsewhere 22 out of 25 times).
+ 236  rtems_task_create(
+ 237    rtems_build_name('C', 'O', 'N', 'S'),
+ 238    RTEMS_MAXIMUM_PRIORITY - 1,
```

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```
+ 239    RTEMS_MINIMUM_STACK_SIZE,
+ 240    RTEMS_DEFAULT_ATTRIBUTES,
+ 241    RTEMS_DEFAULT_MODES,
+ 242    &cons->task
+ 243  );
+ 244
+ }}}
```

- **Summary** changed from *Fix CID `#1437625 <https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/1437625> `_ to consolesimpletask.c: Unchecked Return Value (CID #1437625)*

Author: Joel Sherrill 2021-02-12T20:20:26.000Z

Original author: rlong

- **Description** changed

```
- CID 1437625 (#1 of 1): Unchecked return value from call to rtems_task_
↪create().
?            ----------

+ CID 1437625: Unchecked return value from call to rtems_task_create().
+ CID 1472765: Unchecked return value from call to rtems_task_start().

Snippet from Coverity output.

{{{
234  IMFS_add_node( "/dev", &cons->Node, NULL );
235

CID 1437625 (#1 of 1): Unchecked return value (CHECKED_RETURN)
1. check_return: Calling rtems_task_create without checking return␣
↪value (as is done elsewhere 22 out of 25 times).
236  rtems_task_create(
237    rtems_build_name('C', 'O', 'N', 'S'),
238    RTEMS_MAXIMUM_PRIORITY - 1,
239    RTEMS_MINIMUM_STACK_SIZE,
240    RTEMS_DEFAULT_ATTRIBUTES,
241    RTEMS_DEFAULT_MODES,
242    &cons->task
243  );
244
+       CID 1472765: Unchecked return value (CHECKED_RETURN) [select␣
↪issue]
+ 245  rtems_task_start(
+ 246    cons->task,
+ 247    _Console_simple_task_Task,
+ 248    (rtems_task_argument) cons
```

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```
+ 249  );
+ 250}
}}}
```

- **Summary** changed from *consolesimpletask.c: Unchecked Return Value (CID `#1437625 <https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/1437625> `_)* to *consolesimpletask.c: Two Unchecked Return Values (CID #1437625 and #1472765)*

Author: Joel Sherrill 2021-02-12T20:31:47.000Z

Original author: rlong

- **Summary** changed from *consolesimpletask.c: Two Unchecked Return Values (CID `#1437625 <https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/1437625> `_ and #1472765)* to *consolesimpletask.c: Two Unchecked Return Values Spotted by Coverity*

Author: Trac Migrate 2021-02-12T23:13:50.000Z

Original author: rlong

- **Owner** set to Ryan Long <ryan.long@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"14f5a0597a2030570fe05a7de3b5bd8254c31d75/rtems" 14f5a05/rtems]:

```
consolesimpletask.c: Fix Two Unchecked Return Values (CID #1437625 and
↪#1472765)

CID 1437625: Unchecked return value from call to rtems_task_create().
CID 1472765: Unchecked return value from call to rtems_task_start().

Closes #4237.
```

3.9.1.707 4242 - rtems-debugger-threads.c: Three Dereference before null check errors spotted by Coverity

Id	4242
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2021-02-12T21:30:58.000Z
Updated	2021-02-12T21:32:49.000Z
Milestone	6.1
Labels	cpukit::debugger, priority::normal, resolution::duplicate, ticket-type::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4242
Merges	0

Original author: rlong

CID 1468681: Dereference before null check in rtems_debugger_thread_continue(). CID 1468690: Dereference before null check in rtems_debugger_thread_system_resume(). CID 1468694: Dereference before null check in rtems_debugger_thread_find_index().

```
430  rtems_debugger_threads* threads = rtems_debugger->threads;
431  rtems_debugger_thread*  current;
432  int                     r = 0;
deref_ptr_in_call: Dereferencing pointer threads. [show details]
433  current = rtems_debugger_thread_current(threads);
CID 1468681 (#1 of 1): Dereference before null check (REVERSE_INULL)check_after_
↪deref: Null-checking threads suggests that it may be null, but it has already␣
↪been dereferenced on all paths leading to the check.
434  if (threads != NULL && current != NULL) {
```

```
347  rtems_debugger_threads* threads = rtems_debugger->threads;
348  rtems_debugger_thread*  current;
349  int                     r = 0;
deref_ptr_in_call: Dereferencing pointer threads. [show details]
350  current = rtems_debugger_thread_current(threads);
CID 1468690 (#1 of 1): Dereference before null check (REVERSE_INULL)check_after_
↪deref: Null-checking threads suggests that it may be null, but it has already␣
↪been dereferenced on all paths leading to the check.
351  if (threads != NULL && current != NULL) {
```

```
150  rtems_debugger_threads* threads = rtems_debugger->threads;
deref_ptr_in_call: Dereferencing pointer threads. [show details]
151  rtems_debugger_thread*  current = rtems_debugger_thread_current(threads);
152  int                     r = -1;
CID 1468694 (#1 of 1): Dereference before null check (REVERSE_INULL)check_after_
↪deref: Null-checking threads suggests that it may be null, but it has already␣
↪been dereferenced on all paths leading to the check.
153  if (threads != NULL) {
```

Author: Joel Sherrill 2021-02-12T21:32:49.000Z

Original author: rlong

- **Resolution** set to ~"duplicate"
- **Status** changed from *new* to *closed*

3.9.1.708 3982 - Test failures on BSPs with sbrk() support

Id	3982
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-05-12T06:57:23.000Z
Updated	2021-02-10T06:30:29.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::test, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3982
Merges	0

Original author: sebastian.huber

There are some test failures on BSPs with sbrk() support such as psim, for example psxpipe01:

```
#0  rtems_heap_extend_via_sbrk (heap=0x30468 <_Malloc_Heap>, alloc_size=5) at /
↪home/EB/sebastian_h/src/rtems/c/src/../../cpukit/libcsupport/src/rtems_heap_
↪extend_via_sbrk.c:41
#1  0x00005b48 in rtems_heap_allocate_aligned_with_boundary (size=size@entry=5,␣
↪alignment=alignment@entry=0, boundary=boundary@entry=0) at /home/EB/sebastian_h/
↪src/rtems/c/src/../../cpukit/libcsupport/src/malloc_deferred.c:116
#2  0x00005930 in malloc (size=size@entry=5) at /home/EB/sebastian_h/src/rtems/c/
↪src/../../cpukit/libcsupport/src/malloc.c:39
#3  0x0001b720 in _malloc_r (ignored=ignored@entry=0x2fa68 <_RTEMS_tasks_
↪Objects+736>, size=size@entry=5) at /home/EB/sebastian_h/src/rtems/c/src/../../
↪cpukit/libcsupport/src/_malloc_r.c:26
#4  0x00015ff4 in _strdup_r (reent_ptr=0x2fa68 <_RTEMS_tasks_Objects+736>,␣
↪str=str@entry=0x1ce94 "/tmp") at ../../../../../../gcc-7.5.0/newlib/libc/string/
↪strdup_r.c:10
#5  0x00015fbc in strdup (str=str@entry=0x1ce94 "/tmp") at ../../../../../../gcc-
↪7.5.0/newlib/libc/string/strdup.c:10
#6  0x00011470 in rtems_mkdir (path=path@entry=0x1ce94 "/tmp",␣
↪mode=mode@entry=511) at /home/EB/sebastian_h/src/rtems/c/src/../../cpukit/
↪libcsupport/src/rtems_mkdir.c:133
#7  0x0000a7c8 in pipe (filsdes=filsdes@entry=0x36ce8) at /home/EB/sebastian_h/
↪src/rtems/c/src/../../cpukit/libfs/src/pipe/pipe.c:42
#8  0x000004a0 in Init (ignored=<optimized out>) at /home/EB/sebastian_h/src/
↪rtems/c/src/../../testsuites/psxtests/psxpipe01/init.c:65
#9  0x0000c828 in _Thread_Handler () at /home/EB/sebastian_h/src/rtems/c/src/../..
```

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```
↪/cpukit/score/src/threadhandler.c:139
#10 0x0000c77c in _Thread_Get (id=<optimized out>, lock_context=<optimized out>)␣
↪at /home/EB/sebastian_h/src/rtems/c/src/../../cpukit/score/src/threadget.c:43
```

The problem is that an rtems_heap_greedy_allocate() is ineffective due to the automatic heap extension.

Author: Trac Migrate 2021-02-08T06:47:43.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"7ca3b283bac78e69f09f6e0e992abf088e7dd16c/rtems" 7ca3b28/rtems]:

```
libcsupport: Have greedy allocations use consume extended memory

- Call the heap extend handler until all memory has been
requested.

Closes #3982
```

Author: Chris Johns 2021-02-08T22:33:47.000Z

Original author: sebastian.huber

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

This ticket is being reopened and extended to cover other greedy implementation. There is also `rtems_workspace_greedy_allocate()` and friends.

Author: Trac Migrate 2021-02-10T06:30:29.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

In [changeset:"03dff2019f6972f9b202b15d57ab295d706d86cd/rtems" 03dff201/rtems]:

```
libcsupport: Add sbrk greedy support to consume all sbrk memory

- Move the heap sbrk code into a separate routnine.

```

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```
- Update heap and workspace greedy allocators to use the common
sbrk greedy support.

Closes #3982
```

3.9.1.709 4222 - Add a per mount flag to not create a node on O_CREAT in open

Id	4222
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2021-01-23T23:41:29.000Z
Updated	2021-02-08T02:12:49.000Z
Milestone	6.1
Labels	filesystem, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4222
Merges	0

The libio `rtems_filesystem_eval_path_context_t` context uses a token left after a path evaluation to indicate the path to the leaf node is valid and the path leaf does not exist. System calls such as `mknod`, `mkdir` and `open` uses this to return `EEXIST` or in the case of `open` to create a `S_IFREG` node for a file. Some file systems do not support creating an `S_IFREG` node and the `open` handler is required to do this.

[An aside, libio should leave the `EEXIST` detection to the file system and its evaluation handlers. The `EEXIST` error is one of many that could be returned yet it is specifically singled out using a fragile interface of a path token remaining. Anyway back to the change ...]

The `open` call has:

```
if ( rtems_filesystem_eval_path_has_token( &ctx ) ) {
create_regular_file( &ctx, mode );
}
```

and `create_regular_file` makes a node:

```
rv = rtems_filesystem_mknod(
currentloc,
token,
tokenlen,
S_IFREG | mode,
0
);
```

then wipes the evaluation context of any real and valid flags and settings:

```
rtems_filesystem_eval_path_set_flags( ctx, 0 );
rtems_filesystem_eval_path_set_path( ctx, token, tokenlen );
rtems_filesystem_eval_path_continue( ctx );
```

then continues the path evaluation. The continues path evaluation is suppose to find the new node. If a file system does not support making a regular file node and the `mknod` call is stubbed out to lie about making the node continuing the path evaluation fails with a not found error. I cannot see a way to code around this with the current libio code.

I propose adding a `bool` flag called `no_reg_make_node` to the `rtems_filesystem_mount_table_entry_t` struct that defaults to `false`. If `true` open does not call `create_regular_file`.

Author: Chris Johns 2021-01-25T02:06:21.000Z

- **Owner** set to @chrisj
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2021-02-08T02:12:49.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"822cad8967e130b3769f719502cbd6db81e3efea/rtems" 822cad89/rtems]:

```
libcsupport: Add no_regular_file_mknod as a mount option to the mount table

- Add the bool flag no_regular_file_mknod to the mount table so a file
system can indicate creating regular files is not done by
use the mknod handler. The file system will handle creating a
file node in the open handler.

- Note, the mount option is an enum which means there is only one
exclusive option supported. As a result no encapsulation is
provided and file systems need to set no_regular_file_mknod directly.

Closes #4222
```

3.9.1.710 4219 - gdb master does not compile on CentOS 7

Id	4219
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2021-01-20T18:12:41.000Z
Updated	2021-01-22T15:22:22.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::gdb, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4219
Merges	0

There is a enumerated type and method with the same name. The CentOS 7 gdb does not like this. This ticket is to track the upstream ticket https://sourceware.org/bugzilla/show_bug.cgi?id=27219

Author: Joel Sherrill 2021-01-22T15:22:13.000Z

Fixed and RSB bumped.

Author: Joel Sherrill 2021-01-22T15:22:22.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

3.9.1.711 4207 - PZERO define in RTEMS is wrong

Id	4207
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2020-12-23T19:07:30.000Z
Updated	2021-01-07T22:54:34.000Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4207
Merges	0

Our libbsd support in RTEMS defines `PZERO` to be zero. FreeBSD defines `PZERO` to be `(PRI_MIN_KERN + 20)` and `PRI_MIN_KERN` is `80`.

The `__sleep()` call uses bits allocated above the bits used to hold the highest priority to signal things to do. The `PDROP` (`0x200`) bit causes a lock to be dropped before sleeping and not reclaimed after.

Setting `PZERO` to `0` breaks FreeBSD code in libbsd because calls that end up in `__sleep()` can incorrectly have the `PDROP` bit set. A grep of FreeBSD shows how this happens:

```
(void) nfsmsleep(&lp->nfslock_lock, mutex,
PZERO - 1, "nfsv4gr", NULL);
```

```
error = msleep(msqkptr, &msq_mtx, (PZERO - 4) | PCATCH,
msgsnd", hz);
```

This examples shows how either side is used...

```
selwakeuppri(&tp->tun_rsel, PZERO + 1);
```

Author: Chris Johns 2020-12-23T19:23:03.000Z

- **Description** changed

```
- Our newlib support defines `PZERO` to be zero. FreeBSD defines
`PZERO` to be `(PRI_MIN_KERN + 20)` and `PRI_MIN_KERN` is `80`.
?     ---

+ Our libbsd support in RTEMS defines `PZERO` to be zero. FreeBSD
defines `PZERO` to be `(PRI_MIN_KERN + 20)` and `PRI_MIN_KERN` is
`80`.
?        +++         +++++++++


The `__sleep()` call uses bits allocated above the bits used to hold
the highest priority to signal things to do. The `PDROP` (`0x200`)
bit causes a lock to be dropped before sleeping and not reclaimed
after.

Setting `PZERO` to `0` breaks FreeBSD code in libbsd because calls that
end up in `__sleep()` can incorrectly have the `PDROP` bit set. A
grep of FreeBSD shows how this happens:

{{{
(void) nfsmsleep(&lp->nfslock_lock, mutex,
PZERO - 1, "nfsv4gr", NULL);
}}}
{{{
error = msleep(msqkptr, &msq_mtx, (PZERO - 4) | PCATCH,
msgsnd", hz);

}}}
This examples shows how either side is used...
{{{
selwakeuppri(&tp->tun_rsel, PZERO + 1);
}}}
```

- **Summary** changed from *PZERO define in newlib is wrong* to *PZERO define in*

RTEMS is wrong

Author: Trac Migrate 2021-01-07T22:54:34.000Z

- **Owner** set to Chris Johns <chrisj@rtems.org>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"7696533b97a2d162978b22f371e0c8fab2b65fb9/rtems" 7696533/rtems]:

```
cpukit: Merge FreeBSD values for the priorities

It seems we need valid values or assumptions in the FreeBSD about
these values breaks some of the code.

Closes #4207
```

3.9.1.712 4184 - arm/bsps: Small MMU pages are rounded to 1 MiB

Id	4184
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-11-24T08:33:45.000Z
Updated	2020-12-15T10:26:14.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4184
Merges	0

Original author: soja

The function `arm_cp15_start_set_translation_table_entries` rounds the end address of a section up to 1 MiB even if small 4kiB pages are used (i.e. ARM_MMU_USE_SMALL_PAGES enabled).

Will submit a patch which only rounds the end address to 4kiB boundary.

Author: Trac Migrate 2020-12-02T12:38:22.000Z

Original author: soja

To keep track of it during the Christmas break: The patch is here:

https://lists.rtems.org/pipermail/devel/2020-November/063461.html

Author: Trac Migrate 2020-12-11T05:54:46.000Z

Original author: soja

- **Owner** set to Jan Sommer <jan.sommer@dlr.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"1a7afb55a33f9f87ba508fc45f19761ad2427e16/rtems" 1a7afb5/rtems]:

```
bsps/arm: Fix MMU small pages support

- For small tables only round to the next 4kiB instead of 1MiB

Close #4184.
```

Author: Trac Migrate 2020-12-15T10:26:14.000Z

Original author: soja

In [changeset:"0deeb02527f2a31c3c11657a1962373e07ec69e3/rtems" 0deeb02/rtems]:

```
bsps/arm: Fix MMU configuration

Update #4184.
```

3.9.1.713 4193 - devctl.h does not compile from C++ (cloned)

Id	4193
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-12-01T13:48:43.000Z
Updated	2020-12-01T13:49:24.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::newlib, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4193
Merges	0

Cloned from #4174:

The closing boilerplate of the C++ extern C wrapper is out of order with another #endif and the resulting code does not compile.

The attached patch addresses this but it needs to be merged to newlib and the RSB updated before this ticket closed.

Author: Trac Migrate 2020-12-01T13:49:24.000Z

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"c576ec2f6b461994901f19ace54001da0440359a/rtems-source-builder" c576ec2/rtems-source-builder]:

```
6/7: Update unstable RTEMS 6/7 tool chain

Close #4193.
```

3.9.1.714 4175 - Resolve warning during AArch64 build

Id	4175
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Created	2020-11-10T15:40:39.000Z
Updated	2020-11-16T16:17:43.000Z
Milestone	6.1
Labels	arch:aarch64, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4175
Merges	0

When compiling under the ILP32 mulitilib variant, the build generates a warning related to the saved stack pointer. This resolves the warning by sizing the saved stack pointer appropriately instead of it always being 64bits long.

- 0001-score-aarch64-Size-saved-SP-register-for-ABI.patch

Author: Kinsey Moore 2020-11-10T15:46:16.000Z

- **Attachment** 0001-score-aarch64-Size-saved-SP-register-for-ABI.patch added

Patch to correct warning during ILP32 build.

Author: Kinsey Moore 2020-11-16T16:17:43.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

3.9.1.715 4123 - rtems-bsps needs to be switched to look at waf info for BSPs

Id	4123
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-10-06T18:06:02.000Z
Updated	2020-11-05T20:16:18.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4123
Merges	0

rtems-bsps depends on autoconf. It must be fixed to depend on waf BSP configuration information before we can switch from autoconf.

Author: Chris Johns 2020-10-07T00:19:24.000Z

The `rtems-bsps` command needs to have some python code to read the `spec` YAML files. This is currently in the `wscript` along with the generated pickle data optimisation. I would like to have a common piece of python code in the `spec` directory `rtems-bsps` and `wscript` can share so the generated data can be shared.

The `rtems-bsps` code needs to use the same pickled data `waf` uses. Without this `rtems-bsps` would suffer the same performance issues `waf` had early in it's development that lead to the generation solution. Invoking `rtems-bsps` may result in the same regeneration message `waf` produces but that is OK.

A common python module for `wscript` and `rtems-bsps` follows the model used in the spec data where something is defined once and reused. I believe there is code in `rtems-central` that could be exported (copied into rtems.git) and used but I have not looked into this. The exporting could be handled in a similar way to the generation procedures in place for documentation and headers.

Author: Trac Migrate 2020-11-05T20:16:18.000Z

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"4cd885c3059005a0d63b7f07ac8fa09f61f1d9cf/rtems" 4cd885c/rtems]:

```
rtems-bsps: Use build specification items

Close #4123.
```

3.9.1.716 4164 - Fix NVMe disk synchronization and media block handling

Id	4164
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-10-27T05:24:03.000Z
Updated	2020-10-27T05:28:05.000Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4164
Merges	0

Original author: sebastian.huber

Author: Trac Migrate 2020-10-27T05:28:05.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

3.9.1.717 4158 - rtems_interrupt_server_delete() does not destroy the ISR lock of the server control

Id	4158
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-10-19T15:44:02.000Z
Updated	2020-10-19T15:45:03.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4158
Merges	0

Original author: sebastian.huber

This leads to memory corruption if RTEMS_PROFILING and RTEMS_SMP is enabled.

Author: Trac Migrate 2020-10-19T15:45:03.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"bb4e534014c589fd748ac8a9c1b2488b5bfa650c/rtems" bb4e534/rtems]:

```
bsps: Fix rtems_interrupt_server_delete()

The ISR lock must be destroyed to prevent memory corruption if RTEMS_
↪PROFILING
and RTEMS_SMP is enabled.

Close #4158.
```

3.9.1.718 4148 - RFS bit map search buffer overflow

Id	4148
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2020-10-15T06:12:13.000Z
Updated	2020-10-16T23:54:50.000Z
Milestone	6.1
Labels	filesystem::rfs, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4148
Merges	0

The bit search create writes past the end of its buffer. See:

https://lists.rtems.org/pipermail/devel/2020-October/062701.html

Author: Trac Migrate 2020-10-16T23:54:50.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"f514092f957ae50f73bff227afdd8d9e08c3ec05/rtems" f514092/rtems]:

```
libfs/rfs: Check search bit map end on last bit

- Do not write past the last location of the search bit map
whe nit is being created.

Closes #4148
```

3.9.1.719 4115 - Cortex-A9 MPCore based BSPs should include the workaround for Errata 794072 and 845369

Id	4115
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-10-02T09:37:01.000Z
Updated	2020-10-16T04:39:17.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4115
Merges	0

Original author: sebastian.huber

Cloned from #4114:

The workaround may be already set up by the bootloader. Not having the workaround applied may lead to system crashes, so make sure the BSP does it during system startup.

Author: Trac Migrate	2020-10-02T09:37:11.000Z

Original author: sebastian.huber

- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*

Author: Trac Migrate	2020-10-05T06:47:22.000Z

Original author: sebastian.huber

Original author: sebastian.huber

- **Description** changed

```
Cloned from #4114:
----
- The workaround may be already set up by the bootloader. Not having␣
↪the workaround applied may lead to system crashes, so make sure the␣
↪BSP sets it also during system startup.
?
↪                                                                    ␣
↪---   -----

+ The workaround may be already set up by the bootloader. Not having␣
↪the workaround applied may lead to system crashes, so make sure the␣
```

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```
↪BSP does it during system startup.
?
↪                                                                    ␣
↪                                                                    ␣
↪+++
```

- **Summary** changed from *Cortex-A9 MPCore based BSPs should include the workaround for Errata 845369 (cloned)* to *Cortex-A9 MPCore based BSPs should include the workaround for Errata 794072 and 845369*

Author: Trac Migrate 2020-10-16T04:39:13.000Z

Original author: sebastian.huber

In [changeset:"e7b878e42f0c358379206c025059feccd711804e/rtems" e7b878e/rtems]:

```
bsps/arm: Workaround for Errata 845369

Add a workaround for Cortex-A9 Errata 845369: Under Very Rare Timing
Circumstances Transition into Streaming Mode Might Create Data␣
↪Corruption.

Update #4115.
```

Author: Trac Migrate 2020-10-16T04:39:17.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"cf1682130c096a52fff7b54b30720c6ee2732789/rtems" cf16821/rtems]:

```
bsps/arm: Add workaround for Errata 794072

Add a workaround for Cortex-A9 Errata 845369: A short loop including a␣
↪DMB
instruction might cause a denial of service on another which executes a␣
↪CP15
broadcast operation.

Close #4115.
```

3.9.1.720 4142 - Sparse disk destroys data when it grows

Id	4142
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-10-12T06:08:50.000Z
Updated	2020-10-12T06:23:10.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4142
Merges	0

Original author: sebastian.huber

The qsort() in sparse_disk_get_new_block() may move the appended key which invalidates the pointer.

Author: Trac Migrate 2020-10-12T06:23:10.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"b434dc1874b928eb879f77ac0fb2541659cd4d0b/rtems" b434dc1/rtems]:

```
libblock: Fix sparse disk

The qsort() in sparse_disk_get_new_block() may move the appended key
which invalidates the pointer.

Close #4142.
```

3.9.1.721 4134 - rtemsspec: Support user-defined ordering of directives in header files (Doxygen)

Id	4134
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-10-08T06:17:56.000Z
Updated	2020-10-11T14:21:50.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4134
Merges	0

Original author: sebastian.huber

Currently, the generated interfaces in header files are defined by their dependencies and a topological sorting (alphabetical order is applied to unrelated interfaces). In order to be in line with the Sphinx documentation it would be nice to apply also the user-defined ordering specified in groups.

Author: Trac Migrate 2020-10-11T13:21:13.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"3f3e088740abc2d00cf9986452bef81eae83260e/rtems-central" 3f3e088/rtems-central]:

```
interface: Improve ordering

Close #4134.
```

Author: Trac Migrate 2020-10-11T14:21:50.000Z

Original author: sebastian.huber

- **Milestone** changed from %"Indefinite" to %"6.1"

3.9.1.722 4127 - x86_64/amd64 fails to build

Id	4127
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-10-07T13:36:06.000Z
Updated	2020-10-10T12:02:52.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4127
Merges	0

This is with waf and autoconf on master.

Short versions of failing configurations:

```
FAILED (2)  autoconf build of x86_64 amd64 (NOSMP/NOMP/DEBUG/PROFILE)
FAILED (1)  waf build of x86_64 amd64 (NOSMP/NOMP/DEBUG/PROFILE)
FAILED (2)  autoconf build of x86_64 amd64 (NOSMP/NOMP/DEBUG/NOPROFILE)
FAILED (1)  waf build of x86_64 amd64 (NOSMP/NOMP/DEBUG/NOPROFILE)
```

This is the error:

```
In file included from ../../../testsuites/libtests/termios11/init.c:2:
../../../testsuites/libtests/termios11/../termios10/termios10impl.h: In function
↪'POSIX_Init':
../../../testsuites/libtests/termios11/../termios10/termios10impl.h:171:1: error:␣
↪no return statement in function returning non-void [-Werror=return-type]
171 | }
| ^
cc1: some warnings being treated as errors

In file included from ../../../testsuites/libtests/termios10/init.c:1:
../../../testsuites/libtests/termios10/termios10impl.h: In function 'POSIX_Init':
../../../testsuites/libtests/termios10/termios10impl.h:171:1: error: no return␣
↪statement in function returning non-void [-Werror=return-type]
171 | }
| ^
```

This is the waf ini file for this specific build:

```
[x86_64/amd64]
# Selects the compiler used to build the BSP (allowed values are "gcc" and
# "clang").  Please note that the values of some options depend on the compiler
# selection and changing the compiler may lead to unpredictable behaviour if
# these options are not adjusted as well.  Use the --rtems-compiler command line
# option to get the default values for a particular compiler via
# ./waf bsp_defaults.
COMPILER = gcc
```

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```
# Flags passed to the library archiver
ARFLAGS = crD
# Warning flags passed to the C and C++ compiler
WARNING_FLAGS = -Wall
# Warning flags passed to the C compiler
CC_WARNING_FLAGS = -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-
↪prototypes -Wnested-externs
# Warning flags passed to the C++ compiler
CXX_WARNING_FLAGS =
# Enable the Ada support
__RTEMS_ADA__ = False
# Enable the RTEMS internal debug support
RTEMS_DEBUG = True
# Enable the Driver Manager startup
RTEMS_DRVMGR_STARTUP = False
# Enable the legacy TCP/IP network support
RTEMS_NETWORKING = False
# Enable the Newlib C library support
RTEMS_NEWLIB = True
# Enable the para-virtualization support
RTEMS_PARAVIRT = False
# Enable support for POSIX signals
RTEMS_POSIX_API = True
# Enable the SMP lock profiling support
RTEMS_PROFILING = False
# Build the Ada test programs (may be also enabled by BUILD_TESTS)
BUILD_ADATESTS = False
# Build the test programs
BUILD_TESTS = True
# Build the benchmark programs (may be also enabled by BUILD_TESTS)
BUILD_BENCHMARKS = False
# Build the file system test programs (may be also enabled by
# BUILD_TESTS)
BUILD_FSTESTS = False
# Build the library test programs (may be also enabled by BUILD_TESTS)
BUILD_LIBTESTS = False
# Build the MPCI test programs (may be also enabled by BUILD_TESTS)
BUILD_MPTESTS = False
# Build the POSIX test programs (may be also enabled by BUILD_TESTS)
BUILD_PSXTESTS = False
# Build the POSIX timing test programs (may be also enabled by
# BUILD_TESTS)
BUILD_PSXTMTESTS = False
# Build the Rhealstone benchmark programs (may be also enabled by
# BUILD_TESTS)
BUILD_RHEALSTONE = False
# Build the sample programs (may be also enabled by BUILD_TESTS)
BUILD_SAMPLES = True
# Build the SMP test programs (may be also enabled by BUILD_TESTS)
```

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```
BUILD_SMPTESTS = False
# Build the single-processor test programs (may be also enabled by
# BUILD_TESTS)
BUILD_SPTESTS = False
# Build the timing test programs (may be also enabled by BUILD_TESTS)
BUILD_TMTESTS = False
# Build the validation test programs (may be also enabled by
# BUILD_TESTS)
BUILD_VALIDATIONTESTS = False
# Sets the test verbosity of the RTEMS Test Framework.  Valid values
# are "Verbose", "Normal", and "Quiet".  For normal test runs you can
# use a verbosity of "Normal".  If you need a more detailed output,
# then you can set it to "Verbose".  For example, in case a regression
# ocurred.  Reducing the verbosity level can significantly reduce the
# test duration especially on targets with a slow serial output
# device.  All verbosity levels produce enough output to notice failed
# test cases.  In particular, the begin and end of test information is
# not affected by the verbosity level.
RTEMS_TEST_VERBOSITY = Normal
# Optimization flags passed to the C and C++ compiler
OPTIMIZATION_FLAGS = -O2 -g -fdata-sections -ffunction-sections
# ABI flags
ABI_FLAGS = -mno-red-zone -mcmodel=large -Werror=return-type
# If defined to a non-zero value, prints the some information in case
# of a fatal error.
BSP_VERBOSE_FATAL_EXTENSION = 1
# Flags passed to the linker (GNU ld)
LDFLAGS = -Wl,--gc-sections
# Install the legacy application Makefile framework.
INSTALL_LEGACY_MAKEFILES = True
# If defined to a non-zero value, prints the exception context when an
# unexpected exception occurs.
BSP_PRINT_EXCEPTION_CONTEXT = 1
# If defined to a non-zero value, reset the board when the application
# exits.
BSP_RESET_BOARD_AT_EXIT = 1
# If defined to a non-zero value, print a message and wait until
# pressed before resetting board when application exits.
BSP_PRESS_KEY_FOR_RESET = 0
```

Author: Trac Migrate 2020-10-07T13:37:24.000Z

This would be fixed by:

https://lists.rtems.org/pipermail/devel/2020-October/062577.html

Author: Trac Migrate 2020-10-10T12:02:52.000Z

- **Resolution** set to ~"fixed"

- **Status** changed from *assigned* to *closed*

Fixed by #4122.

3.9.1.723 4128 - all griscv variants fail to build on master

Id	4128
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-10-07T13:52:16.000Z
Updated	2020-10-10T12:01:36.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4128
Merges	0

Looks to be independent of waf or autoconf or configuration settings since a code issue in the BSP:

```
./../../../../../../../rtems/c/src/lib/libbsp/riscv/griscv/../../../../../../bsps/
↪riscv/griscv/clock/clockdrv.c: In function 'grlib_clock_initialize':
../../../../../../../../rtems/c/src/lib/libbsp/riscv/griscv/../../../../../../
↪bsps/riscv/griscv/clock/clockdrv.c:174:10: warning: implicit declaration of␣
↪function 'grlib_irqmp_has_timestamp' [-Wimplicit-function-declaration]
174 |     if (!grlib_irqmp_has_timestamp(irqmp_ts)) {
|          ^~~~~~~~~~~~~~~~~~~~~~~~~
../../../../../../../../rtems/c/src/lib/libbsp/riscv/griscv/../../../../../../
↪bsps/riscv/griscv/clock/clockdrv.c:174:10: warning: nested extern declaration␣
↪of 'grlib_irqmp_has_timestamp' [-Wnested-externs]
../../../../../../../../rtems/c/src/lib/libbsp/riscv/griscv/../../../../../../
↪bsps/riscv/griscv/clock/clockdrv.c:175:17: error: 'GRLIB_FATAL_CLOCK_NO_IRQMP_
↪TIMESTAMP_SUPPORT' undeclared (first use in this function); did you mean 'LEON3_
↪FATAL_CLOCK_NO_IRQMP_TIMESTAMP_SUPPORT'?
175 |       bsp_fatal(GRLIB_FATAL_CLOCK_NO_IRQMP_TIMESTAMP_SUPPORT);
|                 ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
|                 LEON3_FATAL_CLOCK_NO_IRQMP_TIMESTAMP_SUPPORT
../../../../../../../../rtems/c/src/lib/libbsp/riscv/griscv/../../../../../../
↪bsps/riscv/griscv/clock/clockdrv.c:175:17: note: each undeclared identifier is␣
↪reported only once for each function it appears in
gmake[6]: *** [clockdrv.o] Error 1
```

- 0001-bsps-include-bsp-fatal.h-Add-GRLIB-specific-fatal-er.patch

Author: Joel Sherrill 2020-10-07T15:36:19.000Z

- **Attachment** 0001-bsps-include-bsp-fatal.h-Add-GRLIB-specific-fatal-er.patch added

Add GRLIB fatal error

Author: Joel Sherrill 2020-10-07T15:38:09.000Z

With the attached patch, it builds further but fails with this which appears to be triggered because SMP is enabled (configure command below):

```
riscv-rtems6-gcc  -march=rv32imafd -mabi=ilp32d -O2 -g -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -B./../../lib/libbsp/riscv/griscv -B/home/joel/rtems-cron-6/rtems/bsps/riscv/griscv/start -specs bsp_specs -qrtems -L./../../cpukit -L/home/joel/rtems-cron-6/rtems/bsps/riscv/shared/start -Wl,--wrap=printf -Wl,--wrap=puts -Wl,--wrap=putchar -Wl,--gc-sections -o base_sp.exe base_sp/base_sp-init.o base_sp/base_sp-apptask.o ./../../lib/libbsp/riscv/griscv/librtemsbsp.a ./../../cpukit/librtemscpu.a ./../../cpukit/librtemstest.a
/home/joel/rtems-cron-6/tools/6/lib/gcc/riscv-rtems6/10.2.1/../../../../riscv-rtems6/bin/ld: ./../../lib/libbsp/riscv/griscv/librtemsbsp.a(clockdrv.o): in function `grlib_clock_initialize':
/home/joel/rtems-cron-6/b-griscv/riscv-rtems6/c/griscv/lib/libbsp/riscv/griscv/../../../../../../../../rtems/c/src/lib/libbsp/riscv/griscv/../../../../../../bsps/riscv/griscv/clock/clockdrv.c:167: undefined reference to `grlib_irqmp_has_timestamp'
collect2: error: ld returned 1 exit status
gmake[5]: *** [base_sp.exe] Error 1
```

The configuration is:

```
../rtems/configure --target=riscv-rtems6 --enable-rtemsbsp=griscv --prefix=/home/joel/rtems-cron-6/tools/6/bsp-install --disable-networking --enable-posix --enable-smp --disable-multiprocessing --enable-rtems-debug --enable-profiling --enable-tests --enable-cxx --enable-maintainer-mode
```

Author: Joel Sherrill 2020-10-07T15:38:22.000Z

- **Owner** set to jiri
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2020-10-08T07:44:57.000Z

Replying to Joel Sherrill:

I don't get this far, my compilation fails on:

riscv-rtems6-gcc -march=rv32imafd -mabi=ilp32d -O2 -g -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -B./../../lib/libbsp/riscv/griscv -B/home/jiri/ibm/src/rtems/rtems/bsps/riscv/griscv/start -specs bsp_specs -qrtems -L./../../cpukit -L/home/jiri/ibm/src/rtems/rtems/bsps/riscv/shared/start

-Wl,–wrap=printf -Wl,–wrap=puts -Wl,–wrap=putchar -Wl,–gc-sections -o base_sp.exe base_sp/base_sp-init.o base_sp/base_sp-apptask.o ./../../lib/libbsp/riscv/griscv/librtemsbsp.a ./../../cpukit/librtemscpu.a ./../../cpukit/librtemstest.a /home/jiri/src/rtems/6/bin/../lib/gcc/riscv-rtems6/10.2.1/../../../../riscv-rtems6/bin/ld: ./../../cpukit/librtemscpu.a(free.o): in function `free': /home/jiri/ibm/src/rtems/rtems/c/src/../../cpukit/libcsupport/src/free.c:79: undefined reference to `RTEMS_Malloc_Heap'

I updated rsb and rtems from git head and re-built the tool-chain today . . .

Author: Trac Migrate 2020-10-10T12:01:36.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"e1a0e0c30829a0da4174085ee5109fba337dba11/rtems" e1a0e0c3/rtems]:

```
grlib: Add and use irqmp_has_timestamp()

Replace leon3_irqmp_has_timestamp() with irqmp_has_timestamp() and move
it to grlib.h.

Close #4128.
```

3.9.1.724 4140 - waf install of RTEMS breaks Makefile system in rtems-examples

Id	4140
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-10-09T22:19:19.000Z
Updated	2020-10-10T11:50:54.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::build, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4140
Merges	0

This boils down to bsp_specs being referenced in Makefile.inc and it no longer being at the install point. This can be worked around by copying an empty file to the install location for bsp_specs enough to compile the programs but I assume that the -B. . . list of arguments needs to be replaced

Properly the BSP compile flags need to be processed into the installed target.cfg and the line with -B.. modified as needed in gcc-target-default.cfg.

```
i386-rtems6-gcc --pipe -B/home/joel/rtems-work/tools/6/bsp-install/i386-rtems6/
↪pc686/lib/ -specs bsp_specs -qrtems   -Wall      -mtune=pentiumpro -
↪march=pentium       -c   -o o-optimize/test.o test.c
i386-rtems6-gcc: fatal error: cannot read spec file 'bsp_specs': No such file or␣
↪directory
compilation terminated.
make: *** [o-optimize/test.o] Error 1
[joel@localhost hello_world_c]$ cp /dev/null /home/joel/rtems-work/tools/6/bsp-
↪install/i386-rtems6/pc686/lib/bsp_specs
[joel@localhost hello_world_c]$ RTEMS_MAKEFILE_PATH=/home/joel/rtems-work/tools/6/
↪bsp-install/i386-rtems6/pc686/ make clean all
rm -f a.out core mon.out gmon.out
rm -f -r
rm -f -r  a.out *.o *.BAK Depends-o-optimize.tmp
rm -f -r o-optimize o-debug
test -d o-optimize || mkdir o-optimize
i386-rtems6-gcc --pipe -B/home/joel/rtems-work/tools/6/bsp-install/i386-rtems6/
↪pc686/lib/ -specs bsp_specs -qrtems   -Wall      -mtune=pentiumpro -
↪march=pentium       -c   -o o-optimize/test.o test.c
i386-rtems6-gcc --pipe -B/home/joel/rtems-work/tools/6/bsp-install/i386-rtems6/
↪pc686/lib/ -specs bsp_specs -qrtems   -Wall      -mtune=pentiumpro -
↪march=pentium      -qrtems -Wl,-Ttext,0x00100000 -mtune=pentiumpro -
↪march=pentium -Wl,--gc-sections -L/home/joel/rtems-work/rtems/bsps/i386/shared/
↪start -L/home/joel/rtems-work/rtems/bsps/i386/pc386/start   -mtune=pentiumpro -
↪march=pentium   -o o-optimize/hello.exe  o-optimize/test.o
i386-rtems6-nm -g -n o-optimize/hello.exe > o-optimize/hello.num
i386-rtems6-size o-optimize/hello.exe
text    data     bss     dec     hex filename
151790    9628   33056  194474   2f7aa o-optimize/hello.exe
```

Author: Trac Migrate 2020-10-10T11:50:54.000Z

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"6ca00e61dc8ba9f3c0510aa88209ef8ca31e3b6d/rtems" 6ca00e61/rtems]:

```
build: Fix legacy Makefile support

Close #4140.
```

3.9.1.725 4116 - raspberrypi fails to build on waf and autoconf

Id	4116
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-10-02T14:15:32.000Z
Updated	2020-10-07T05:45:58.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4116
Merges	0

This may apply to 5 as well but I didn't check.

The following configurations for pi didn't build:

```
FAILED (2)  autoconf build of arm raspberrypi (SMP/NOMP/DEBUG/PROFILE)
FAILED (1)  waf build of arm raspberrypi (SMP/NOMP/DEBUG/PROFILE)
FAILED (2)  autoconf build of arm raspberrypi (SMP/NOMP/DEBUG/NOPROFILE)
FAILED (1)  waf build of arm raspberrypi (SMP/NOMP/DEBUG/NOPROFILE)
FAILED (2)  autoconf build of arm raspberrypi (SMP/NOMP/NODEBUG/PROFILE)
FAILED (1)  waf build of arm raspberrypi (SMP/NOMP/NODEBUG/PROFILE)
FAILED (2)  autoconf build of arm raspberrypi (SMP/NOMP/NODEBUG/NOPROFILE)
FAILED (1)  waf build of arm raspberrypi (SMP/NOMP/NODEBUG/NOPROFILE)
```

This one of the configure commands:

```
../rtems/configure --target=arm-rtems6 --enable-rtemsbsp=raspberrypi --prefix=/
↪home/joel/rtems-cron-6/tools/6/bsp-install --disable-networking --enable-posix -
↪-enable-smp --disable-multiprocessing --enable-rtems-debug --enable-profiling --
↪enable-tests --enable-cxx --enable-maintainer-mode
```

And this is the failure:

```
gmake[4]: Entering directory `/home/joel/rtems-cron-6/b-raspberrypi/arm-rtems6/c/
↪raspberrypi/cpukit'
depbase=`echo score/cpu/arm/cpu_asm.o | sed 's|[^/]*$|.deps/&|;s|\\.o$||'`;\\
arm-rtems6-gcc --pipe -DHAVE_CONFIG_H   -I. -I/home/joel/rtems-cron-6/b-
↪raspberrypi/arm-rtems6/c/raspberrypi/include -I/home/joel/rtems-cron-6/rtems/
↪cpukit/include -I/home/joel/rtems-cron-6/rtems/cpukit/score/cpu/arm/include  -
↪DASM -mcpu=arm1176jzf-s -O2 -g -ffunction-sections -fdata-sections -Wall -
↪Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -
↪Wnested-externs -mcpu=arm1176jzf-s -O2 -g -ffunction-sections -fdata-sections -
↪Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -
↪Wnested-externs -MT score/cpu/arm/cpu_asm.o -MD -MP -MF $depbase.Tpo -c -o␣
↪score/cpu/arm/cpu_asm.o ../../../../../rtems/c/src/../../cpukit/score/cpu/arm/
↪cpu_asm.S &&\\
mv -f $depbase.Tpo $depbase.Po
```

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```
../../../../../rtems/c/src/../../cpukit/score/cpu/arm/cpu_asm.S: Assembler␣
↪messages:
../../../../../rtems/c/src/../../cpukit/score/cpu/arm/cpu_asm.S:75: Error:␣
↪selected processor does not support `dmb' in ARM mode
../../../../../rtems/c/src/../../cpukit/score/cpu/arm/cpu_asm.S:93: Error:␣
↪selected processor does not support `dmb' in ARM mode
gmake[4]: *** [score/cpu/arm/cpu_asm.o] Error 1
```

Author: Joel Sherrill 2020-10-06T22:22:02.000Z

Confirming this still fails in all autoconf and waf builds with SMP enabled.

Author: Joel Sherrill 2020-10-06T22:22:13.000Z

- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2020-10-07T05:45:58.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"ca9b2e34be41b8fca66964d866626de2606a1441/rtems" ca9b2e3/rtems]:

```
build: Remove raspberrypi from RTEMS_SMP

Close #4116.
```

3.9.1.726 4121 - lm3s3749 fails to build all tests on master

Id	4121
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-10-04T01:24:57.000Z
Updated	2020-10-05T17:34:51.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4121
Merges	0

FAILED (2) autoconf build of arm lm3s3749 (NOSMP/NOMP/DEBUG/PROFILE) FAILED (1) waf build of arm lm3s3749 (NOSMP/NOMP/DEBUG/PROFILE) FAILED (2) autoconf build of

arm lm3s3749 (NOSMP/NOMP/DEBUG/NOPROFILE) FAILED (1) waf build of arm lm3s3749 (NOSMP/NOMP/DEBUG/NOPROFILE)

```
../rtems/configure --target=arm-rtems6 --enable-rtemsbsp=lm3s3749 OPERATION_
↪COUNT=10 --prefix=/home/joel/rtems-cron-6/tools/6/bsp-install --disable-
↪networking --enable-posix --disable-smp --disable-multiprocessing --enable-
↪rtems-debug --enable-profiling --enable-tests --enable-cxx --enable-maintainer-
↪mode
```

```
arm-rtems6-gcc  -mthumb -mcpu=cortex-m3 -O2 -g -ffunction-sections -fdata-
↪sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-
↪prototypes -Wnested-externs -B./../../lib/libbsp/arm/lm3s69xx -B/home/joel/
↪rtems-cron-6/rtems/bsps/arm/lm3s69xx/start -specs bsp_specs -qrtems -L./../../
↪cpukit -L/home/joel/rtems-cron-6/rtems/bsps/arm/shared/start -Wl,--wrap=printf -
↪Wl,--wrap=puts -Wl,--wrap=putchar -Wl,--gc-sections -o math.exe math/math-init.
↪o math/math-domath.o -lm ./../../lib/libbsp/arm/lm3s69xx/librtemsbsp.a ./../../
↪cpukit/librtemscpu.a ./../../cpukit/librtemstest.a
/home/joel/rtems-cron-6/tools/6/lib/gcc/arm-rtems6/10.2.1/../../../../arm-rtems6/
↪bin/ld: math.exe section `.rodata' will not fit in region `ROM_INT'
/home/joel/rtems-cron-6/tools/6/lib/gcc/arm-rtems6/10.2.1/../../../../arm-rtems6/
↪bin/ld: region `ROM_INT' overflowed by 2872 bytes
```

Author: Trac Migrate 2020-10-05T17:34:51.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"83278070ba17f5d4a0c5df863c3a0d2733dff483/rtems" 83278070/rtems]:

```
build: Add test excludes for RTEMS_DEBUG

Close #4121.
```

3.9.1.727 4117 - lpc1768_mbed_ahb_ram_eth sp01 and others fail to link

Id	4117
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-10-02T15:50:32.000Z
Updated	2020-10-05T17:34:48.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4117
Merges	0

This fails on both waf and autoconf. This is troubling because the test is sp01 which should build and link.

Did not check if this also applies to 5 branch.

```
../rtems/configure --target=arm-rtems6 --enable-rtemsbsp=lpc1768_mbed_ahb_ram_eth␣
↪--prefix=/home/joel/rtems-cron-6/tools/6/bsp-install --disable-networking --
↪enable-posix --disable-smp --disable-multiprocessing --disable-rtems-debug --
↪disable-profiling --enable-tests --enable-cxx --enable-maintainer-mode
```

Fails with:

```
arm-rtems6-gcc  -mthumb -mcpu=cortex-m3 -O2 -ggdb3 -ffunction-sections -fdata-
↪sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-
↪prototypes -Wnested-externs -B./../../lib/libbsp/arm/lpc176x -B/home/joel/rtems-
↪cron-6/rtems/bsps/arm/lpc176x/start -specs bsp_specs -qrtems -L./../../cpukit -
↪L/home/joel/rtems-cron-6/rtems/bsps/arm/shared/start -Wl,--wrap=printf -Wl,--
↪wrap=puts -Wl,--wrap=putchar -Wl,--gc-sections -o sp01.exe sp01/sp01-init.o␣
↪sp01/sp01-task1.o ./../../lib/libbsp/arm/lpc176x/librtemsbsp.a ./../../cpukit/
↪librtemscpu.a ./../../cpukit/librtemstest.a
/home/joel/rtems-cron-6/tools/6/lib/gcc/arm-rtems6/10.2.1/../../../../arm-rtems6/
↪bin/ld: sp01.exe section `.bss' will not fit in region `RAM_AHB1'
/home/joel/rtems-cron-6/tools/6/lib/gcc/arm-rtems6/10.2.1/../../../../arm-rtems6/
↪bin/ld: region `RAM_AHB1' overflowed by 2324 bytes
collect2: error: ld returned 1 exit status
gmake[5]: *** [sp01.exe] Error 1
```

Author: Joel Sherrill 2020-10-02T15:50:49.000Z

- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2020-10-02T15:52:59.000Z

Are you sure it fails with waf?

spec/build/bsps/arm/lpc176x/tstlpc1768mbedahbrameth.yml: sp01: exclude

Author: Joel Sherrill 2020-10-02T16:39:29.000Z

Because waf uses the same build tree, I can't reproduce the waf build until the complete sweep finishes. It is a lost feature not to have the ability to have the build tree vary from build to build. :(

Anyway, this is what I have in the build log. Maybe you can reproduce more:

```
grep FAILED all-bsps-log.txt | grep lpc1768_mbed_ahb_ram_eth
FAILED (2)  autoconf build of arm lpc1768_mbed_ahb_ram_eth (NOSMP/NOMP/
↪DEBUG/PROFILE)
```

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```
FAILED (1)  waf build of arm lpc1768_mbed_ahb_ram_eth (NOSMP/NOMP/DEBUG/
↪PROFILE)
FAILED (2)  autoconf build of arm lpc1768_mbed_ahb_ram_eth (NOSMP/NOMP/
↪DEBUG/NOPROFILE)
FAILED (1)  waf build of arm lpc1768_mbed_ahb_ram_eth (NOSMP/NOMP/DEBUG/
↪NOPROFILE)
FAILED (2)  autoconf build of arm lpc1768_mbed_ahb_ram_eth (NOSMP/NOMP/
↪NODEBUG/PROFILE)
FAILED (1)  waf build of arm lpc1768_mbed_ahb_ram_eth (NOSMP/NOMP/
↪NODEBUG/PROFILE)
FAILED (2)  autoconf build of arm lpc1768_mbed_ahb_ram_eth (NOSMP/NOMP/
↪NODEBUG/NOPROFILE)
FAILED (1)  waf build of arm lpc1768_mbed_ahb_ram_eth (NOSMP/NOMP/
↪NODEBUG/NOPROFILE)
```

Please go ahead and add sp01 to the tcfg so the builds can get closer to matching. There was also at least one other test that didn't fit into the memory. We must achieve parity before the switchover. Minor issues must be addressed in the autoconf side. Major ones we will work around (like the smp/mp option).

Author: Trac Migrate 2020-10-05T17:34:48.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"a9995f101d7153acaefd1803bff27b405fd97b50/rtems" a9995f1/rtems]:

```
bsp/lpc176x: Fix memory map

Due to the static allocation of operating system resources the .bss␣
↪section
needs more space than the .work section.

Close #4117.
```

3.9.1.728 4120 - altcycv_devkit and imx7 fail to build all tests on master

Id	4120
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-10-03T21:40:21.000Z
Updated	2020-10-05T10:01:00.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4120
Merges	0

This appears to not happen with waf but it needs to be resolved or we don't have parity to achieve a switchover.

Happens to at least two BSPs. Not sure if more until all arm BSP configurations finish.

Configuration:

```
../rtems/configure --target=arm-rtems6 --enable-rtemsbsp=altcycv_devkit --prefix=/
↪home/joel/rtems-cron-6/tools/6/bsp-install --disable-networking --enable-posix -
↪-enable-smp --disable-multiprocessing --enable-rtems-debug --enable-profiling --
↪enable-tests --enable-cxx --enable-maintainer-mode
```

Results in:

```
arm-rtems6-gcc -DHAVE_CONFIG_H -I. -I../../../../../../rtems/c/src/../../
↪testsuites/smptests   -I. -I/home/joel/rtems-cron-6/b-altcycv_devkit/arm-rtems6/
↪c/altcycv_devkit/include -I/home/joel/rtems-cron-6/rtems/cpukit/include -I/home/
↪joel/rtems-cron-6/rtems/cpukit/score/cpu/arm/include -I/home/joel/rtems-cron-6/
↪b-altcycv_devkit/arm-rtems6/c/altcycv_devkit/lib/libbsp/arm/altera-cyclone-v/
↪include -I/home/joel/rtems-cron-6/rtems/bsps/include -I/home/joel/rtems-cron-6/
↪rtems/bsps/arm/include -I/home/joel/rtems-cron-6/rtems/bsps/arm/altera-cyclone-
↪v/include -DT_FILE_NAME='"init.c"'  -I../../../../../../rtems/c/src/../../
↪testsuites/smptests/../support/include   -march=armv7-a -mthumb -mfpu=neon -
↪mfloat-abi=hard -mtune=cortex-a9 -O2 -g -ffunction-sections -fdata-sections -
↪Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -
↪Wnested-externs -MT smpmulticast01/smpmulticast01-init.o -MD -MP -MF␣
↪smpmulticast01/.deps/smpmulticast01-init.Tpo -c -o smpmulticast01/
↪smpmulticast01-init.o `test -f 'smpmulticast01/init.c' || echo '../../../../../.
↪./rtems/c/src/../../testsuites/smptests/'`smpmulticast01/init.c
../../../../../../rtems/c/src/../../testsuites/smptests/smpmulticast01/init.
↪c:37:10: fatal error: rtems/testopts.h: No such file or directory
37 | #include <rtems/testopts.h>
|          ^~~~~~~~~~~~~~~~~~
compilation terminated.
gmake[5]: *** [smpmulticast01/smpmulticast01-init.o] Error 1
```

Author: Joel Sherrill 2020-10-03T21:46:42.000Z

- **Description** changed

```
This appears to not happen with waf but it needs to be resolved or we don't have parity to achieve a switchover.
+
+ Happens to at least two BSPs. Not sure if more until all arm BSP configurations finish.

Configuration:

{{{
../rtems/configure --target=arm-rtems6 --enable-rtemsbsp=altcycv_devkit --prefix=/home/joel/rtems-cron-6/tools/6/bsp-install --disable-networking --enable-posix --enable-smp --disable-multiprocessing --enable-rtems-debug --enable-profiling --enable-tests --enable-cxx --enable-maintainer-mode

}}}

Results in:

{{{
arm-rtems6-gcc -DHAVE_CONFIG_H -I. -I../../../../../../rtems/c/src/../../testsuites/smptests   -I. -I/home/joel/rtems-cron-6/b-altcycv_devkit/arm-rtems6/c/altcycv_devkit/include -I/home/joel/rtems-cron-6/rtems/cpukit/include -I/home/joel/rtems-cron-6/rtems/cpukit/score/cpu/arm/include -I/home/joel/rtems-cron-6/b-altcycv_devkit/arm-rtems6/c/altcycv_devkit/lib/libbsp/arm/altera-cyclone-v/include -I/home/joel/rtems-cron-6/rtems/bsps/include -I/home/joel/rtems-cron-6/rtems/bsps/arm/include -I/home/joel/rtems-cron-6/rtems/bsps/arm/altera-cyclone-v/include -DT_FILE_NAME='"init.c"'  -I../../../../../../rtems/c/src/../../testsuites/smptests/../support/include   -march=armv7-a -mthumb -mfpu=neon -mfloat-abi=hard -mtune=cortex-a9 -O2 -g -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -MT smpmulticast01/smpmulticast01-init.o -MD -MP -MF smpmulticast01/.deps/smpmulticast01-init.Tpo -c -o smpmulticast01/smpmulticast01-init.o `test -f 'smpmulticast01/init.c' || echo '../../../../../../rtems/c/src/../../testsuites/smptests/'`smpmulticast01/init.c
../../../../../../rtems/c/src/../../testsuites/smptests/smpmulticast01/init.c:37:10: fatal error: rtems/testopts.h: No such file or directory
37 | #include <rtems/testopts.h>
|          ^~~~~~~~~~~~~~~~~~
compilation terminated.
gmake[5]: *** [smpmulticast01/smpmulticast01-init.o] Error 1

}}}
```

- **Summary** changed from *altcycv_devkit famils to build all tests on master* to

altcycv_devkit and imx7 fail to build all tests on master

Author: Trac Migrate	2020-10-05T10:01:00.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"2c367617688edd17d41fc8d837d53d27838d9ef6/rtems" 2c367617/rtems]:

```
build: Add testopts.h to configure script

Close #4120.
```

3.9.1.729 4118 - Add clang variants for sparc BSPs

Id	4118
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-10-02T15:53:11.000Z
Updated	2020-10-02T15:55:17.000Z
Milestone	6.1
Labels	arch:sparc, priority::normal, resolution::wontfix, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4118
Merges	0

There are clang variants for RISV-V BSPs but not SPARC BSPs even though clang is supported on them.

If there are other architectures with clang support, I don't know.

Author: Trac Migrate	2020-10-02T15:55:17.000Z

- **Resolution** set to ~"wontfix"
- **Status** changed from *new* to *closed*

There is no need to add clang BSPs. The new build system has an option to select the compiler.

3.9.1.730 4101 - atsamv fails to build on master

Id	4101
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-09-29T19:45:27.000Z
Updated	2020-10-01T20:10:15.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4101
Merges	0

This may also fail on 5.

$ ../rtems/configure –target=arm-rtems6 –enable-rtemsbsp=atsamv –prefix=/home/joel/rtems-cron-6/tools/6/bsp-install –disable-networking –enable-posix –enable-smp –disable-multiprocessing –disable-rtems-debug –disable-profiling –enable-tests –enable-cxx –enable-maintainer-mode

```
rm-rtems6-gcc --pipe -DHAVE_CONFIG_H   -I. -I/home/joel/rtems-cron-6/b-atsamv/arm-rtems6/c/atsamv/include -I/home/joel/rtems-cron-6/rtems/cpukit/include -I/home/joel/rtems-cron-6/rtems/cpukit/score/cpu/arm/include   -mthumb -mcpu=cortex-m7 -mfpu=fpv5-d16 -mfloat-abi=hard -O2 -g -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -MT libcsupport/src/error.o -MD -MP -MF $depbase.Tpo -c -o libcsupport/src/error.o ../../../../../rtems/c/src/../../cpukit/libcsupport/src/error.c &&\\
mv -f $depbase.Tpo $depbase.Po
In file included from /home/joel/rtems-cron-6/rtems/cpukit/include/rtems/score/threaddispatch.h:21,
from /home/joel/rtems-cron-6/rtems/cpukit/include/rtems/score/objectimpl.h:29,
from /home/joel/rtems-cron-6/rtems/cpukit/include/rtems/score/threadimpl.h:31,
from ../../../../../rtems/c/src/../../cpukit/libcsupport/src/error.c:16:
/home/joel/rtems-cron-6/rtems/cpukit/include/rtems/score/percpu.h:439:3: error: unknown type name 'CPU_Interrupt_frame'
439 |   CPU_Interrupt_frame Interrupt_frame;
|   ^~~~~~~~~~~~~~~~~~
```

Author: Joel Sherrill 2020-09-29T21:53:17.000Z

I am not going through every failing ARM BSP but spot checking shows that this impacts the lpc176x family also.

Author: Joel Sherrill 2020-09-29T22:03:41.000Z

- **Description** changed

```
+ This may also fail on 5.
+
$ ../rtems/configure --target=arm-rtems6 --enable-rtemsbsp=atsamv --
↪prefix=/home/joel/rtems-cron-6/tools/6/bsp-install --disable-
↪networking --enable-posix --enable-smp --disable-multiprocessing --
↪disable-rtems-debug --disable-profiling --enable-tests --enable-cxx --
↪enable-maintainer-mode


{{{
rm-rtems6-gcc --pipe -DHAVE_CONFIG_H   -I. -I/home/joel/rtems-cron-6/b-
↪atsamv/arm-rtems6/c/atsamv/include -I/home/joel/rtems-cron-6/rtems/
↪cpukit/include -I/home/joel/rtems-cron-6/rtems/cpukit/score/cpu/arm/
↪include   -mthumb -mcpu=cortex-m7 -mfpu=fpv5-d16 -mfloat-abi=hard -O2␣
↪-g -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -
↪Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -
↪MT libcsupport/src/error.o -MD -MP -MF $depbase.Tpo -c -o libcsupport/
↪src/error.o ../../../../../rtems/c/src/../../cpukit/libcsupport/src/
↪error.c &&\\
mv -f $depbase.Tpo $depbase.Po
In file included from /home/joel/rtems-cron-6/rtems/cpukit/include/
↪rtems/score/threaddispatch.h:21,
from /home/joel/rtems-cron-6/rtems/cpukit/include/rtems/score/
↪objectimpl.h:29,
from /home/joel/rtems-cron-6/rtems/cpukit/include/rtems/score/
↪threadimpl.h:31,
from ../../../../../rtems/c/src/../../cpukit/libcsupport/src/error.c:16:
/home/joel/rtems-cron-6/rtems/cpukit/include/rtems/score/percpu.
↪h:439:3: error: unknown type name 'CPU_Interrupt_frame'
439 |   CPU_Interrupt_frame Interrupt_frame;
|   ^~~~~~~~~~~~~~~~~~~

}}}
```

Author: Trac Migrate 2020-09-30T05:51:40.000Z

These BSPs don't support SMP.

Author: Joel Sherrill 2020-09-30T12:59:08.000Z

And why is this not a more obvious configure time problem in waf?

I would report the failures against waf but since it uses the same build directory all the time, I can't rebuild those until all the builds fail and it is just now getting to mips.

Author: Trac Migrate 2020-10-01T20:08:10.000Z

Fixed by recent commit.

Author: Trac Migrate 2020-10-01T20:10:15.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

3.9.1.731 4103 - BeagleBoard BSPs Fail to Build

Id	4103
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-09-29T22:03:16.000Z
Updated	2020-10-01T20:09:48.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4103
Merges	0

This may also fail on 5.

../rtems/configure –target=arm-rtems6 –enable-rtemsbsp=beagleboardorig –prefix=/home/joel/rtems-cron-6/tools/6/bsp-install –disable-networking –enable-posix –enable-smp –disable-multiprocessing –disable-rtems-debug –disable-profiling –enable-tests –enable-cxx –enable-maintainer-mode

```
1 arm-rtems6-gcc  -mcpu=cortex-a8 -O2 -g -ffunction-sections -fdata-sections -Wall -
  ↪Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -
  ↪Wnested-externs -B./../../lib/libbsp/arm/beagle -B/home/joel/rtems-cron-6/rtems/
  ↪bsps/arm/beagle/start -specs bsp_specs -qrtems -L./../../cpukit -L/home/joel/
  ↪rtems-cron-6/rtems/bsps/arm/shared/start -Wl,--wrap=printf -Wl,--wrap=puts -Wl,-
  ↪-wrap=putchar -Wl,--gc-sections -o base_sp.exe base_sp/base_sp-init.o base_sp/
  ↪base_sp-apptask.o ./../../lib/libbsp/arm/beagle/librtemsbsp.a ./../../cpukit/
  ↪librtemscpu.a ./../../cpukit/librtemstest.a
2 /home/joel/rtems-cron-6/tools/6/lib/gcc/arm-rtems6/10.2.1/../../../../arm-rtems6/
  ↪bin/ld: ./../../cpukit/librtemscpu.a(threadrestart.o): in function `_Thread_
  ↪Dispatch_request':
3 /home/joel/rtems-cron-6/rtems/cpukit/include/rtems/score/threaddispatch.h:245:␣
  ↪undefined reference to `_CPU_SMP_Send_interrupt'
4 /home/joel/rtems-cron-6/tools/6/lib/gcc/arm-rtems6/10.2.1/../../../../arm-rtems6/
  ↪bin/ld: ./../../cpukit/librtemscpu.a(smp.o): in function `_SMP_Handler_
  ↪initialize':
5 /home/joel/rtems-cron-6/b-beagleboardorig/arm-rtems6/c/beagleboardorig/cpukit/../.
  ↪./../../../rtems/c/src/../../cpukit/score/src/smp.c:135: undefined reference to␣
  ↪`_CPU_SMP_Initialize'
6 /home/joel/rtems-cron-6/tools/6/lib/gcc/arm-rtems6/10.2.1/../../../../arm-rtems6/
  ↪bin/ld: ./../../cpukit/librtemscpu.a(smp.o): in function `_SMP_Start_processors
```

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```
↪':
/home/joel/rtems-cron-6/b-beagleboardorig/arm-rtems6/c/beagleboardorig/cpukit/../.
↪./../../../rtems/c/src/../../cpukit/score/src/smp.c:78: undefined reference to␣
↪`_CPU_SMP_Start_processor'
/home/joel/rtems-cron-6/tools/6/lib/gcc/arm-rtems6/10.2.1/../../../../arm-rtems6/
↪bin/ld: ./../../cpukit/librtemscpu.a(smp.o): in function `_SMP_Handler_
↪initialize':
/home/joel/rtems-cron-6/b-beagleboardorig/arm-rtems6/c/beagleboardorig/cpukit/../.
↪./../../../rtems/c/src/../../cpukit/score/src/smp.c:151: undefined reference to␣
↪`_CPU_SMP_Finalize_initialization'
/home/joel/rtems-cron-6/tools/6/lib/gcc/arm-rtems6/10.2.1/../../../../arm-rtems6/
↪bin/ld: /home/joel/rtems-cron-6/b-beagleboardorig/arm-rtems6/c/beagleboardorig/
↪cpukit/../../../../../rtems/c/src/../../cpukit/score/src/smp.c:135: undefined␣
↪reference to `_CPU_SMP_Initialize'
/home/joel/rtems-cron-6/tools/6/lib/gcc/arm-rtems6/10.2.1/../../../../arm-rtems6/
↪bin/ld: ./../../cpukit/librtemscpu.a(smp.o): in function `_SMP_Send_message':
/home/joel/rtems-cron-6/b-beagleboardorig/arm-rtems6/c/beagleboardorig/cpukit/../.
↪./../../../rtems/c/src/../../cpukit/score/src/smp.c:221: undefined reference to␣
↪`_CPU_SMP_Send_interrupt'
/home/joel/rtems-cron-6/tools/6/lib/gcc/arm-rtems6/10.2.1/../../../../arm-rtems6/
↪bin/ld: ./../../cpukit/librtemscpu.a(threadstartmultitasking.o): in function `_
↪Thread_Start_multitasking':
/home/joel/rtems-cron-6/b-beagleboardorig/arm-rtems6/c/beagleboardorig/cpukit/../.
↪./../../../rtems/c/src/../../cpukit/score/src/threadstartmultitasking.c:44:␣
↪undefined reference to `_CPU_SMP_Prepare_start_multitasking'
collect2: error: ld returned 1 exit status
gmake[5]: *** [base_sp.exe] Error 1
```

Author: Chris Johns 2020-09-30T03:13:48.000Z

The BBB is a single core SoC and so the SMP option has no meaning.

Author: Trac Migrate 2020-10-01T20:09:48.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Fixed by recent commit.

3.9.1.732 4100 - arm/edb7312 Build Failure When SMP is Enabled

Id	4100
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-09-29T17:14:49.000Z
Updated	2020-10-01T20:05:57.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4100
Merges	0

This is from the edb7312 but may apply to others. Build is still underway and this is a common file.

```
__gmake[4]: Entering directory `/home/joel/rtems-cron-6/b-edb7312/arm-rtems6/c/edb7312/cpukit'
depbase=`echo score/src/percpu.o | sed 's|[^/]*$|.deps/&|;s|\\.o$||'`;\\
arm-rtems6-gcc --pipe -DHAVE_CONFIG_H   -I. -I/home/joel/rtems-cron-6/b-edb7312/arm-rtems6/c/edb7312/include -I/home/joel/rtems-cron-6/rtems/cpukit/include -I/home/joel/rtems-cron-6/rtems/cpukit/score/cpu/arm/include   -mcpu=arm7tdmi -O2 -g -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -MT score/src/percpu.o -MD -MP -MF $depbase.Tpo -c -o score/src/percpu.o ../../../../../rtems/c/src/../../cpukit/score/src/percpu.c &&\\
mv -f $depbase.Tpo $depbase.Po
{standard input}: Assembler messages:
{standard input}:157: Error: selected processor does not support `sev' in ARM mode
{standard input}:347: Error: selected processor does not support `wfe' in ARM mode
{standard input}:525: Error: selected processor does not support `wfe' in ARM mode
gmake[4]: *** [score/src/percpu.o] Error 1
```

Author: Joel Sherrill 2020-09-29T21:51:16.000Z

I am not going through every failing ARM BSP but the csb337 family also fails similarly.

Author: Trac Migrate 2020-09-30T05:51:04.000Z

This BSP doesn't support SMP.

Author: Joel Sherrill 2020-09-30T12:59:39.000Z

Why are these not configure time failures in waf and not build time failures?

Author: Trac Migrate 2020-09-30T13:05:06.000Z

This was also not a configure time error in the old build system I guess. The information if a BSP supports SMP is not explicitly available in the build specification. This information is currently present in the RTEMS Tools: config/rtems-bsps-arm.ini. This can be changed of course.

Author: Trac Migrate 2020-10-01T20:05:57.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

Fixed by recent commit.

3.9.1.733 4084 - throwing std::runtime on PC BSP fails

Id	4084
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-09-21T19:46:08.000Z
Updated	2020-10-01T15:23:45.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::gcc, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4084
Merges	0

Copied from #2830 for new release milestone. The solution is to update gcc/config/i386/t-rtems. Whether for gcc 10 or gcc master is the difference on this CR versus #2830 which had to be to gcc 7 as a patch via the RSB.

Throwing a std::runtime() exception locks up.

The lock up is in the exception clean up handler where the exception object is destructed. The destructor loops distructing the std::string object. The path ends up in libstdc++-v3/include/ext/atomicity.h line 48 or exchange_and_add.

At a guess it would seem like the C++ atomics on i386 is broken or fragile.

UPDATE: This was broken when gcc i386 eliminated -mcpu in favor of -march/-mtune. The multilibs were built with -mtune and not -march.

- gcc-10-i386march-1.diff

Author: Joel Sherrill 2020-09-21T20:17:06.000Z

- **Attachment** gcc-10-i386march-1.diff added

Patch for GCC 10 to fix multilib compiler arguments on i386

Author: Trac Migrate 2020-09-21T21:14:32.000Z

In [changeset:"1ea1c9cdc56313e33abf39fce23a2ddf308ff5b3/rtems-source-builder" 1ea1c9c/rtems-source-builder]:

```
patch gcc i386 multiarch

Add patch to change from mtune to march when building multilibs.
The mtune argument tunes or optimizes for a specific CPU model but
does not ensure the generated code is appropriate for the
CPU model. Prior to this patch, i386 compatible code was always
generated but tuned for later models.

This is the same fix as #2830 but applying to gcc 10.

Updates #4084.
```

Author: Joel Sherrill 2020-09-21T21:17:08.000Z

Post for GCC 10 and master posted https://gcc.gnu.org/pipermail/gcc-patches/2020-September/554430.html

Author: Joel Sherrill 2020-09-21T21:17:50.000Z

- **Cc** added @@chrisj, @mdavidsaver

Author: Joel Sherrill 2020-10-01T15:23:45.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

I applied the GCC patch to the master and 10 release branch.

https://gcc.gnu.org/git/?p=gcc.git;a=commit;h=63a32847b0e8d14ae1eafe047ea43441f6e3a11c

3.9.1.734 4107 - waf -j24 fails on powerpc/psim – probable dependency issue

Id	4107
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-09-30T19:08:05.000Z
Updated	2020-10-01T05:47:05.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::build, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4107
Merges	0

While experimenting with -j options since waf defaults to fewer jobs than I have been using with make, I tripped across this failure on powerpc/psim which I assume is a missing dependency somewhere:

```
1561/4127] Linking build/powerpc/psim/testsuites/fstests/fsjffs2gc01.exe
[1562/4127] Linking build/powerpc/psim/testsuites/fstests/fsclose01.exe
[1563/4127] Linking build/powerpc/psim/libdebugger.a
[1564/4127] Linking build/powerpc/psim/libz.a
[1565/4127] Compiling testsuites/fstests/fslink/test.c
/home/joel/rtems-work/tools/6/lib/gcc/powerpc-rtems6/10.2.1/../../../../powerpc-
↪rtems6/bin/ld: cannot find -ljffs2
collect2: error: ld returned 1 exit status

../../../testsuites/fstests/fsdosfsname01/init.c: In function 'test_creating_
↪invalid_directories':
../../../testsuites/fstests/fsdosfsname01/init.c:430:19: warning: '%s' directive␣
↪output may be truncated writing up to 6424 bytes into a region of size 257 [-
↪Wformat-truncation=]
430 |                 "%s/%s",
|                   ^~
../../../testsuites/fstests/fsdosfsname01/init.c:428:5: note: 'snprintf' output␣
↪between 6 and 6430 bytes into a destination of size 262
428 |     snprintf( dirname,
|     ^~~~~~~~~~~~~~~~~~
429 |                 sizeof( dirname ),
|                 ~~~~~~~~~~~~~~~~~~
430 |                 "%s/%s",
|                 ~~~~~~~~
431 |                 MOUNT_DIR,
|                 ~~~~~~~~~~
432 |                 DIRECTORY_NAMES_INVALID[index] );
|                 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

../../../cpukit/mghttpd/mongoose.c: In function 'handle_request':
../../../cpukit/mghttpd/mongoose.c:1919:45: warning: '.gz' directive output may␣
```

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```
↪be truncated writing 3 bytes into a region of size between 1 and 255 [-Wformat-
↪truncation=]
1919 |       snprintf(gz_path, sizeof(gz_path), "%s.gz", buf);
|                                             ^~~
../../../cpukit/mghttpd/mongoose.c:1919:7: note: 'snprintf' output between 4 and␣
↪258 bytes into a destination of size 255
1919 |       snprintf(gz_path, sizeof(gz_path), "%s.gz", buf);
|       ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Waf: Leaving directory `/home/joel/rtems-work/rtems/build/powerpc/psim'
Build failed
-> task in 'testsuites/fstests/fsjffs2gc01.exe' failed with exit status 1 (run␣
↪with -v to display more information)
```

INI file was:

```
[powerpc/psim]
# Selects the compiler used to build the BSP (allowed values are "gcc" and
# "clang").  Please note that the values of some options depend on the compiler
# selection and changing the compiler may lead to unpredictable behaviour if
# these options are not adjusted as well.  Use the --rtems-compiler command line
# option to get the default values for a particular compiler via
# ./waf bsp_defaults.
COMPILER = gcc
# Flags passed to the library archiver
ARFLAGS = crD
# Warning flags passed to the C and C++ compiler
WARNING_FLAGS = -Wall
# Warning flags passed to the C compiler
CC_WARNING_FLAGS = -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-
↪prototypes -Wnested-externs
# Warning flags passed to the C++ compiler
CXX_WARNING_FLAGS =
# Enable the Ada support
__RTEMS_ADA__ = False
# Enable the RTEMS internal debug support
RTEMS_DEBUG = False
# Enable the Driver Manager startup
RTEMS_DRVMGR_STARTUP = False
# Enable the message passing based multiprocessing support (MPCI); do
# not confuse this with the SMP support
RTEMS_MULTIPROCESSING = False
# Enable the legacy TCP/IP network support
RTEMS_NETWORKING = False
# Enable the Newlib C library support
RTEMS_NEWLIB = True
# Enable the para-virtualization support
RTEMS_PARAVIRT = False
# Enable support for POSIX signals
```

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```
RTEMS_POSIX_API = True
# Enable the SMP lock profiling support
RTEMS_PROFILING = False
# Enable the Symmetric Multiprocessing (SMP) support
RTEMS_SMP = False
# Build the Ada test programs (may be also enabled by BUILD_TESTS)
BUILD_ADATESTS = False
# Build the test programs
BUILD_TESTS = True
# Build the benchmark programs (may be also enabled by BUILD_TESTS)
BUILD_BENCHMARKS = False
# Build the file system test programs (may be also enabled by
# BUILD_TESTS)
BUILD_FSTESTS = False
# Build the library test programs (may be also enabled by BUILD_TESTS)
BUILD_LIBTESTS = False
# Build the MPCI test programs (may be also enabled by BUILD_TESTS)
BUILD_MPTESTS = False
# Build the POSIX test programs (may be also enabled by BUILD_TESTS)
BUILD_PSXTESTS = False
# Build the POSIX timing test programs (may be also enabled by
# BUILD_TESTS)
BUILD_PSXTMTESTS = False
# Build the Rhealstone benchmark programs (may be also enabled by
# BUILD_TESTS)
BUILD_RHEALSTONE = False
# Build the sample programs (may be also enabled by BUILD_TESTS)
BUILD_SAMPLES = True
# Build the SMP test programs (may be also enabled by BUILD_TESTS)
BUILD_SMPTESTS = False
# Build the single-processor test programs (may be also enabled by
# BUILD_TESTS)
BUILD_SPTESTS = False
# Build the timing test programs (may be also enabled by BUILD_TESTS)
BUILD_TMTESTS = False
# Build the validation test programs (may be also enabled by
# BUILD_TESTS)
BUILD_VALIDATIONTESTS = False
# Optimization flags passed to the C and C++ compiler
OPTIMIZATION_FLAGS = -O2 -g -fdata-sections -ffunction-sections
# ABI flags
ABI_FLAGS = -Dppc603e -meabi -mcpu=603e -msdata=sysv
# This sets a mode where the time runs as fast as possible when a
# clock ISR occurs while the IDLE thread is executing.  This can
# significantly reduce simulation times.
CLOCK_DRIVER_USE_FAST_IDLE = True
# If defined then the BSP may reduce the available memory size
# initially. This can be useful for debugging (reduce the core size)
# or dynamic loading (std gcc text offsets/jumps are < +/-32M).  Note
```

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```
# that the policy can still be defined by the application (see sbrk.c,
# BSP_sbrk_policy). By undefining CONFIGURE_MALLOC_BSP_SUPPORTS_SBRK
# this feature is removed and a little memory is saved.
CONFIGURE_MALLOC_BSP_SUPPORTS_SBRK = True
# If defined, then the PowerPC specific code in RTEMS will use some of
# the special purpose registers to slightly optimize interrupt
# response time.  The use of these registers can conflict with other
# tools like debuggers.
PPC_USE_SPRG = False
# This defines the base address of the exception table.  NOTE: Vectors
# are actually at 0xFFF00000 but file starts at offset.
PPC_VECTOR_FILE_BASE = 0xfff00100
# If defined to a non-zero value, prints the some information in case
# of a fatal error.
BSP_VERBOSE_FATAL_EXTENSION = 1
# Flags passed to the linker (GNU ld)
LDFLAGS = -Wl,--gc-sections
# Install the legacy application Makefile framework.
INSTALL_LEGACY_MAKEFILES = True
# If defined to a non-zero value, prints the exception context when an
# unexpected exception occurs.
BSP_PRINT_EXCEPTION_CONTEXT = 1
# If defined to a non-zero value, reset the board when the application
# exits.
BSP_RESET_BOARD_AT_EXIT = 1
# If defined to a non-zero value, print a message and wait until
# pressed before resetting board when application exits.
BSP_PRESS_KEY_FOR_RESET = 0
```

Author: Joel Sherrill 2020-09-30T19:08:19.000Z

- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2020-10-01T05:39:30.000Z

In [changeset:"9628dfde43b7347f2698be0af9d9db6ba283ddb5/rtems-docs" 9628dfd/rtems-docs]:

```
eng: Clarify stlib build attribute

Update #4107.
```

Author: Trac Migrate 2020-10-01T05:47:05.000Z

- **Resolution** set to ~"fixed"

- **Status** changed from *assigned* to *closed*

In [changeset:"16b29af2c5424ccd44a15172fb71b107663a39e1/rtems" 16b29af2/rtems]:

```
build: Fix build dependencies of JFFS2 tests

Close #4107.
```

3.9.1.735 4077 - Implement LibBSD module dependencies in the build system

Id	4077
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2020-09-14T05:39:34.000Z
Updated	2020-09-25T01:17:15.000Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4077
Merges	0

The build system has a partially implemented module dependency system. Complete the implementation. Control tests being built. If a test depends on a module and the module is disabled do not build the test.

Add dependency checking to the `freebsd-to-rtems.py` command. If the module definition is not consistent generate an error.

Author: Chris Johns 2020-09-25T01:17:15.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

3.9.1.736 4066 - test running for too long

Id	4066
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2020-08-28T23:10:21.000Z
Updated	2020-09-25T01:16:43.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4066
Merges	0

The spcache01 test on my PC test hardware is not finishing. It is looping generating output. Add a _Test too **long_** error count and end the test after 5 minutes.

Author: Trac Migrate 2020-08-30T14:51:51.000Z

Which test case runs too long and why?

Author: Chris Johns 2020-08-31T03:27:33.000Z

Replying to Sebastian Huber:

> Which test case runs too long and why? The test is spcache01. I do not know the reason but I am using it to add support to handle a stuck test that loops for ever generating output.

Author: Trac Migrate 2020-08-31T06:34:43.000Z

The spcache01 test program contains several test cases. If one of them loops forever, then there is a bug in the test or the cache support.

For the test runner wouldn't this be a timed out test?

Author: Chris Johns 2020-08-31T07:52:45.000Z

This ticket is about the tester being able to handle that case. The failure has highlighted a need for the tester to detect this, end the test and report the failure.

Author: Chris Johns 2020-09-25T01:16:43.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

3.9.1.737 4067 - Libbsd build system does not separate kernel and user land include paths

Id	4067
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2020-09-02T07:43:45.000Z
Updated	2020-09-25T01:16:16.000Z
Milestone	6.1
Labels	libbsd, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4067
Merges	0

FreeBSD has duplicates kernel and user land header files. LibBSD build system currently supports only one set of header include and the kernel and user land include paths.

Author: Chris Johns 2020-09-25T01:16:16.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

3.9.1.738 4093 - bsps/pc386: Add missing license header

Id	4093
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-09-23T13:24:57.000Z
Updated	2020-09-23T13:25:51.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4093
Merges	0

bspsmp.c is missing a licence header.

Author: Trac Migrate 2020-09-23T13:25:51.000Z

- **Owner** set to Jan Sommer <jan.sommer@dlr.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"1f77518fcab14b14868849c0f166b43136ff974b/rtems" 1f77518/rtems]:

```
bsps/pc386: Add missing license header

Closes #4093.
```

3.9.1.739 3883 - Trace linker is broken on small-data area targets

Id	3883
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-02-25T08:17:11.000Z
Updated	2020-09-20T15:32:28.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3883
Merges	0

Original author: sebastian.huber

The trace linker generates some data, e.g. `__rtld_trace_names`. The arrays are not declared in a header file as arrays of unspecified size. So, in rtems-trace-buffer-vars.c the compiler assumes that the size one weakly defined defaults reside in the small-data area. This leads to linker errors with the strong definitions:

```
Waf: Entering directory `/scratch/git-rtems-examples/build/powerpc-rtems5-qoriq_
↪e6500_32'
[22/29] Processing rtrace: build/powerpc-rtems5-qoriq_e6500_32/filesystem/fat_
↪ramdisk/init.c.6.o build/powerpc-rtems5-qoriq_e6500_32/filesystem/fat_ramdisk/
↪fs-root-tar.c.6.o -> build/powerpc-rtems5-qoriq_e6500_32/filesystem/fat_ramdisk/
↪fat_ramdisk.texe
/opt/rtems/5/bin/powerpc-rtems5-gcc: /opt/rtems/5/lib64/gcc/powerpc-rtems5/7.5.0/.
↪./../../../powerpc-rtems5/bin/ld: /opt/rtems/5/powerpc-rtems5/qoriq_e6500_32/
↪lib/librtemscpu.a(rtems-trace-buffer-vars.o): the target (__rtld_trace_names)␣
↪of a R_PPC_SDAREL16 relocation is in the wrong output section (.data)
/opt/rtems/5/bin/powerpc-rtems5-gcc: /opt/rtems/5/powerpc-rtems5/qoriq_e6500_32/
↪lib/librtemscpu.a(rtems-trace-buffer-vars.o): in function `rtems_trace_names':
/opt/rtems/5/bin/powerpc-rtems5-gcc: /home/EB/sebastian_h/git-rtems-5/c/src/../../
↪cpukit/libmisc/capture/rtems-trace-buffer-vars.c:51:(.text.rtems_trace_
↪names+0x2): relocation truncated to fit: R_PPC_SDAREL16 against symbol `__rtld_
↪trace_names' defined in .data.__rtld_trace_names section in /tmp/ccu6uaaa.o
/opt/rtems/5/bin/powerpc-rtems5-gcc: /opt/rtems/5/lib64/gcc/powerpc-rtems5/7.5.0/.
↪./../../../powerpc-rtems5/bin/ld: /opt/rtems/5/powerpc-rtems5/qoriq_e6500_32/
↪lib/librtemscpu.a(rtems-trace-buffer-vars.o): the target (__rtld_trace_
↪signatures) of a R_PPC_SDAREL16 relocation is in the wrong output section (.
↪rodata)
/opt/rtems/5/bin/powerpc-rtems5-gcc: /opt/rtems/5/powerpc-rtems5/qoriq_e6500_32/
↪lib/librtemscpu.a(rtems-trace-buffer-vars.o): in function `rtems_trace_
↪signatures':
/opt/rtems/5/bin/powerpc-rtems5-gcc: /home/EB/sebastian_h/git-rtems-5/c/src/../../
↪cpukit/libmisc/capture/rtems-trace-buffer-vars.c:81:(.text.rtems_trace_
↪signatures+0x2): relocation truncated to fit: R_PPC_SDAREL16 against symbol `__
↪rtld_trace_signatures' defined in .rodata.__rtld_trace_signatures section in /
↪tmp/ccu6uaaa.o
```

Author: Trac Migrate 2020-09-20T15:16:15.000Z

Original author: sebastian.huber

- **Milestone** changed from %"Indefinite" to %"6.1"
- **Owner** set to sebastian.huber
- **Status** changed from *assigned* to *accepted*

Author: Trac Migrate 2020-09-20T15:32:28.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"9f2a2075fca6493cf9232e11a2b9b72cc4ade5a6/rtems" 9f2a207/rtems]:

```
capture: Move default trace data

Provide the default trace data in a separate file to avoid issues on␣
↪targets
with a small-data area.

Close #3883.
```

3.9.1.740 4079 - build: i386/pc686/appstart.o is created more than once

Id	4079
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-09-15T13:20:08.000Z
Updated	2020-09-15T18:08:01.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::build, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4079
Merges	0

Original author: sebastian.huber

In this build specification item

https://git.rtems.org/rtems/tree/spec/build/bsps/i386/pc386/objsmpstart.yml

is an error:

```
* Node /home/EB/sebastian_h/git-rtems-6/build/i386/pc686/appstart.o is created more than once. The task generators are:
1. bld(target=['appstart.o'], idx=14, tg_idx_count=14, meths=['check_err_features', 'check_err_order', 'process_rule', 'process_source'], rule='${OBJCOPY} -I binary -O elf32-i386 -B i386 ${SRC} ${TGT}', _name='appstart.o', source=[], path=/home/EB/sebastian_h/git-rtems-6, posted=True, features=[]) in /home/EB/sebastian_h/git-rtems-6
2. bld(target='/bsps/i386/pc386/objsmpstart', idx=15, tmp_use_objects=False, tg_idx_count=15, meths=['check_err_features', 'check_err_order', 'process_rule', 'process_source'], tmp_use_stlib=True, _name='/bsps/i386/pc386/objsmpstart', source=[/home/EB/sebastian_h/git-rtems-6/build/i386/pc686/appstart.o], tmp_use_var='', path=/home/EB/sebastian_h/git-rtems-6, posted=True, typ='objects', features=[]) in /home/EB/sebastian_h/git-rtems-6
If you think that this is an error, set no_errcheck_out on the task instance
```

All what we have to do is to add a specially produced appstart.o to librtemsbsp.a.

Author: Trac Migrate 2020-09-15T18:08:01.000Z

Original author: sebastian.huber

- **Owner** set to Sebastian Huber <sebastian.huber@embedded-brains.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"9979042a3a40ab5e59ff06dae0fc229cd8bb0cc9/rtems" 9979042/rtems]:

```
build: Fix multiple defintion error for i386/pc386

Make the objcopy an bld.objects() task generator.

Close #4079.
```

3.9.1.741 4034 - Add rtems_interrupt_server_create() and rtems_interrupt_server_destroy() (cloned)

Id	4034
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-07-31T06:54:01.000Z
Updated	2020-09-14T07:00:08.000Z
Milestone	6.1
Labels	library, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4034
Merges	0

Original author: sebastian.huber

Cloned from #4033. In addition to the implementation add also unit tests.

Author: Trac Migrate 2020-08-01T09:56:10.000Z

Original author: sebastian.huber

- **Summary** changed from *Add rtems_interrupt_server_build() and rtems_interrupt_server_destroy() (cloned)* to *Add rtems_interrupt_server_create() and rtems_interrupt_server_destroy() (cloned)*

Author: Trac Migrate 2020-08-03T06:52:57.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"c60942ea5bd6c8973e1f81dd2674f753b2862839/rtems" c60942ea/rtems]:

```
rtems: Add rtems_interrupt_server_create()

Add rtems_interrupt_server_destroy().

Before this patch, the only way to create interrupt servers was
rtems_interrupt_server_initialize(). This function creates the default
interrupt server and in SMP configurations additional interrupt servers
for the additional processors. The interrupt server is heavily used by
libbsd. This includes the epoch based reclamation which performs time
consuming resource and memory deallocation work. This does not work well
with time critical services, for example an UART over SPI or I2C. One
approach to address this problem is to allow the application to create
custom interrupt servers with the right priority and task properties.
The interrupt server API accounted for this, however, it was not
implemented before this patch.

Close #4034.
```

Author: Trac Migrate 2020-08-03T06:55:28.000Z

Original author: sebastian.huber

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

Tests are pending.

Author: Trac Migrate 2020-09-14T07:00:08.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

In [changeset:"46477898205f1907734263a95e7dc61ad63a0f43/rtems" 46477898/rtems]:

```
irqs01/smpirqs01: New tests

Close #4034.
```

3.9.1.742 4076 - i386: bad asm in smp mode

Id	4076
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Created	2020-09-12T04:58:58.000Z
Updated	2020-09-12T15:13:14.000Z
Milestone	6.1
Labels	arch:i386, priority::normal, resolution::fixed, tickettype::defect, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4076
Merges	0

A note for me (or someone) to make the fix outlined on the mailing list.

> cpukit/score/cpu/i386/include/rtems/asm.h:157 movb imps_apic_cpu_map(REG),REG /* CPU ID in REG */ The assembler is right to complain. movb has to target one of the 1-byte mnemonics, so this should be %al for the LSB of %eax. One needs to check through this logic carefully, but I think the right thing to do here is: movzbl imps_apic_cpu_map(REG),REG That should do the trick. Can you test it locally?

Sure! Builds fine and testsuite testing reveals:

Author: Gedare Bloom 2020-09-12T14:26:07.000Z

- **Description** changed

```
 - A note for me (or someone) to make the fix outlined on the mailing␣
↪list, and apply to the 5 branch.
 ?                                                                    ␣
↪   ---------------------------

 + A note for me (or someone) to make the fix outlined on the mailing␣
↪list.
```

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```
5
6
7
8       cpukit/score/cpu/i386/include/rtems/asm.h:157 \ |md_0_160|\  movb
9       imps_apic_cpu_map(\\REG),\\REG \ |md_0_160|\  \ |md_0_160|\  \␣
↪|md_0_160|\  \ |md_0_160|\ /* CPU ID in REG */
10      The assembler is right to complain. movb has to target one of the
11      1-byte mnemonics, so this should be %al for the LSB of %eax. One␣
↪needs
12      to check through this logic carefully, but I think the right␣
↪thing to
13      do here is:
14      movzbl \ |md_0_160|\  \ |md_0_160|\  imps_apic_cpu_map(\\REG),\\
↪REG
15      That should do the trick. Can you test it locally?
16
17
18    Sure! Builds fine and testsuite testing reveals:
19
20 * **Milestone** changed from %"5.1" to %"6.1"
21 * **Version** changed from ~"5" to ~"6"
```

Author: Joel Sherrill 2020-09-12T14:55:37.000Z

This should be fixed on the 5 branch as well for safety.

Author: Trac Migrate 2020-09-12T15:13:14.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"9f096f47243ab19db617ec990188dbef71166e41/rtems" 9f096f4/rtems]:

```
1 i386/score: fix assembly mnemonic
2
3 Closes #4076.
```

3.9.1.743 4040 - coverhd.h remnants left to remove

Id	4040
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2020-08-03T19:00:38.000Z
Updated	2020-09-11T13:54:33.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::test, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4040
Merges	0

coverhd.h has been removed but there are as least two remnants to address:

- tmoverhd is not needed and still is present.
- (done) m68k/mcf52235/README references coverhd.h

```
$ grep -r coverhd ..
../rtems/bsps/m68k/mcf52235/README:*) Update the coverhd.h (calling overheads)␣
↪page 21 of the BSP guide
../rtems/bsps/m68k/mcf5225x/README:*) Update the coverhd.h (calling overheads)␣
↪page 21 of the BSP guide
```

Author: Trac Migrate 2020-09-10T16:42:28.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"e563e61c7aa22e87d5d0631011b80622be5b4557/rtems" e563e61/rtems]:

```
Remove remaining references to coverhd.h

Closes #4040.
```

Author: Joel Sherrill 2020-09-10T16:43:24.000Z

- **Description** changed

```
coverhd.h has been removed but there are as least two remnants to␣
↪address:

* tmoverhd is not needed and still is present.
- * m68k/mcf52235/README references coverhd.h
+ * (done) m68k/mcf52235/README references coverhd.h
?  +++++++
```

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```
{{{
$ grep -r coverhd ..
../rtems/bsps/m68k/mcf52235/README:*) Update the coverhd.h (calling overheads) page 21 of the BSP guide
../rtems/bsps/m68k/mcf5225x/README:*) Update the coverhd.h (calling overheads) page 21 of the BSP guide
}}}
```

- **Resolution** ~"fixed" deleted
- **Status** changed from *closed* to *reopened*

Author: Trac Migrate 2020-09-11T13:54:33.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *reopened* to *closed*

In [changeset:"5959b1e34c6ebd47cc75f4589091a39cdf7a6a57/rtems" 5959b1e/rtems]:

```
Remove tmoverhd which existed to produce the obsolete coverhd.h

Closes #4040.
```

3.9.1.744 4063 - Change to a simpler TFTP server for rtems-test

Id	4063
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2020-08-27T04:54:24.000Z
Updated	2020-08-31T23:18:16.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement, tool::test, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4063
Merges	0

Add a simpler TFTP server that can have multiple instances on different ports running at once. Allowing more than one TFTP server to run at once is the first step to letting `rtems-test` run parallel hardware test jobs if the user has more one piece of hardware available for testing. Parallel hardware testing will speed up the time it takes to run the tests on target hardware.

This feature combined with the `rtems-tftp-proxy` lets a standard bootloader configuration be integrated into a parallel hardware test set up.

Author: Trac Migrate 2020-08-31T23:18:16.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"eb3608133b41b9cb7b4dd55cb15d77691d2300c6/rtems-tools" eb36081/rtems-tools]:

```
tester: Change to a simpler TFTP server

- Add a simpler TFTP to allow parallel test hardware

- Remove the imported tftpy server

Closes #4063
```

3.9.1.745 4055 - bsps/xilinx-zynq: Flush TX-Buffer before initializing the zynq-uart

Id	4055
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-08-20T07:11:39.000Z
Updated	2020-08-22T07:30:22.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4055
Merges	1

Original author: soja

We experienced that u-boot (at least from Xilinx repositories) does not wait until all its output has left the TX Buffer of the stdout uart, before handing over to the RTEMS application

This causes some garbage output at the begin of the RTEMS application in some cases and corrupts the test begin marker prohibiting rtems-test to recognize the test correctly.

Proposed fix is to let RTEMS wait until the TX Buffer of the uart is empty before configuring and using it.

Author: Trac Migrate 2020-08-22T07:29:38.000Z

Original author: soja

- **Owner** set to Jan Sommer <jan.sommer@dlr.de>
- **Resolution** set to ~"fixed"

- **Status** changed from *new* to *closed*

In [changeset:"b87efa7599f33f56608da20567d77dbb06db98e1/rtems" b87efa7/rtems]:

```
bsp/xilinx-zynq: Flush TX-Buffer before initializing uart

Closes #4055
Closes #4056
```

Author: Trac Migrate 2020-08-22T07:30:22.000Z

Original author: soja

In [changeset:"61ccb9c05dcd695114541960aa6bfc1315f30514/rtems" 61ccb9c0/rtems]:

```
bsp/xilinx-zynq: Flush TX-Buffer before initializing uart

Closes #4055
Closes #4056
```

3.9.1.746 4061 - The reworked <rtems/confdefs.h> has a cyclic dependency with RTEMS_MULTIPROCESSING enabled (cloned)

Id	4061
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-08-21T06:47:39.000Z
Updated	2020-08-21T06:57:49.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, rtems::config, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4061
Merges	0

Original author: sebastian.huber

Cloned from #4060:

The changes for #3875 introduced a cyclic dependency between <rtems/confdefs/mpci.h> and <rtems/confdefs/threads.h>.

Author: Trac Migrate 2020-08-21T06:57:49.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"81efe37c35896362f2493d1fc81e26ca32444d81/rtems" 81efe37c/rtems]:

```
confdefs: Fix cyclic dependency

Close #4061.
```

3.9.1.747 3886 - Fail an RSB build with –mail option if a repo is not clean

Id	3886
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2020-02-27T22:40:21.000Z
Updated	2020-08-12T06:56:09.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::5, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3886
Merges	0

Fail a build if a user has the –mail option to post the build results and repo is not clean. Public postings of results with local changes has no public value. Users cannot replicate the results if changes are not publicaly available.

What about a repo that is clean but has changes that are not pushed?

Author: Gedare Bloom 2020-04-05T04:53:01.000Z

What about for users that want to mail their builds to a non-public destination?

Author: Gedare Bloom 2020-04-05T04:53:43.000Z

- **Milestone** changed from %"5.1" to %"6.1"
- **Version** changed from ~"5" to ~"6"

Author: Chris Johns 2020-08-12T06:56:09.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

Replying to Gedare Bloom:

> What about for users that want to mail their builds to a non-public destination?

> The user could make a local commit? If this does not matter then this ticket can be closed with `wontfix`.

3.9.1.748 4036 - Track dependency command for the RSB

Id	4036
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2020-08-01T00:01:59.000Z
Updated	2020-08-12T01:11:35.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::enhancement, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4036
Merges	0

Add a command to track dependencies in the RSB. Scan all the bset files and see what they include. Build a list of dependencies and also a list of those configs that are not referenced. The configs not references can be removed.

Errors in build sets can result in an invalid list so the scan needs to be clean. This is difficult when some build sets like `rtems-defaults.bset` are designed to be included and not used from the command line. As a result it generates an error. A list of these could be maintained or a tag added to the bset file to indicate it is not a top level build set file.

Removal of unreferenced configs can occur in the RBS because we use a branch model for releases.

> **Author:** Joel Sherrill 2020-08-01T00:19:53.000Z
>
> Is this going to result in a report that shows bsets and which source/patches they need?
>
> Is it going to be something like this?
>
> - bset
> - another bset
> - source package
> - diff1
>
> Or is the goal to look at a set of bsets and see what isn't needed?

> **Author:** Chris Johns 2020-08-01T02:51:05.000Z
>
> It could and yes the goal was to remove the config files not referenced. Up to now I was only looking at the list but the tree could be captured. This is nice addition.

A bset that is top level is difficult to remove because we do not know if it is being used.

Author: Chris Johns 2020-08-06T02:51:46.000Z

- **Owner** set to @chrisj
- **Status** changed from *new* to *assigned*

Joel, is this what you wanted?

```
Include Tree(s):
rtems/config/5/rtems-arm.bset
rtems/config/5/rtems-default.bset
bare/config/devel/expat-2.1.0-1.cfg
source-builder/config/base.cfg
source-builder/config/expat-2-1.cfg
rtems/config/5/rtems-autotools.bset
rtems/config/5/rtems-autotools-base.bset
rtems/config/rtems-base.bset
rtems/config/rtems-urls.bset
rtems/config/rtems-version.bset
rtems/config/tools/rtems-autoconf-2.69-1.cfg
bare/config/devel/autoconf-2.69-1.cfg
source-builder/config/autoconf-2-1.cfg
source-builder/config/base.cfg
source-builder/config/base.cfg
source-builder/config/checks.cfg
source-builder/config/versions.cfg
rtems/config/tools/rtems-automake-1.12.6-1.cfg
bare/config/devel/automake-1.12.6-1.cfg
source-builder/config/automake-1-1.cfg
source-builder/config/base.cfg
source-builder/config/base.cfg
source-builder/config/checks.cfg
source-builder/config/versions.cfg
rtems/config/5/rtems-autotools-internal.bset
rtems/config/5/rtems-autotools-base.bset
rtems/config/rtems-base.bset
rtems/config/rtems-urls.bset
rtems/config/rtems-version.bset
rtems/config/tools/rtems-autoconf-2.69-1.cfg
bare/config/devel/autoconf-2.69-1.cfg
source-builder/config/autoconf-2-1.cfg
source-builder/config/base.cfg
source-builder/config/base.cfg
source-builder/config/checks.cfg
source-builder/config/versions.cfg
rtems/config/tools/rtems-automake-1.12.6-1.cfg
bare/config/devel/automake-1.12.6-1.cfg
source-builder/config/automake-1-1.cfg
```

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```
source-builder/config/base.cfg
source-builder/config/base.cfg
source-builder/config/checks.cfg
source-builder/config/versions.cfg
rtems/config/rtems-base.bset
rtems/config/rtems-urls.bset
rtems/config/rtems-version.bset
rtems/config/tools/rtems-binutils-2.34.cfg
source-builder/config/base.cfg
source-builder/config/binutils-2-1.cfg
source-builder/config/checks.cfg
source-builder/config/checks.cfg
rtems/config/tools/rtems-gcc-7.5.0-newlib-7947581.cfg
source-builder/config/base.cfg
source-builder/config/checks.cfg
source-builder/config/gcc-7.2-1.cfg
source-builder/config/gcc-common-1.cfg
source-builder/config/checks.cfg
rtems/config/tools/rtems-gdb-9.1-1.cfg
source-builder/config/base.cfg
source-builder/config/checks.cfg
source-builder/config/gdb-common-1.cfg
source-builder/config/checks.cfg
rtems/config/tools/rtems-tools-5-1.cfg
rtems/config/tools/rtems-tools-common-1.cfg
```

Author: Trac Migrate 2020-08-10T23:03:11.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"12418190b984f3f94da08588276ef3d6440bd454/rtems-source-builder" 1241819/rtems-source-builder]:

```
sb/track: Add a command to track build sets.

- Process a build set for a range of hosts and output a dependency
tree, the used build set and configuration files.
- Output the configuration files that are no referenced

Closes #4036
```

Author: Trac Migrate 2020-08-12T01:11:35.000Z

In [changeset:"967999b99660dcb40f943da0e0da7791e764edbe/rtems-docs" 967999b/rtems-docs]:

```
user: Add the RSB sb-track command

Updates #4036
```

3.9.1.749 4046 - Remove RSB sb-bootstrap command

Id	4046
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2020-08-10T05:52:21.000Z
Updated	2020-08-12T01:11:29.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4046
Merges	0

Bootstrapping is going away with the new build system and until then the command in `rtems.git` should be used.

Author: Trac Migrate 2020-08-10T23:03:16.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"a863b15fdbbfc8af577d92ae6ed6d0b3c151e6cb/rtems-source-builder" a863b15/rtems-source-builder]:

```
sb/bootstrap: Remove the sb-bootstrap command

Closes #4046
```

Author: Trac Migrate 2020-08-12T01:11:29.000Z

In [changeset:"441d2e15f3566919eac29b0e1a22cb59a31051f9/rtems-docs" 441d2e1/rtems-docs]:

```
user, eclipse: Remove RSB sb-bootstrap command

Update #4046
```

3.9.1.750 4045 - Remove RSB sb-builder command

Id	4045
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2020-08-10T05:50:46.000Z
Updated	2020-08-12T01:11:27.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4045
Merges	0

This command is now always wrapped bu the set builder. There is no need to use the command line with configuration files.

Author: Trac Migrate 2020-08-10T23:03:14.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"481bbd11093b238afb6225f3f08a1ef513d0d042/rtems-source-builder" 481bbd1/rtems-source-builder]:

```
sb/builder: Remove sb-builder command

Closes #4045
```

Author: Trac Migrate 2020-08-12T01:11:27.000Z

In [changeset:"089f6197c7b666d4682282ef73dc8936668e5a4e/rtems-docs" 089f619/rtems-docs]:

```
user: Remove RSB sb-builder command

Updates #4045
```

3.9.1.751 4044 - Add RSB Track command

Id	4044
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Created	2020-08-10T05:45:40.000Z
Updated	2020-08-10T06:16:48.000Z
Milestone	6.1
Labels	priority::normal, resolution::duplicate, tickettype::defect, tool::rtems-source-builder, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4044
Merges	0

Add a comment to track the RSB build set and configuration files.

Author: Chris Johns 2020-08-10T06:16:48.000Z

- **Resolution** set to ~"duplicate"
- **Status** changed from *assigned* to *closed*

Duplicate of #4036.

3.9.1.752 4043 - Update software eng manual to rtems-central

Id	4043
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Trac Migrate
Created	2020-08-05T00:25:24.000Z
Updated	2020-08-07T04:43:48.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4043
Merges	0

https://docs.rtems.org/branches/master/eng/req/howto.html

Update to rtems-central

Author: Trac Migrate 2020-08-05T04:38:33.000Z

- **Owner** set to sebastian.huber
- **Status** changed from *new* to *assigned*

Author: Trac Migrate 2020-08-07T04:43:48.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"e2abac7f30aea2da423e745ec6be14f236f3eb03/rtems-docs" e2abac7/rtems-docs]:

```
eng: Refer to the rtems-central repository

Close #4043.
```

3.9.1.753 4039 - arm/atsam/SC16IS752: Make interrupt server configurable (cloned)

Id	4039
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-08-03T07:45:54.000Z
Updated	2020-08-05T05:01:10.000Z
Milestone	6.1
Labels	arch:arm, priority::normal, resolution::fixed, tickettype::enhancement, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4039
Merges	0

Original author: sebastian.huber

Cloned from #4038.

Author: Trac Migrate 2020-08-05T05:01:10.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

In [changeset:"1b42158588a90de815666f5924744d260cec70d7/rtems" 1b421585/rtems]:

```
arm/atsam: Make interrupt server configurable

The external UART over SPI device SC16IS752 uses the interrupt server
for interrupt processing. The interrupt server is also heavily used by
libbsd. The interrupt processing for the SC16IS752 is time critical and
doesn't work if network traffic is processed at the same priority.
With #4033 custom interrupt servers are available. Change
atsam_sc16is752_spi_create() to support user-defined interrupt servers.
Introduced atsam_sc16is752_spi_config to cut down the argument count of
this function.
```

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```
11
12 Close #4039.
```

3.9.1.754 4031 - i386: ISR can overwrite its own stack during system initialization (cloned)

Id	4031
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-07-22T12:38:21.000Z
Updated	2020-07-29T09:39:17.000Z
Milestone	6.1
Labels	arch:i386, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4031
Merges	0

Original author: soja

Cloned from #4030:

During testing the rtems-libbsd examples, we experienced GP exceptions from within the ISR from time to time during initalization.

When the init task is restored for the first time and the a pending interrupt is available, an ISR could overwrite its own return address if it is spawned between restoring the eflags register and restoring the esp register.

Author: Trac Migrate 2020-07-29T09:39:17.000Z

Original author: soja

- **Owner** set to Jan Sommer <jan.sommer@dlr.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"21c7e3a41f1590b18c2c3f883e2b63e36cc409aa/rtems" 21c7e3a/rtems]:

```
1 i386: Fix possible race condition on first context restore
2
3 Make sure that the esp is restored before the eflags register.
4
5 When the init task is initially restored, system interrupts are␣
  ↪activated when the
6 eflags register is loaded.
```

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```
If the esp register still points to an address in the interrupt stack
area (from early system initlization) the ISR might overwrite its own
stack.

Closes #4031
```

3.9.1.755 4029 - i386: SMP-System hangs with non-consecutive APIC IDs

Id	4029
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-07-15T15:48:17.000Z
Updated	2020-07-16T13:01:33.000Z
Milestone	6.1
Labels	arch:i386, priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4029
Merges	0

Original author: soja

If a processor enumerates its cores non-consecutively (e.g. 0,2,4,8 for a tested Intel Atom) the target cpu for IPIs is mapped wrongly.

Author: Trac Migrate 2020-07-16T13:01:33.000Z

Original author: soja

- **Owner** set to Jan Sommer <jan.sommer@dlr.de>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"9cb107c97002f9ad5944740e1bf645ab136099e1/rtems" 9cb107c9/rtems]:

```
bsps/pc386: Fix IPI for non-consecutive APICIDs

- properly use the cpu <-> apic maps for IPIs

Closes #4029.
```

3.9.1.756 3941 - Remove epiphany architecture support

Id	3941
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2020-04-08T10:09:05.000Z
Updated	2020-07-07T13:01:53.000Z
Milestone	6.1
Labels	arch:epiphany, priority::normal, resolution::fixed, tickettype::task, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3941
Merges	0

Original author: sebastian.huber

I tried to build the epiphany BSP with GCC 10 recently and a lot internal compiler errors appeared. If it is not possible to build the BSP with a released GCC 10.1, then I suggest to remove this architecture. The GDB was never supported by the FSF upstream. To me this looks like an unmaintained architecture.

Author: Trac Migrate 2020-04-08T10:19:55.000Z

Original author: sebastian.huber

I think the development of the Ephipany architecture and its toolchain is already seized. In this case, yes I agree it should be deleted.

Author: Trac Migrate 2020-04-08T10:21:31.000Z

Original author: sebastian.huber

Ok, good. You can still use RTEMS 5 for it. If necessary, the port can be resurrected from this release.

Author: Joel Sherrill 2020-04-08T12:07:31.000Z

Original author: sebastian.huber

You can't build rtems5 for epiphany. Mongoose.c has long caused an ICE. GCC has just gotten worse. Removing it after the release is ok by me.

Author: Trac Migrate 2020-07-05T16:05:54.000Z

Original author: sebastian.huber

In [changeset:"401b237f9349362b40e3c08f7fd8db38fc51c5d4/rtems" 401b237/rtems]:

```
epiphany: Remove support for this target

Due to an unmaintained toolchain (internal errors in GCC, no FSF GDB
integration) the Epiphany architecture was obsoleted in RTEMS 5.1.

Update #3941.
```

Author: Trac Migrate 2020-07-05T16:06:19.000Z

Original author: sebastian.huber

In [changeset:"2df6f90d4b3a8d626ffe82c0b13a81f8bc1d4e1f/rtems-docs" 2df6f90/rtems-docs]:

```
Reflect removal of the epiphany target

Update #3941.
```

Author: Trac Migrate 2020-07-05T16:06:39.000Z

Original author: sebastian.huber

In [changeset:"dcceeade33a86c103cc7a8ee9ba6a9fc91d9f103/rtems-tools" dcceead/rtems-tools]:

```
Remove support for epiphany target

Update #3941.
```

Author: Trac Migrate 2020-07-05T16:07:55.000Z

Original author: sebastian.huber

In [changeset:"7f79fe90262aff88f1c3ef22e1d4cc586490a59b/rtems-source-builder" 7f79fe9/rtems-source-builder]:

```
6/7: Remove support for epiphany target

Update #3941.
```

Author: Trac Migrate 2020-07-05T18:46:17.000Z

Original author: sebastian.huber

In [changeset:"d76e7c19750688dddb9a68e30ec0be7a128907e8/rtems" d76e7c1/rtems]:

```
build: Fix RTEMS_CHECK_NETWORKING

Update #3941.
```

Author: Trac Migrate	2020-07-07T13:01:53.000Z

Original author: sebastian.huber

- **Resolution** set to ~"fixed"
- **Status** changed from *assigned* to *closed*

I updated also the release notes.

3.9.1.757 4018 - libcpusupport: Architecture defines are present outside CPU port

Id	4018
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Trac Migrate
Created	2020-06-29T15:29:40.000Z
Updated	2020-06-30T15:39:32.000Z
Milestone	6.1
Labels	priority::normal, resolution::fixed, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/4018
Merges	0

The handler code for global constructors (threadhandler.c) and destructors (newlibc_exit.c) uses compiler-provided architecture defines which should be limited to the CPU port as they are in other locations.

Author: Trac Migrate	2020-06-30T07:46:41.000Z

- **Owner** set to Kinsey Moore <kinsey.moore@oarcorp.com>
- **Resolution** set to ~"fixed"
- **Status** changed from *new* to *closed*

In [changeset:"48dd7b8c2ef7056ff4730c378ccd7e9445b5e40f/rtems" 48dd7b8c/rtems]:

```
score: Add CPU_USE_LIBC_INIT_FINI_ARRAY

This introduces the CPU_USE_LIBC_INIT_FINI_ARRAY define for use by CPU
ports to determine which global constructor and destructor methods are
used instead of placing architecture defines where they shouldn't be.

Close #4018
```

Author: Joel Sherrill 2020-06-30T13:43:29.000Z

Should this go on 5.x as well as 6?

Author: Kinsey Moore 2020-06-30T14:32:47.000Z

It could, but it doesn't actually cause a bug. It's just a style deficiency making new ports harder.

Author: Trac Migrate 2020-06-30T15:39:32.000Z

In [changeset:"3c78e93c959e3cc9d0fe47ce3eaccc2814367356/rtems" 3c78e93/rtems]:

```
score: Clarify CPU_USE_LIBC_INIT_FINI_ARRAY option

Update #4018.
```

3.9.1.758 3962 - Licensing Requirements for Submissions Poorly Documented

Id	3962
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Gedare Bloom
Created	2020-04-20T18:32:47.000Z
Updated	2020-05-01T16:12:46.000Z
Milestone	6.1
Labels	priority::high, resolution::fixed, tickettype::defect, version::5
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/3962
Merges	0

The discussion of licensing for code/docs in RTEMS is a bit of a mess right now. After posting this issue to the mailing list (https://lists.rtems.org/pipermail/devel/2020-April/059489.html), Sebastian pointed out where the actual recommended text for code/docs was located.

SW Engineering Guide sections 6.3.1.2 (Licenses) and 11 (Licensing Requirements) are somewhat overlapping and duplicative. In addition, Gedare's old blog http://gedare-csphd.blogspot.com/2013/05/software-licenses-with-rtems.html is still a decent discussion of the underlying issues and goals even though we have moved to BSD-2 and Creative Commons for documentation since he wrote that in 2013.

The above references just describe the rationale and cite the licenses. For an example of what to put in the code, you have to visit https://docs.rtems.org/branches/master/eng/coding-file-hdr.html#copyright-and-license-block

I **THINK** a good solution would be to reference the Chapter 11 Licensing Requirements from the Coding Conventions chapter. And incorporate an updated version of Gedare's blog text.

Author: Chris Johns 2020-04-26T23:30:12.000Z

Is this being worked on for the RTEMS 5 release?

Author: Trac Migrate 2020-04-27T12:14:01.000Z

Yes, this needs to be fixed, however, it is not release critical from my point of view. This stuff is important for new contributors and they should focus on the master. I would move the milestone to 6.1.

Author: Gedare Bloom 2020-04-30T03:36:35.000Z

- **Milestone** changed from %"5.1" to %"6.1"
- **Owner** set to @gedare
- **Status** changed from *new* to *accepted*

Author: Trac Migrate 2020-05-01T16:12:46.000Z

- **Resolution** set to ~"fixed"
- **Status** changed from *accepted* to *closed*

In [changeset:"2d22d7453d56e9558a11a8f80a3f139018df2da8/rtems-docs" 2d22d74/rtems-docs]:

```
Rework RTEMS licensing discussions.

This now captures historical rationale along with cross-linking
code templates with license guidelines.

Closes #3962.
```

3.9.1.759 2269 - x86 Context Switch Synchronization and SMP

Id	2269
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Trac Migrate
Created	2015-02-13T21:02:35.000Z
Updated	2017-11-09T06:26:42.000Z
Milestone	6.1
Labels	priority::normal, resolution::duplicate, rtems::score, tickettype::defect, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2269
Merges	0

The x86 context switch code does not implement the “is executing” hand-off protocol used on the other ports. It should.

Author: Trac Migrate 2015-02-13T21:05:44.000Z

- **Resolution** set to ~”duplicate”
- **Status** changed from *new* to *closed*

https://devel.rtems.org/ticket/2183

How can we set the duplicate like on Bugzilla?

Author: Trac Migrate 2017-11-09T06:26:42.000Z

- **Milestone** changed from %”5.0” to %”6.1”

Milestone renamed

3.9.1.760 2215 - Duplicate code for TAR support

Id	2215
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2014-12-11T07:21:49.000Z
Updated	2017-11-09T06:26:42.000Z
Milestone	6.1
Labels	filesystem, priority::normal, resolution::duplicate, tickettype::defect, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2215
Merges	0

Original author: sebastian.huber

We have similar code in rtems_tarfs_load(), Untar_FromMemory() and Untar_FromFile(). These functions should instead use a common TAR archive iterator with specific visitor functions.

Author: Chris Johns 2016-05-15T23:09:35.000Z

Original author: sebastian.huber

- **Resolution** set to ~”duplicate”
- **Status** changed from *new* to *closed*

Duplicate of #2415.

Author: Trac Migrate 2017-11-09T06:26:42.000Z

Original author: sebastian.huber

- **Milestone** changed from %”5.0” to %”6.1”

Milestone renamed

3.9.1.761 2114 - statvfs for MS-DOS filesystem and ‘df’ coomand for shell

Id	2114
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Chris Johns
Created	2013-04-08T19:17:41.000Z
Updated	2017-11-09T06:26:42.000Z
Milestone	6.1
Labels	filesystem, priority::low, priority::normal, resolution::invalid, ticket-type::defect, version::4.11, version::HEAD
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2114
Merges	0

Original author: nopscmn

I need statvfs for MS-DOS filesystem in my project. Share implementation and example shell command ‘df’ - like in GNU coreutils, but very simplified.

- msdos_statvfs.patch

Author: Trac Migrate	2013-04-08T19:17:41.000Z

Original author: nopscmn

- **Attachment** msdos_statvfs.patch added

statvfs for MS-DOS

Author: Trac Migrate	2013-04-10T14:22:45.000Z

Original author: nopscmn

- **Cc** added @sebastian.huber

Can you please add a proper license header to all new files. Please send patches to <rtems-devel@rtems.org>. It would be good to have a test case for the new feature. Please have a look at

http://git.rtems.org/rtems/tree/testsuites/fstests/fsdosfssync01/init.c

for an example test.

Author: Gedare Bloom	2014-11-24T18:58:28.000Z

Original author: nopscmn

- **Version** changed from ~"HEAD" to ~"4.11"

Replace Version=HEAD with Version=4.11 for the tickets with Milestone >= 4.11

Author: Trac Migrate 2014-12-18T12:26:56.000Z

Original author: nopscmn

- **Milestone** changed from %"4.11" to %"5.0"
- **Priority** changed from ~"normal" to ~"low"

Author: Chris Johns 2017-08-14T00:40:48.000Z

Original author: nopscmn

- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*

No activity.

Author: Trac Migrate 2017-11-09T06:26:42.000Z

Original author: nopscmn

- **Milestone** changed from %"5.0" to %"6.1"

Milestone renamed

3.9.1.762 2111 - AVR needs avr-libc to compile RTEMS.

Id	2111
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2013-04-03T03:46:56.000Z
Updated	2017-11-09T06:26:42.000Z
Milestone	6.1
Labels	cpukit, priority::normal, resolution::invalid, rtems::config, ticket-type::defect, version::4.11
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2111
Merges	0

Original author: cynt6007

The avr io.h header gives a warning that if not doing avr-libc, that if not heeded leads to many errors.

Need an avr-libc configuration file... should be a place-holding stub that states this is a problematic build.

Anyway, these are just some cans of worms... FYI

AVR has issues so deep it requires ~50 patches for binutils, ~60 patches for gcc, and has ~14 patches for avr-libc.

I suspect getting ONE functional AVR-RTEMS a major undertaking... I wonder if it might be worth exploring using ATMEL's prepatched toolchain for non-Ada builds... For Ada-builds, that's going to be another major undertaking...

Eric Weddington (at ATMEL) is recommending the use of their source for C, C++ builds... http://distribute.atmel.no/tools/opensource/Atmel-AVR-Toolchain-3.4.1/avr/

Although the Rolf Ebert (at AVR-Ada) have their own patch-set (using different tool versions) etc, which is making updating the AVR port so challenging... http://sourceforge.net/projects/avr-ada/files/avr-ada/Source%20Dist/

Their source-builder is located at: avr-ada/tools/build/build-avr-ada.sh

Author: Joel Sherrill 2013-04-12T23:16:03.000Z

Original author: cynt6007

- **Cc** added @ralf.corsepius
- **Cc** added @@gedare
- **Cc** added @@joel

Replying to comment:14:

> ... gcc won't build without a libc... (complains about 'limits.h') gcc-4.8.0 has an internal compiler error with avr-libc, and newlib is too big for AVR, so going back to gcc-4.7.2 with avr-libc... avr community maintains non-rtems targets, so using an avr target (as opposed to avr-rtems4.11)
>
> This is OK. The avr GCC community needs to know this so they can decide what to do. Unfortunately as much as we would like all targets to upgrade in lockstep, it doesn't happen. We would need a more aggressive testing program to know this as early as possible and attempt to fix an issue. And we could still end up in this situation.

Author: Gedare Bloom 2014-11-22T13:14:06.000Z

Original author: cynt6007

- **Description** changed

```
1 The avr io.h header gives a warning that if not doing avr-libc, that if␣
  ↪not heeded leads to many errors.
2 -
3 Need an avr-libc configuration file... should be a place-holding stub␣
  ↪that states this is a problematic build.
4 -
5 Anyway, these are just some cans of worms... FYI
```

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```
-
AVR has issues so deep it requires ~50 patches for binutils, ~60 patches for gcc, and has ~14 patches for avr-libc.
-
I suspect getting ONE functional AVR-RTEMS a major undertaking... I wonder if it might be worth exploring using ATMEL's prepatched toolchain for non-Ada builds... For Ada-builds, that's going to be another major undertaking...
-
Eric Weddington (at ATMEL) is recommending the use of their source for C, C++ builds...
http://distribute.atmel.no/tools/opensource/Atmel-AVR-Toolchain-3.4.1/avr/
-
Although the Rolf Ebert (at AVR-Ada) have their own patch-set (using different tool versions) etc, which is making updating the AVR port so challenging...
http://sourceforge.net/projects/avr-ada/files/avr-ada/Source%20Dist/
-
- Their source-builder is located at:
?                                       -

+ Their source-builder is located at:
avr-ada/tools/build/build-avr-ada.sh
```

- **Milestone** set to %”5.0”

Author: Gedare Bloom 2014-11-22T13:14:56.000Z

Original author: cynt6007

- **Owner** set to @joel
- **Status** changed from *new* to *assigned*

Author: Joel Sherrill 2014-11-22T16:12:07.000Z

Original author: cynt6007

- **Resolution** set to ~”invalid”
- **Status** changed from *assigned* to *closed*

Author: Trac Migrate 2017-11-09T06:26:42.000Z

Original author: cynt6007

- **Milestone** changed from %”5.0” to %”6.1”

Milestone renamed

3.9.1.763 2071 - The object-file suffixes for default-bsp-post-link in leaf.cfg don't work with make-exe...

Id	2071
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Trac Migrate
Created	2012-06-21T16:26:35.000Z
Updated	2017-11-09T06:26:42.000Z
Milestone	6.1
Labels	priority::normal, resolution::wontfix, rtems::build, tickettype::defect, version::4.11, version::HEAD
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/2071
Merges	0

Original author: cynt6007

Would it be proper to change the suffix of the input in default-bsp-post-link in rtems/make/leaf.cfg ?

Namely changing:

define default-bsp-post-link * $(NM) -g -n $@ > $(basename $@).num * $(SIZE) $@ endef

define default-bsp-post-link + $(NM) -g -n $@.o > $(basename $@).num + $(SIZE) $@.o endef

I'm working on the application side of RTEMS (as opposed to the source), but here are the errors I encountered, what I did to find the problem, and the results.

I kept getting errors when I ran the BuildTests.sh...

~/rtems-addon-packages/examples/openldap$ ... i386-rtems4.11-nm o-optimize/slapd-addel i386-rtems4.11-nm: 'o-optimize/slapd-addel': No such file ... ~/rtems-addon-packages/examples/openldap$ ... i386-rtems4.11-size o-optimize/slapd-addel i386-rtems4.11-size: 'o-optimize/slapd-addel': No such file

After looking at the Makefile it looks like they were called by: make-exe.

Doing grep -r make-exe /opt revealed make-exe is defined in /opt/rtems-4.11/make/leaf.cfg, which calls bsp-post-link, (which is exactly the stage of the build process giving errors).

According to man, nm and size work on object files. So, I changed the suffixes in /opt/rtems-4.11/make/leaf.cfg and the errors went away. After making the change, the following additional objects appeared in o-optimize:

*.bin and *.ralf, with an approximate size of 570,000. The sizes vary slightly...

If changing the suffixes in /opt/rtems-4.11/make/leaf.cfg makes sense, would it make sense to change them for rtems/make/leaf.cfg ? Also, there are other target.cfg's in the different bsp s that may have similar problems.

Thanks, Cynthia Rempel

Author: Trac Migrate 2012-06-21T16:26:35.000Z

Original author: cynt6007

Would it be proper to change the suffix of the input in default-bsp-post-link in rtems/make/leaf.cfg ?

Namely changing:

define default-bsp-post-link * $(NM) -g -n $@ > $(basename $@).num * $(SIZE) $@ endef

define default-bsp-post-link + $(NM) -g -n $@.o > $(basename $@).num + $(SIZE) $@.o endef

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Thanks, Cynthia Rempel

Author: Gedare Bloom 2014-11-24T18:58:28.000Z

Original author: cynt6007

- **Version** changed from ~"HEAD" to ~"4.11"

Replace Version=HEAD with Version=4.11 for the tickets with Milestone >= 4.11

Author: Trac Migrate 2014-12-18T11:14:45.000Z

Original author: cynt6007

Original author: sebastian.huber

- **Description** changed

```
Would it be proper to change the suffix of the input in default-bsp-post-link in rtems/make/leaf.cfg ?

Namely changing:

define default-bsp-post-link
-       $(NM) -g -n $@ > $(basename $@).num
-       $(SIZE) $@
endef

define default-bsp-post-link
+       $(NM) -g -n $@.o > $(basename $@).num
+       $(SIZE) $@.o
endef

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I kept getting errors when I ran the BuildTests.sh...

~/rtems-addon-packages/examples/openldap$
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i386-rtems4.11-nm o-optimize/slapd-addel
i386-rtems4.11-nm: 'o-optimize/slapd-addel': No such file
...
~/rtems-addon-packages/examples/openldap$
...
i386-rtems4.11-size o-optimize/slapd-addel
i386-rtems4.11-size: 'o-optimize/slapd-addel': No such file



After looking at the Makefile it looks like they were called by: \ |md_0_65533|\ make-exe\ |md_0_65533|\ .

Doing
grep -r \ |md_0_65533|\ make-exe\ |md_0_65533|\  /opt
revealed \ |md_0_65533|\ make-exe\ |md_0_65533|\  is defined in /opt/rtems-4.11/make/leaf.cfg, which calls bsp-post-link, (which is exactly the stage of the build process giving errors).

According to man, nm and size work on object files.  So, I changed the suffixes in /opt/rtems-4.11/make/leaf.cfg and the errors went away.  After making the change, the following additional objects appeared in o-optimize:

*.bin and *.ralf, with an approximate size of 570,000.  The sizes vary slightly...

```

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```
If changing the suffixes in /opt/rtems-4.11/make/leaf.cfg makes sense,␣
↪would it make sense to change them for rtems/make/leaf.cfg ?  Also,␣
↪there are other target.cfg's in the different bsp s that may have␣
↪similar problems.

Thanks,
Cynthia Rempel
```

- **Milestone** changed from %”4.11” to %”5.0”

Author: Chris Johns	2017-08-13T23:41:42.000Z

Original author: cynt6007

- **Resolution** set to ~”wontfix”
- **Status** changed from *new* to *closed*

Author: Trac Migrate	2017-11-09T06:26:42.000Z

Original author: cynt6007

- **Milestone** changed from %”5.0” to %”6.1”

Milestone renamed

3.9.1.764 1820 - sptests/sp36: Improper buildsystem integration

Id	1820
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2011-06-20T05:59:36.000Z
Updated	2017-11-09T06:26:42.000Z
Milestone	6.1
Labels	priority::low, priority::normal, resolution::wontfix, rtems::testing, ticket-type::defect, version::4.11, version::HEAD
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/1820
Merges	0

Original author: ralf.corsepius

sptests/sp36 is improperly integrated into the rtems buildsystem.

sp36 is missing from SUBDIRS in sptests/Makefile.am, but is referenced in sptests/configure.ac, as well as the code is present in sp36/

sp36/ either should be activated (== added to SUBDIRS) or be fully removed.

Author: Trac Migrate 2011-06-20T05:59:36.000Z

Original author: ralf.corsepius

sptests/sp36 is improperly integrated into the rtems buildsystem.

sp36 is missing from SUBDIRS in sptests/Makefile.am, but is referenced in sptests/configure.ac, as well as the code is present in sp36/

sp36/ either should be activated (== added to SUBDIRS) or be fully removed.

Author: Gedare Bloom 2014-11-24T18:58:28.000Z

Original author: ralf.corsepius

- **Version** changed from ~"HEAD" to ~"4.11"

Replace Version=HEAD with Version=4.11 for the tickets with Milestone >= 4.11

Author: Trac Migrate 2014-12-18T10:15:27.000Z

Original author: ralf.corsepius

Original author: sebastian.huber

- **Description** changed

```
sptests/sp36 is improperly integrated into the rtems buildsystem.

sp36 is missing from SUBDIRS in sptests/Makefile.am, but is referenced in sptests/configure.ac, as well as the code is present in sp36/

sp36/ either should be activated (== added to SUBDIRS) or be fully removed.
```

- **Milestone** changed from %"4.11" to %"5.0"
- **Priority** changed from ~"normal" to ~"low"

Author: Chris Johns 2017-08-14T00:32:35.000Z

Original author: ralf.corsepius

- **Resolution** set to ~"wontfix"
- **Status** changed from *new* to *closed*

Author: Trac Migrate 2017-11-09T06:26:42.000Z

Original author: ralf.corsepius

- **Milestone** changed from %"5.0" to %"6.1"

Milestone renamed

3.9.1.765 1815 - _ISR_Nest_level should be protected with interrupts disabled in function _Watchdog_Insert

Id	1815
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2011-06-15T15:20:17.000Z
Updated	2017-11-09T06:26:42.000Z
Milestone	6.1
Labels	priority::normal, resolution::invalid, rtems::score, tickettype::defect, version::4.11, version::HEAD
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/1815
Merges	0

Original author: silvah15

_ISR_Nest_level should be protected with interrupts disabled in function _Watchdog_Insert, because another interrupt can occur after _ISR_Nest_level is saved, causing inconsistency in the global variable.

Author: Trac Migrate 2011-06-16T09:35:16.000Z

Original author: silvah15

Yes, by swapping those 2 lines.

Author: Joel Sherrill 2014-11-24T14:59:19.000Z

Original author: silvah15

- **Description** changed

```
_ISR_Nest_level should be protected with interrupts disabled in function
_Watchdog_Insert, because another interrupt can occur after _ISR_Nest_
↪level is
saved, causing inconsistency in the global variable.
```

Was this fixed?

Author: Gedare Bloom 2014-11-24T18:58:28.000Z

Original author: silvah15

- **Version** changed from ~"HEAD" to ~"4.11"

Replace Version=HEAD with Version=4.11 for the tickets with Milestone >= 4.11

Author: Trac Migrate 2014-12-18T10:11:08.000Z

Original author: silvah15

Original author: sebastian.huber

- **Description** changed

```
_ISR_Nest_level should be protected with interrupts disabled in function
_Watchdog_Insert, because another interrupt can occur after _ISR_Nest_
↪level is
saved, causing inconsistency in the global variable.
```

- **Milestone** changed from %"4.11" to %"5.0"

I am not sure what the problem is. Interrupts are nested, so the code looks all right to me.

For SMP we have to re-write the watchdog stuff anyway and the _Watchdog_Sync_level and _Watchdog_Sync_count will go away.

Author: Trac Migrate 2016-01-05T10:41:38.000Z

Original author: silvah15

- **Resolution** set to ~"invalid"
- **Status** changed from *new* to *closed*

There is no problem in pre 4.11 versions, since interrupts are nested. Version 4.11 and later use a different watchdog handler implementation.

Author: Trac Migrate 2017-11-09T06:26:42.000Z

Original author: silvah15

- **Milestone** changed from %"5.0" to %"6.1"

Milestone renamed

3.9.1.766 1728 - Patch for RTEMS-BSP m68k/mcf5225x

Id	1728
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2010-12-22T08:12:53.000Z
Updated	2017-11-09T06:26:42.000Z
Milestone	6.1
Labels	bsp, priority::low, priority::normal, resolution::invalid, ticket-type::enhancement, version::4.9
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/1728
Merges	0

Original author: m.presulli

This patch is based on a “clean” RTEMS 4.9.4 and offers some modifications/enhancements for the BSP.

- Generic Exception Handler can be used instead of _uhoh
- Flash Driver for the onboard flash including flash security
- DMA initializations can be used to substitute the whole termios, so we saved

alot of code/memory size

- Bugfixes in fec for the lwip-port, the fec driver works now “optimized” with the lwip-port
- RTC driver routines which configures the RTC clock and time
- generic software trap handler capable of return values
- Bugfix in “old” bsp with MASKALL_BIT when use RTEMS without console
- bugfixes and extensions in bsp header file “mcf5225x.h”
- generic dbg_printk() which prints debug outputs directly via a dma channel

I hope someone have the time to merge it into the CVS head, it shouldn’t be a real task i think.

- rtems-4.9.4_embed-it-part-0.patch.bz2
- rtems-4.9.4_embed-it-part-1.patch.bz2

Author: Trac Migrate 2010-12-22T08:12:53.000Z

Original author: m.presulli

This patch is based on a “clean” RTEMS 4.9.4 and offers some modifications/enhancements for the BSP.

- Generic Exception Handler can be used instead of _uhoh
- Flash Driver for the onboard flash including flash security
- DMA initializations can be used to substitute the whole termios, so we saved

alot of code/memory size

- Bugfixes in fec for the lwip-port, the fec driver works now “optimized” with the lwip-port
- RTC driver routines which configures the RTC clock and time
- generic software trap handler capable of return values
- Bugfix in “old” bsp with MASKALL_BIT when use RTEMS without console
- bugfixes and extensions in bsp header file “mcf5225x.h”
- generic dbg_printk() which prints debug outputs directly via a dma channel

I hope someone have the time to merge it into the CVS head, it shouldn’t be a real task i think.

Author: Trac Migrate 2014-12-18T09:26:44.000Z

Original author: m.presulli

Original author: sebastian.huber

- **Description** changed

```
This patch is based on a "clean" RTEMS 4.9.4 and offers some modifications/enhancements for the BSP.

* Generic Exception Handler can be used instead of _uhoh

* Flash Driver for the onboard flash including flash security

* DMA initializations can be used to substitute the whole termios, so we saved
alot of code/memory size

* Bugfixes in fec for the lwip-port, the fec driver works now "optimized" with the lwip-port

* RTC driver routines which configures the RTC clock and time

* generic software trap handler capable of return values

* Bugfix in "old" bsp with MASKALL_BIT when use RTEMS without console

* bugfixes and extensions in bsp header file "mcf5225x.h"

* generic dbg_printk() which prints debug outputs directly via a dma channel

I hope someone have the time to merge it into the CVS head, it shouldn't be
a real task i think.
```

- **Milestone** changed from %”4.11” to %”5.0”
- **Priority** changed from ~”normal” to ~”low”

Patch is missing.

Author: Amar Takhar 2014-12-19T13:21:12.000Z

Original author: m.presulli

I looked in the Bugzilla DB and could not find a patch this is not a migration issue.

Author: Amar Takhar 2014-12-19T13:22:56.000Z

Original author: m.presulli

Also:

<m.presulli@XXX>: host aspmx.l.google.com[74.125.129.27] said: 550 5.2.1 The email account that you tried to reach is disabled. i1si14392786pdk.67 - gsmtp (in reply to RCPT TO command)

We should either close the ticket or find another way to contact the submitter.

Author: Amar Takhar 2014-12-19T13:44:25.000Z

Original author: m.presulli

- **Resolution** set to ~”invalid”
- **Status** changed from *new* to *closed*

Closing as we cannot get ahold of the original submitter and do not have a patch. If anyone has a copy please attach it to the ticket.

Author: Trac Migrate 2016-06-28T12:49:33.000Z

Original author: m.presulli

- **Attachment** rtems-4.9.4_embed-it-part-0.patch.bz2 added

Patch part 0

Author: Trac Migrate 2016-06-28T12:49:45.000Z

Original author: m.presulli

- **Attachment** rtems-4.9.4_embed-it-part-1.patch.bz2 added

Patch part 1

Author: Trac Migrate 2016-06-28T12:50:13.000Z

Original author: m.presulli

Add patches received by mail for reference.

Author: Trac Migrate	2017-11-09T06:26:42.000Z

Original author: m.presulli

- **Milestone** changed from %”5.0” to %”6.1”

Milestone renamed

3.9.1.767 1593 - RTEMS Sequenced Initialization API

Id	1593
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2010-06-27T03:54:42.000Z
Updated	2017-11-09T06:26:42.000Z
Milestone	6.1
Labels	priority::normal, resolution::wontfix, rtems::score, tickettype::defect, tickettype::enhancement, version::4.11, version::HEAD
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/1593
Merges	0

Original author: 157724595

This is a part of GSOC2010 project RTEMS Sequenced Initialization. The attachment is the implement of RTEMS Sequenced Initialization API. More details are placed on the wiki http://www.rtems.com/wiki/index.php/RTEMSSequencedInitialization.

- rtems_sysinit_size_compare.patch
- rtems_sysinit_size_compare_PR2.patch
- rtems_sysinit_size_compare_new.patch
- sequence_api_test.patch
- sequenced_initilization_api.patch
- sequenced_initilization_api_and_test.patch
- sis_bsp.patch
- sis_bsp_v1.patch
- sysinit_BSP.patch
- sysinit_api.patch
- sysinit_api_v1.patch
- sysinit_testcase.patch
- sysinit_testcase_v1.patch

- sysinit_testcase_v2.patch
- sysinit_update_managers.patch
- sysinit_update_managers_v1.patch

Author: Trac Migrate 2010-06-28T16:19:41.000Z

Original author: 157724595

- **Attachment** sequenced_initilization_api.patch added

the implement of rtems sequenced initilization api

Author: Trac Migrate 2010-07-04T10:46:45.000Z

Original author: 157724595

- **Attachment** sequenced_initilization_api_and_test.patch added

Add a test case for sequenced initialization api update the api code

Author: Trac Migrate 2010-07-06T13:37:23.000Z

Original author: 157724595

- **Attachment** sequence_api_test.patch added

modify the patch of sequence sysinit api and test case code

Author: Trac Migrate 2010-07-18T15:20:49.000Z

Original author: 157724595

- **Attachment** rtems_sysinit_size_compare.patch added

The patch of updating RTEMS initialise managers API wiht sysinit api

Author: Trac Migrate 2010-07-21T14:49:00.000Z

Original author: 157724595

- **Attachment** rtems_sysinit_size_compare_PR2.patch added

The patch of updating RTEMS initialise managers API wiht sysinit api(new)

Author: Trac Migrate 2010-07-21T14:52:13.000Z

Original author: 157724595

- **Attachment** sis_bsp.patch added

patch for SIS bsp changers

Author: Trac Migrate 2010-07-23T14:52:26.000Z

Original author: 157724595

- **Attachment** rtems_sysinit_size_compare_new.patch added

The patch of updating RTEMS initialise managers API wiht sysinit api

Author: Trac Migrate 2010-07-23T14:57:22.000Z

Original author: 157724595

- **Attachment** sis_bsp_v1.patch added

patch for SIS bsp changers

Author: Trac Migrate 2010-07-27T14:10:56.000Z

Original author: 157724595

- **Attachment** sysinit_api.patch added

the implement of rtems sysinit api

Author: Trac Migrate 2010-07-27T14:12:09.000Z

Original author: 157724595

- **Attachment** sysinit_testcase.patch added

The test case for sysinit API

Author: Trac Migrate 2010-07-27T14:13:37.000Z

Original author: 157724595

- **Attachment** sysinit_update_managers.patch added

Update RTEMS initialization managers with sysinit API

Author: Trac Migrate 2010-07-27T14:17:05.000Z

Original author: 157724595

- **Attachment** sysinit_testcase_v1.patch added

The test case for sysinit API

Author: Trac Migrate 2010-08-09T15:39:10.000Z

Original author: 157724595

- **Attachment** sysinit_BSP.patch added

patch for SIS bsp changers

Author: Trac Migrate 2010-08-09T15:40:09.000Z

Original author: 157724595

- **Attachment** sysinit_api_v1.patch added

the implement of rtems sysinit api

Author: Trac Migrate 2010-08-09T15:40:42.000Z

Original author: 157724595

- **Attachment** sysinit_update_managers_v1.patch added

Update RTEMS initialization managers with sysinit API

Author: Trac Migrate 2010-08-09T15:41:21.000Z

Original author: 157724595

- **Attachment** sysinit_testcase_v2.patch added

The test case for sysinit API

Author: Trac Migrate 2010-08-11T13:43:31.000Z

Original author: 157724595

It is possible to include files within the SECTIONS scope in linker command files. We can use this to reduce the amount of copy & paste inside the linker command files. Example:

.rodata : { *(.rodata .rodata.* .gnu.linkonce.r.*) INCLUDE linkcmds_score_rodata }

We can use this also for the “Special FreeBSD sysctl sections”.

Author: Joel Sherrill 2014-11-23T16:48:07.000Z

Original author: 157724595

- **Description** changed

```
1 This is a part of GSOC2010 project RTEMS Sequenced Initialization. The␣
  ↪attachment is the implement of RTEMS Sequenced Initialization API.␣
  ↪More details
2 are placed on the wiki http://www.rtems.com/wiki/index.php/
  ↪RTEMSSequencedInitialization.
```

Author: Gedare Bloom 2014-11-24T18:58:28.000Z

Original author: 157724595

- **Version** changed from ~"HEAD" to ~"4.11"

Replace Version=HEAD with Version=4.11 for the tickets with Milestone >= 4.11

Author: Trac Migrate 2014-11-27T13:06:45.000Z

Original author: 157724595

- **Milestone** changed from %"4.11" to %"5.0"

Author: Trac Migrate 2014-12-15T14:52:41.000Z

Original author: 157724595

Original author: sebastian.huber

- **Description** changed

```
This is a part of GSOC2010 project RTEMS Sequenced Initialization. The␣
↪attachment is the implement of RTEMS Sequenced Initialization API.␣
↪More details
are placed on the wiki http://www.rtems.com/wiki/index.php/
↪RTEMSSequencedInitialization.
```

- **Milestone** changed from %"4.11" to %"5.0"

Author: Trac Migrate 2015-09-02T12:52:44.000Z

Original author: 157724595

- **Resolution** set to ~"wontfix"
- **Status** changed from *new* to *closed*

Obsoleted by #2408.

Author: Trac Migrate 2017-11-09T06:26:42.000Z

Original author: 157724595

- **Milestone** changed from %"5.0" to %"6.1"

Milestone renamed

3.9.1.768 1318 - libcpu/shared is not helpful

Id	1318
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Created	2008-09-22T13:36:04.000Z
Updated	2017-11-09T06:26:42.000Z
Milestone	6.1
Labels	bsp, priority::normal, resolution::wontfix, tickettype::defect, version::4.10
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/work_items/1318
Merges	0

Original author: ralf.corsepius

IMO, libcpu/shared is not helpful

Either something is * cpu-specific, then it should go into cpukit/score/cpu, * general, then in should go into cpukit/ * bsp-dependent, then it should go into libbsp.

I would strongly suggest to reconsider libcpu/shared.

Author: Joel Sherrill 2010-08-06T21:32:22.000Z

Original author: ralf.corsepius

- **Milestone** changed from %"4.10" to %"4.11"

Moving to 4.11. Needs to be addressed but too much for a branch.

Author: Chris Johns 2014-11-20T03:31:07.000Z

Original author: ralf.corsepius

- **Milestone** changed from %"4.11" to %"4.12"
- **Milestone** changed from %"4.12" to %"4.11"

Author: Chris Johns 2014-11-20T07:22:20.000Z

Original author: ralf.corsepius

- **Description** changed

```
IMO, libcpu/shared is not helpful

Either something is
* cpu-specific, then it should go into cpukit/score/cpu,
* general, then in should go into cpukit/
```

(continues on next page)

(continued from previous page)

```
* bsp-dependent, then it should go into libbsp.

I would strongly suggest to reconsider libcpu/shared.
```

- **Milestone** changed from %”4.11” to %”5.0”

This needs to be part of the source tree rearrangement.

Author: Trac Migrate 2016-01-05T12:09:59.000Z

Original author: ralf.corsepius

Original author: sebastian.huber

- **Description** changed

```
IMO, libcpu/shared is not helpful

Either something is
* cpu-specific, then it should go into cpukit/score/cpu,
* general, then in should go into cpukit/
* bsp-dependent, then it should go into libbsp.

I would strongly suggest to reconsider libcpu/shared.
```

- **Resolution** set to ~”wontfix”
- **Status** changed from *new* to *closed*

This directory contains only support code for the cache manager. I don’t know a better place for these files. They cannot go into cpukit, since the cache manager is potentially BSP-dependent.

Author: Trac Migrate 2017-11-09T06:26:42.000Z

Original author: ralf.corsepius

- **Milestone** changed from %”5.0” to %”6.1”

Milestone renamed

3.9.2 Merge Requests

3.9.2.1 201 - Revert “bsps/stm32h7: Workaround STM32 H7 errata by enforcing aligned access only”

Id	201
State	merged
Merged by	Amar Takhar
Merged at	2024-09-03T17:50:57.601Z
Created	2024-08-31T16:19:22.644Z
Updated	2025-09-19T02:36:48.324Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/201
Commit	f61086a40492deabec039c4168d3c3cd87322e5f

Summary

Revert “bsps/stm32h7: Workaround STM32 H7 errata by enforcing aligned access only”

This reverts commit d81bf04501cb83de4586f431ae91123e4965d86a.

The commit is reverted as this is only partial solution and remaining part to fix properly is extremely hard and usually done in completely diffetrent way. Hence let’s not enforce compiler but rather enforce RTEMS/H7 users.

Closes #5110

Author: Karel Gardas 2024-08-31T16:24:42.605Z

mentioned in merge request !184

Author: Karel Gardas 2024-08-31T16:26:12.872Z

Reference MRs here are !184 which was not merged in yet and !180 which was and this MR reverts it.

Author: Sebastian Huber 2024-09-02T23:59:24.336Z

approved this merge request

Author: Amar Takhar 2024-09-03T00:39:57.729Z

added 2 commits

- 1b6684ee - 1 commit from branch `rtems/rtos:main`
- f61086a4 - Revert “bsps/stm32h7: Workaround STM32 H7 errata by enforcing aligned access only”

Compare with previous version

Author: Amar Takhar 2024-09-03T00:40:02.403Z

approved this merge request

3.9.2.2 193 - jffs2: Add checks for long file name

Id	193
State	merged
Merged by	Amar Takhar
Merged at	2024-08-23T20:30:48.704Z
Created	2024-08-23T05:32:22.929Z
Updated	2025-09-19T02:36:48.000Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/193
Commit	b5767d2c60be32b6f21d457388d4ccfa8f18c2cc

Summary

jffs2: Add checks for long file name

Add filename length checks to prevent the creation of files and folders that cannot be listed, unlinked or renamed by subsequent calls. These changes are sufficient to make the jffs2fsrenamelongname and jffs2nandfsrenamelongname testcases pass.

Should also `pathconf` be fixed or is it fine like that? `pathconf` yields wrong information for all the filesystems

Updates #5073

Author: Joel Sherrill 2024-08-23T20:28:14.060Z

I don't think "appart" is a word. Rework the sentence please.

Author: Loris Nardo 2024-08-23T20:28:14.060Z

Ops.. should have been "apparent", but that line is being removed from the file because with the changes the test does not fail anymore

Author: Joel Sherrill 2024-08-23T17:35:10.988Z

Code changes look ok. Just need to fix the tst.yml file.

Author: Loris Nardo 2024-08-23T18:30:15.932Z

marked this merge request as **ready**

Author: Joel Sherrill 2024-08-23T20:28:14.082Z

resolved all threads

Author: Joel Sherrill 2024-08-23T20:28:27.584Z

added 19 commits

- 8c7dbeac...c2b3a517 - 18 commits from branch `rtems/rtos:main`
- b5767d2c - jffs2: Add checks for long file name

Compare with previous version

Author: Joel Sherrill 2024-08-23T20:28:45.875Z

approved this merge request

Author: Amar Takhar 2024-08-23T20:30:41.195Z

approved this merge request

3.9.2.3 192 - x86_64: Add TLS support

Id	192
State	merged
Merged by	Amar Takhar
Merged at	2024-08-27T21:21:00.980Z
Created	2024-08-20T15:56:49.463Z
Updated	2025-09-19T02:36:47.433Z
Milestone	6.1
Labels	arch:x86_64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/192
Commit	acf7c725ca178276329c96c809101382219d6408

Summary

Adds TLS support to the x86_64 port

This MR is dependent on: !169

Author: Joel Sherrill 2024-08-24T16:45:37.287Z

This { should be at the end of the previous line.

Author: Matheus Pecoraro 2024-08-24T16:59:13.999Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-08-24T16:45:36.328Z

Is there any issue which could be cited in comments here to add interrupt affinity to this BSP?

Please resolve this “with issue” and cite the issue in a comment in the code.

Author: Amar Takhar 2024-08-27T21:20:52.090Z

changed this line in version 4 of the diff

Author: Joel Sherrill 2024-08-24T16:45:34.800Z

Please pull Amaan’s name onto the copyright line so these match. This may be necessary elsewhere also.

Author: Matheus Pecoraro 2024-08-24T16:59:15.571Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-08-27T21:17:47.225Z

I am assuming that tests pass.

Author: Matheus Pecoraro 2024-08-27T21:17:47.225Z

Yes all TLS tests are passing

Author: Matheus Pecoraro 2024-08-24T16:45:04.860Z

mentioned in merge request !169

Author: Matheus Pecoraro 2024-08-24T16:45:37.377Z

resolved all threads

Author: Matheus Pecoraro 2024-08-24T16:45:59.019Z

@joel I am moving the comments you left here to !169 since they are related to commits from that MR.

Author: Matheus Pecoraro 2024-08-24T16:46:35.979Z

mentioned in issue #5121

Author: Matheus Pecoraro 2024-08-24T16:59:15.842Z

added 25 commits

- 95799d37...07728e09 - 21 commits from branch `rtems/rtos:main`
- 46149431 - x86_64/amd64: Add SMP support
- cfd8e44e - x86_64: x86_64 port doxygen and license cleanup
- 7dcd0752 - x86_64/amd64: Add issues to TODO comments
- c7671be5 - x86_64: Add TLS support

Compare with previous version

Author: Joel Sherrill 2024-08-27T21:17:47.244Z

resolved all threads

Author: Joel Sherrill 2024-08-27T21:17:51.617Z

approved this merge request

Author: Joel Sherrill 2024-08-27T21:18:00.564Z

added 6 commits

- c7671be5...43a581c7 - 2 commits from branch `rtems/rtos:main`
- 1107d019 - x86_64/amd64: Add SMP support
- adf0f01b - x86_64: x86_64 port doxygen and license cleanup
- c8f73c31 - x86_64/amd64: Add issues to TODO comments
- cf382c00 - x86_64: Add TLS support

Compare with previous version

Author: Amar Takhar 2024-08-27T21:20:52.307Z

added 4 commits

- cf382c00...77850f9f - 3 commits from branch `rtems/rtos:main`
- acf7c725 - x86_64: Add TLS support

Compare with previous version

Author: Amar Takhar 2024-08-27T21:20:57.216Z

approved this merge request

3.9.2.4 191 - Unify the parameters in the function declaration

Id	191
State	merged
Merged by	Kinsey Moore
Merged at	2024-08-21T17:30:24.420Z
Created	2024-08-20T06:41:50.038Z
Updated	2025-09-19T02:36:46.552Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/191
Commit	991b3b1695643cce6d89df571e55884addccfcf3

Summary

Unify the parameters in the function declaration and the parameters in the function implementation

Author: Sebastian Huber 2024-08-21T06:25:08.381Z

approved this merge request

Author: Kinsey Moore 2024-08-21T17:30:20.526Z

approved this merge request

3.9.2.5 183 - Flashdisk.c: Invalid printf format string

Id	183
State	merged
Merged by	Amar Takhar
Merged at	2024-08-10T21:53:58.263Z
Created	2024-08-10T21:21:06.971Z
Updated	2025-09-19T02:36:43.774Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/183
Commit	4337300649a2771fd6e6334ba44f1a1ce2fcfdf3

Summary

Coverity CID 1467406

Coverity spotted that line 1013 has an invalid printf format string.

Closes #5112

Author: zack liang 2024-08-10T21:21:30.489Z

changed title from **lashdisk.c: Invalid printf format string** to **{+F+}lashdisk.c: Invalid printf format string**

Author: Joel Sherrill 2024-08-10T21:22:46.789Z

approved this merge request

Author: Amar Takhar 2024-08-10T21:53:54.539Z

approved this merge request

Author: Amar Takhar 2024-08-10T21:54:14.062Z

Good catch!

3.9.2.6 185 - bsps/shared: Add Abracom EOZ9 RTC driver

Id	185
State	merged
Merged by	Amar Takhar
Merged at	2024-08-27T21:55:16.169Z
Assignee(s)	Christian Mauderer
Created	2024-08-12T12:27:46.176Z
Updated	2025-09-19T02:36:43.471Z
Milestone	6.1
Labels	device::i2c
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/185
Commit	3b053f69191f10dbe75bfcab3096ec8d8d83b297

Summary

bsps/shared: Add Abracom EOZ9 RTC driver

The EOZ9 RTC has a similar register interface like the MCP7940M (and quite some other I2C RTCs). This commit:

- Extracts the generic parts from MCP7940M and moves it into a generic

i2c-rtc driver. * Uses the new i2c-rtc for the MCP7940M. * Uses the new i2c-rtc for the new Abracom EOZ9.

Author: Christian Mauderer 2024-08-12T12:27:46.391Z

assigned to @c-mauderer

Author: Joel Sherrill 2024-08-27T21:24:04.472Z

approved this merge request

Author: Amar Takhar 2024-08-27T21:54:38.209Z

approved this merge request

Author: Amar Takhar 2024-08-27T21:54:46.973Z

added 30 commits

- eaa100d8...acf7c725 - 29 commits from branch `rtems/rtos:main`
- 3b053f69 - bsps/shared: Add Abracom EOZ9 RTC driver

Compare with previous version

3.9.2.7 220 - bsps/arm/atsam: Remove README.md

Id	220
State	merged
Merged by	Amar Takhar
Merged at	2024-09-13T21:29:39.044Z
Created	2024-09-13T14:17:27.751Z
Updated	2025-09-19T02:36:29.494Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/220
Commit	3edf2bd579692024423cf28e8457872d65a982e8

Summary

bsps/arm/atsam: Remove README.md

Migrated to the rtems-docs repository.

Updates #5088

Author: Amar Takhar 2024-09-13T17:00:59.518Z

approved this merge request

Author: Amar Takhar 2024-09-13T17:01:19.662Z

This is a great change, nice!

Author: Joel Sherrill 2024-09-13T20:55:08.847Z

approved this merge request

Author: Joel Sherrill 2024-09-13T20:55:20.992Z

added 2 commits

- e91c136f - 1 commit from branch `rtems/rtos:main`
- 3edf2bd5 - bsps/arm/atsam: Remove README.md

Compare with previous version

3.9.2.8 202 - shell:Ignore empty user names as input

Id	202
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-15T13:12:12.545Z
Created	2024-09-03T06:01:35.296Z
Updated	2025-09-19T02:36:29.139Z
Milestone	6.1
Labels	rtems::shell
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/202
Commit	bcd4b83e1666f1160514546ebf4e474938f424b7

Summary

When the user name input interface is activated, if the user only presses the Enter key and the entered user name is empty, then this input will be ignored.

Author: Sebastian Huber 2024-10-15T05:57:38.893Z

What is the benefit of ignoring the input?

Author: shuhua hua 2024-10-15T05:57:38.893Z

Just as when we use other systems such as the Linux system, user account information is typically stored in the /etc/passwd file, with each account having a line of records that include the username, password (stored in an encrypted form), user ID, group ID, and other information. Records with a blank username are not permitted because this would cause the system to be unable to correctly identify and manage

the user. If a user does not wish to use a username, they can set the login_check parameter to NULL in rtems_shell_init when logging into the shell. Currently, during system startup, when prompting the user to enter a username, some additional printouts may be appended after the username prompt. Users usually press the Enter key, which then leads to a password prompt, and pressing Enter again will lead to a prompt to re-enter the username. By incorporating a check to see if the user's input for the username is empty, the system can directly prompt the user to enter a username, thus avoiding the aforementioned operations.

Author: Sebastian Huber 2024-10-15T05:57:38.893Z

Ok, makes sense. We have tests for this function in `testsuites/libtests/shell01/init.c`. Please add a test case to your patch and squash the commits. Please also fix the formatting to be in line with the surrounding code.

Author: shuhua hua 2024-10-15T05:57:38.893Z

Sure, I'll pay attention to my code style. I reviewed the testsuites/libtests/shell01/init.c test case you mentioned, and I think there might have been a misunderstanding. My submission concerns an issue I encountered while using the shell: when it prompts me for a username, other programs subsequently print some logs. At that point, I press Enter intending to clear these logs and expecting the username prompt to reappear. However, the system unexpectedly jumps to requesting a password, which prompted me to submit that pull request.

Regarding init.c that you just mentioned, I attempted to add two test cases within it:

1.When rtems_shell_login_check("", NULL) is tested, the return value of false is understandable.

2.However, when I test rtems_shell_login_check(NULL, NULL), the return value is true. Is this return value expected behavior?

Author: Sebastian Huber 2024-10-15T05:57:38.893Z

With respect to 2), this is a feature of getpw_r().

Author: Chris Johns 2024-10-15T05:57:38.893Z

@huangshuhua your experience is what I see on a FreeBSD console. If I hit enter on a screen full of log message the login prompt is quickly returned. I think having the same behavior is a good idea.

Author: shuhua hua 2024-10-15T05:57:38.893Z

Yes, I encountered this issue while working in the shell, which is why I submitted this modification request. I have just revised the code style to align it with the

surrounding conventions, ensuring consistency. Thank you for your feedback, and I appreciate your consideration of my contribution

Author: Sebastian Huber 2024-10-15T05:57:38.893Z

Could you please squash your commits so that we have a single consistent commit which ends up in the repository.

Author: Amar Takhar 2024-10-15T05:57:38.893Z

I have done this for the submitter.

Author: shuhua hua 2024-09-12T01:16:51.984Z

added 1 commit

- cd4d81f2 - To unify the surrounding coding style

Compare with previous version

Author: Sebastian Huber 2024-09-12T23:38:10.485Z

mentioned in merge request !215

Author: shuhua hua 2024-09-13T03:06:00.056Z

changed title from **Ignore empty user names as input** to **{+shell:+}Ignore empty user names as input**

Author: Kinsey Moore 2024-09-28T21:20:54.647Z

Once the patches have been squashed together and the commit message is cleaned up, I think this is ready to be committed to the main branch.

Author: Amar Takhar 2024-10-15T05:55:56.006Z

added 1 commit

- dd96ad22 - Ignore empty user names as input

Compare with previous version

Author: Amar Takhar 2024-10-15T05:56:03.035Z

approved this merge request

Author: Amar Takhar 2024-10-15T05:57:15.650Z

@opticron Hi I have fixed this MR for @huangshuhua can you merge this and !217 thank you.

Author: Amar Takhar 2024-10-15T05:57:38.914Z

resolved all threads

Author: Amar Takhar 2024-10-15T13:11:36.606Z

@huangshuhua I hope you do not mind I have squashed the commits for you so these changes can go in nothing else has been changed thank you very much for your submission! :)

Author: shuhua hua 2024-10-15T13:11:36.606Z

Thank you so much for squashing the commits for me! I appreciate your assistance in making those changes more manageable.

Author: Kinsey Moore 2024-10-15T13:11:36.625Z

resolved all threads

Author: Kinsey Moore 2024-10-15T13:11:38.991Z

approved this merge request

Author: Kinsey Moore 2024-10-15T13:11:50.816Z

added 163 commits

- dd96ad22...ad378dca - 162 commits from branch `rtems/rtos:main`
- bcd4b83e - Ignore empty user names as input

Compare with previous version

3.9.2.9 228 - spec: Refactor arm-pl011 build options

Id	228
State	merged
Merged by	Amar Takhar
Merged at	2024-09-19T06:14:49.288Z
Created	2024-09-19T05:15:43.035Z
Updated	2025-09-19T02:36:28.969Z
Milestone	6.1
Labels	arch:aarch64, arch:arm, device::serial
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/228
Commit	1b5cd007e78a5845e1ea302af3b3b7ba30ae524c

Summary

spec: Refactor arm-pl011 build options

Close #5026

Author: Ning Yang 2024-09-19T05:16:01.619Z

mentioned in issue #5026

Author: Ning Yang 2024-09-19T05:24:09.843Z

mentioned in merge request !47

Author: Ning Yang 2024-09-19T05:42:21.696Z

added 6 commits

- 65ba3d61...6482c5cc - 5 commits from branch `rtems/rtos:main`
- 1b5cd007 - spec: Refactor arm-pl011 build options

Compare with previous version

Author: Sebastian Huber 2024-09-19T06:01:11.819Z

approved this merge request

Author: Amar Takhar 2024-09-19T06:14:42.120Z

approved this merge request

3.9.2.10 217 - libtests/shell01:add test empty and NULL usernames check

Id	217
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-15T13:12:48.728Z
Created	2024-09-13T07:41:54.000Z
Updated	2025-09-19T02:36:28.789Z
Milestone	6.1
Labels	rtems::shell
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/217
Commit	c4f97590686e7cc62864dc5671900efde4a17cc8

Summary

libtests/shell01:add test empty and NULL usernames check

Author: Kinsey Moore 2024-09-28T21:21:26.793Z

approved this merge request

Author: Amar Takhar 2024-10-15T05:56:54.416Z

approved this merge request

Author: Amar Takhar 2024-10-15T05:57:16.786Z

mentioned in merge request !202

Author: Kinsey Moore 2024-10-15T13:12:32.891Z

added 164 commits

- af706a5e...bcd4b83e - 163 commits from branch `rtems/rtos:main`
- c4f97590 - libtests/shell01:add test empty and NULL usernames check

Compare with previous version

3.9.2.11 225 - tests: Enable ISR in fatal extensions

Id	225
State	merged
Merged by	Amar Takhar
Merged at	2024-09-19T02:56:06.984Z
Assignee(s)	Sebastian Huber
Created	2024-09-19T02:36:24.091Z
Updated	2025-09-19T02:36:28.617Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/225
Commit	2aa921c3befa777540e677655d45e2ccfe41856a

Summary

tests: Enable ISR in fatal extensions

Fix code locations left over by commit 3332e54772fb477e81dbe87921fb3a1cca7e3b14.

Update #5067.

Author: Sebastian Huber 2024-09-19T02:36:24.234Z

assigned to @sebhub

Author: Chris Johns 2024-09-19T02:38:19.831Z

approved this merge request

Author: Amar Takhar 2024-09-19T02:56:00.225Z

approved this merge request

3.9.2.12 210 - cpukit/libmisc/shell:fix command df overflow

Id	210
State	merged
Merged by	Amar Takhar
Merged at	2024-09-13T21:31:05.254Z
Created	2024-09-10T01:31:26.356Z
Updated	2025-09-19T02:36:28.488Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/210
Commit	29a0d99bfd8dcd896884a6cfe01cf8f82de5a8d5

Summary

cpukit/libmisc/shell:fix command df overflow

- change type unsigned to uint64_t, it might overflowed if

the size is greater the 4GB. * increase buffer size is to eliminate the compiler's warning that the buffer might be too small

Author: Christian Mauderer 2024-09-13T08:52:02.435Z

Why is it necessary to increase the buffer size? If you use the biggest number (2 ^ 64 = 18446744073709551616) The `rtems_shell_df_humanize_size` should make a `16777216T` out of that if I calculated that correctly. So it shouldn't be necessary to increase the size. Or did I miss something?

By the way: Would it be a good idea to add a 'P' and maybe a 'E' to the `suffixes`? With that, the number would get better readable for huge sizes in the peta or exabyte range.

Author: xiaojun zheng 2024-09-13T08:52:02.435Z

I think gcc considers `block_size` to be a 64-bit number, and be written to a buffer, the buffer size is less than the biggest length, so gcc throw out a warnning. Since the maximum number after the conversion is less than `16777216T`, I think `block_size` can be force to uint32_t when write to buffer, and increase buffer size is not necessary.

Author: Christian Mauderer 2024-09-13T08:52:02.435Z

OK. If it avoids a warning, that's fine. I don't think that the 3*4 additional bytes will be a problem in any application. I more or less just wondered why you selected 20 and therefore started to think about it. For the 2 ^ 64, 22 chars would have been necessary (20 for the number, one suffix and one `\0`. But I'm fine with your explanation.

Author: Christian Mauderer 2024-09-13T08:52:02.464Z

resolved all threads

Author: Christian Mauderer 2024-09-13T08:52:28.659Z

approved this merge request

Author: Joel Sherrill 2024-09-13T21:03:09.186Z

approved this merge request

Author: Joel Sherrill 2024-09-13T21:03:17.243Z

added 12 commits

- 91daa456...e91c136f - 11 commits from branch `rtems/rtos:main`
- d6dbe084 - cpukit/libmisc/shell:fix command df overflow

Compare with previous version

Author: Joel Sherrill 2024-09-13T21:08:21.407Z

Please resolve the update conflict so this can be merged.

Author: Amar Takhar 2024-09-13T21:30:48.629Z

added 3 commits

- d6dbe084...31c91be2 - 2 commits from branch `rtems/rtos:main`
- 29a0d99b - cpukit/libmisc/shell:fix command df overflow

Compare with previous version

Author: Amar Takhar 2024-09-13T21:32:15.136Z

@joel every single time in my experience so far the conflicts are solved by refreshing the page it's a website issue.

3.9.2.13 224 - dev/serial: Fix uninitialized variable warnings

Id	224
State	merged
Merged by	Kinsey Moore
Merged at	2024-09-19T02:26:37.759Z
Assignee(s)	Sebastian Huber
Created	2024-09-19T02:18:15.723Z
Updated	2025-09-19T02:36:28.360Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/224
Commit	1f52965f98047f4a6772e38a97512a041711aba2

Summary

dev/serial: Fix uninitialized variable warnings

Use the reset values to get rid of uninitialized variable warnings.

Author: Sebastian Huber 2024-09-19T02:18:15.890Z

assigned to @sebhub

Author: Chris Johns 2024-09-19T02:26:13.892Z

Just a note for the MR.

The reset values are set by the FSBL using the `ps7_init` settings from Vivado so resets values can be confusing with the Zynq platform.

Author: Chris Johns 2024-09-19T02:26:26.568Z

approved this merge request

Author: Kinsey Moore 2024-09-19T02:26:31.701Z

approved this merge request

3.9.2.14 226 - bsps/arm: Fix BSP_START_VECTOR_RESERVED_SLOT

Id	226
State	merged
Merged by	Amar Takhar
Merged at	2024-09-19T03:09:03.570Z
Assignee(s)	Sebastian Huber
Created	2024-09-19T02:58:01.238Z
Updated	2025-09-19T02:36:28.206Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/226
Commit	6482c5cc56c933331a7aecc47fd673d274280ab6

Summary

bsps/arm: Fix BSP_START_VECTOR_RESERVED_SLOT

The option value is a string.

Author: Sebastian Huber 2024-09-19T02:58:01.340Z

assigned to @sebhub

Author: Chris Johns 2024-09-19T03:08:03.717Z

approved this merge request

Author: Amar Takhar 2024-09-19T03:08:57.574Z

approved this merge request

3.9.2.15 203 - cpukit/posix/src/aio_misc.c: Fix for illegal memory access.

Id	203
State	merged
Merged by	Kinsey Moore
Merged at	2024-09-05T23:13:35.560Z
Created	2024-09-03T09:48:37.488Z
Updated	2025-09-19T02:36:27.442Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/203
Commit	acd2a24d641bedcf26b9c7a911e59d0df8bc44a4

Summary

cpukit/posix/src/aio_misc.c: Fix for illegal memory access.

CID 1618881: Memory - illegal accesses (USE_AFTER_FREE)

Author: Joel Sherrill 2024-09-03T14:29:30.871Z

approved this merge request

Author: Kinsey Moore 2024-09-05T23:13:28.226Z

added 2 commits

- f61086a4 - 1 commit from branch `rtems/rtos:main`
- acd2a24d - cpukit/posix/src/aio_misc.c: Fix for illegal memory access.

Compare with previous version

Author: Kinsey Moore 2024-09-05T23:13:32.341Z

approved this merge request

3.9.2.16 213 - ntptime: Use time_t for tv_sec related variables

Id	213
State	merged
Merged by	Amar Takhar
Merged at	2024-09-12T17:26:37.300Z
Assignee(s)	Sebastian Huber
Created	2024-09-12T00:14:28.871Z
Updated	2025-09-19T02:36:27.320Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/213
Commit	48618b1060c75c9d81a2769ef61c59e3810a918e

Summary

ntptime: Use time_t for tv_sec related variables

The struct timespec tv_sec member is of type time_t. Make sure that all variables related to this member are of the type time_t. This is important for targets where long is a 32-bit type and time_t a 64-bit type.

Reviewed by: imp Pull Request: https://github.com/freebsd/freebsd-src/pull/1373

Author: Sebastian Huber 2024-09-12T00:14:28.971Z

assigned to @sebhub

Author: Joel Sherrill 2024-09-12T17:23:36.172Z

approved this merge request

Author: Amar Takhar 2024-09-12T17:26:24.704Z

approved this merge request

Author: Amar Takhar 2024-09-12T17:26:30.851Z

added 6 commits

- 6da06294...9d6f1710 - 5 commits from branch `rtems/rtos:main`
- 48618b10 - ntptime: Use time_t for tv_sec related variables

Compare with previous version

3.9.2.17 218 - posix/aio: updated documentation after changes to lio_listio()

Id	218
State	merged
Merged by	Amar Takhar
Merged at	2024-09-13T21:30:25.493Z
Created	2024-09-13T08:53:09.820Z
Updated	2025-09-19T02:36:26.697Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/218
Commit	31c91be2eab82fc7f2de0d234360ae570f641dd1

Summary

posix/aio: updated documentation after changes to lio_listio()

updated the doxygen comment in aio.h updated the description in spec/build/cpukit/optposix.yml

Author: Alessandro Nardin 2024-09-13T08:57:15.609Z

added 1 commit

- 55e122c0 - posix/aio: updated documentation after changes to lio_listio()

Compare with previous version

Author: Joel Sherrill 2024-09-13T20:55:50.428Z

approved this merge request

Author: Amar Takhar 2024-09-13T21:29:46.510Z

approved this merge request

Author: Amar Takhar 2024-09-13T21:30:19.565Z

added 3 commits

- 55e122c0...3edf2bd5 - 2 commits from branch `rtems/rtos:main`
- 31c91be2 - posix/aio: updated documentation after changes to lio_listio()

Compare with previous version

3.9.2.18 216 - libmisc/stackchk: fix Doxygen file comment

Id	216
State	merged
Merged by	Joel Sherrill
Merged at	2024-09-13T20:54:46.554Z
Created	2024-09-12T14:51:55.454Z
Updated	2025-09-19T02:36:26.569Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/216
Commit	e91c136f67f49f79e3b816708069f510b97b7434

Summary

libmisc/stackchk: fix Doxygen file comment

revert back to the original RTEMS Doxygen guidelines by adding @file and @ingroup

Author: Joel Sherrill 2024-09-13T00:06:04.922Z

First, if this stays, it should be an @note.

More importantly, the extension installed does not change based on the direction the stack grows. There are some macros and one function that have different definitions based on direction.

You can change this to say it uses conditional compilation to account for stack direction but does not use different extensions.

Author: Mohamed Hassan 2024-09-12T22:59:49.561Z

changed this line in version 2 of the diff

Author: Mohamed Hassan 2024-09-12T22:59:49.779Z

added 2 commits

- 48618b10 - 1 commit from branch `rtems/rtos:main`
- b5318305 - libmisc/stackchk: fix Doxygen file comment

Compare with previous version

Author: Joel Sherrill 2024-09-13T00:06:04.943Z

resolved all threads

Author: Joel Sherrill 2024-09-13T00:06:10.973Z

approved this merge request

Author: Amar Takhar 2024-09-13T00:56:10.938Z

approved this merge request

Author: Amar Takhar 2024-09-13T00:56:17.197Z

added 2 commits

- ce1fb41a - 1 commit from branch `rtems/rtos:main`
- e91c136f - libmisc/stackchk: fix Doxygen file comment

Compare with previous version

Author: Amar Takhar 2024-09-13T00:57:08.285Z

@Hamzi this is set to draft once you undraft it you can merge it!

Author: Mohamed Hassan 2024-09-13T17:23:10.351Z

marked this merge request as **ready**

3.9.2.19 240 - spec/build: make minimum sample norun

Id	240
State	merged
Merged by	Amar Takhar
Merged at	2024-09-25T00:25:37.911Z
Created	2024-09-24T20:55:18.081Z
Updated	2025-09-19T02:36:26.439Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/240
Commit	7cda579524d35e6566a1137164596f71ad44100d

Summary

minimum sample is not expected to run, or to produce testable output.

verified this works on erc32/sis.

Author: Sebastian Huber 2024-09-24T23:13:30.409Z

The test produces no output, however, it is still important to run. Even in this minimum configuration you should properly ends up in the system termination process and not for example end up in an infinite loop somewhere.

Author: Chris Johns 2024-09-25T00:03:32.262Z

approved this merge request

Author: Amar Takhar 2024-09-25T00:25:31.249Z

approved this merge request

Author: Sebastian Huber 2024-10-15T22:11:19.010Z

Not running this test produces a gap in the test coverage. It was the only test with potentially no dependency to the test output device.

Author: Gedare Bloom 2024-10-15T22:12:01.985Z

I happened to come across this comment. It's pretty easy to miss activity on a closed MR. You can open an Issue if you think we need this capability, but, we have no effective way to test it automatically so such test case seems unhelpful in CI/automation. I submitted this because `minimum` has no way to be tested for pass/fail. If you want this as an Issue, I think it should be possible to "Create a new Issue" here and then convert this thread to an Issue. I just have no clue how to resolve such an Issue with the tools we have.

3.9.2.20 229 - bsp/aarch64:Fix _CPU_SMP_Get_current_processor()

Id	229
State	merged
Merged by	Amar Takhar
Merged at	2024-09-19T17:23:42.516Z
Created	2024-09-19T06:37:30.355Z
Updated	2025-09-19T02:36:26.081Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/229
Commit	5e5214b786e327fa0639b45c181638ac174f1f97

Summary

bsp/aarch64:Fix _CPU_SMP_Get_current_processor()

Fix _CPU_SMP_Get_current_processor(), since read from register MPIDR_EL1 (the least significant byte) is not always right,for example the least significant byte of MPIDR_EL1 is always zero for cortex-a55. aarch64 has a thread ID register TPIDR_EL1 available for for OS management purposes. RTEMS stores per-CPU control in TPIDR_EL1 when the core startup, so we can use _Per_CPU_Get_index() to get current processor index.

update #5064

Author: Sebastian Huber 2024-09-19T17:23:04.279Z

`_CPU_SMP_Get_current_processor( void )`

Author: xiaojun zheng 2024-09-19T10:43:44.258Z

changed this line in version 2 of the diff

Author: Sebastian Huber 2024-09-19T17:23:10.920Z

Indentation should be two spaces. Needs an ` @brief Returns the index of the current processor.

Author: xiaojun zheng 2024-09-19T10:43:45.065Z

changed this line in version 2 of the diff

Author: Sebastian Huber 2024-09-19T09:29:16.933Z

Could you please also fix the spacing in the commit message.

Author: xiaojun zheng 2024-09-19T10:43:45.377Z

added 1 commit

- 72a350af - bsp/aarch64:Fix _CPU_SMP_Get_current_processor()

Compare with previous version

Author: Sebastian Huber 2024-09-19T17:23:18.082Z

The `@brief` should be the first line. Then a blank line. ... `_CPU_Get_current_per_CPU_control()`. It shall not ....

Author: xiaojun zheng 2024-09-19T11:15:49.878Z

added 1 commit

- 5e5214b7 - bsp/aarch64:Fix _CPU_SMP_Get_current_processor()

Compare with previous version

Author: Sebastian Huber 2024-09-19T12:32:54.703Z

approved this merge request

Author: Amar Takhar 2024-09-19T17:22:09.198Z

approved this merge request

Author: Amar Takhar 2024-09-19T17:23:18.100Z

resolved all threads

Author: Amar Takhar 2024-09-19T17:23:37.372Z

Merging because the requested changes were made and Sebastian approved it after.

3.9.2.21 214 - kvprintf(): Fix '+' conversion handling

Id	214
State	merged
Merged by	Joel Sherrill
Merged at	2024-09-13T00:04:01.833Z
Assignee(s)	Sebastian Huber
Created	2024-09-12T00:24:08.158Z
Updated	2025-09-19T02:36:25.938Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/214
Commit	ce1fb41a6c33e5708b477e8b34c0aa49d6fc79ec

Summary

kvprintf(): Fix '+' conversion handling

For example, printf("%+i", 1) prints "+1". However, kvprintf() did print just "1" for this example. According to PRINTF(3):

A sign must always be placed before a number produced by a signed conversion.

For "%+r" radix conversions, keep the "+" handling as it is, since this is a non-standard conversion. For "%+p" pointer conversions, continue to ignore the sign modifier to be in line with libc.

This change allows to support the ' conversion modifier in the future.

Reviewed by: imp Pull Request: https://github.com/freebsd/freebsd-src/pull/1310

Author: Sebastian Huber 2024-09-12T00:24:08.267Z

assigned to @sebhub

Author: Chris Johns 2024-09-12T00:27:44.457Z

approved this merge request

Author: Sebastian Huber 2024-09-12T23:34:31.709Z

added 7 commits

- 7b1b7252...48618b10 - 6 commits from branch `rtems/rtos:main`
- ce1fb41a - kvprintf(): Fix '+' conversion handling

Compare with previous version

Author: Joel Sherrill 2024-09-13T00:03:57.996Z

approved this merge request

3.9.2.22 231 - spec/aarch64: Add missing symbols to ILP32 linker script

Id	231
State	merged
Merged by	Amar Takhar
Merged at	2024-09-20T04:10:48.054Z
Assignee(s)	Kinsey Moore
Created	2024-09-19T13:23:10.482Z
Updated	2025-09-19T02:36:25.755Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/231
Commit	3ec16d5f9d59722d48290bd50a18482d1c464364

Summary

This fixes the build issues with AArch64 ILP32 builds due to the recent change to support more than 2GB of RAM in the LP64 builds.

Author: Kinsey Moore 2024-09-19T13:23:10.700Z

assigned to @opticron

Author: Kinsey Moore 2024-09-19T13:23:32.308Z

mentioned in merge request !195

Author: Kinsey Moore 2024-09-19T13:23:48.330Z

added 8 commits

- 4e47b533...1b5cd007 - 7 commits from branch `rtems/rtos:main`

- 5cd477c3 - spec/aarch64: Add missing symbols to ILP32 linker script

Compare with previous version

Author: Sebastian Huber 2024-09-20T02:38:16.312Z

approved this merge request

Author: Amar Takhar 2024-09-20T04:10:24.008Z

added 2 commits

- 5e5214b7 - 1 commit from branch `rtems/rtos:main`
- 3ec16d5f - spec/aarch64: Add missing symbols to ILP32 linker script

Compare with previous version

Author: Amar Takhar 2024-09-20T04:10:37.438Z

approved this merge request

3.9.2.23 311 - libtests/ttest01: Fix CPU counter precision issues

Id	311
State	merged
Merged by	Amar Takhar
Merged at	2024-11-14T06:46:40.688Z
Assignee(s)	Sebastian Huber
Created	2024-11-14T02:47:40.238Z
Updated	2025-03-11T02:08:55.855Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/311
Commit	83dccef48d4dfa6addb1b9b8cdbb5312d63661a1

Summary

libtests/ttest01: Fix CPU counter precision issues

Change the time to convert so that rounding issues do not propergate to the second next digit. Properly round the result used for the precision estimate.

Author: Sebastian Huber 2024-11-14T02:47:40.351Z

assigned to @sebhub

Author: Gedare Bloom 2024-11-14T06:37:45.415Z

approved this merge request

Author: Amar Takhar 2024-11-14T06:46:23.320Z

approved this merge request

Author: Kinsey Moore 2025-03-11T02:08:17.867Z

This appears to have caused a constant failure on AArch64 hardware (ZynqMP) while still passing on the QEMU BSP:

```
P:2:0:UI1:test-time.c:152
FAILED:80:*ctx->c == c
```

The failing comparison generates a string representation `1.099999992` instead of the expected `1.100000000`.

Author: Sebastian Huber 2025-03-11T02:08:17.867Z

Thanks for the report. It looks like we still have rounding issues. I will have a look at it at some point in time.

Author: Sebastian Huber 2025-03-11T02:08:17.887Z

created #5228 to continue this discussion

Author: Sebastian Huber 2025-03-11T02:09:16.149Z

Thanks for the report. It looks like we still have rounding issues. I will have a look at it at some point in time.

Author: Amar Takhar 2025-03-11T02:09:16.149Z

If you reply to Kinsey and turn it into a thread there is a button in the lower right that will say 'resolve this thread with an issue' to create an issue that refers back to his comment. Easy way to keep track I would do this for you but you replied to the MR instead of him as a reply.

Author: Sebastian Huber 2025-03-11T02:09:16.149Z

Thanks for the hint.

Author: Amar Takhar 2025-03-11T02:09:16.149Z

No problem! :)

Author: Sebastian Huber 2025-03-11T02:08:18.249Z

mentioned in issue #5228

Author: Amar Takhar 2025-03-11T02:08:55.835Z

resolved all threads

Author: Amar Takhar 2025-03-11T02:09:16.178Z

resolved all threads

3.9.2.24 362 - waf: Handle no version label in VERSION when a release

Id	362
State	merged
Merged by	Kinsey Moore
Merged at	2025-01-22T03:12:07.204Z
Assignee(s)	Chris Johns
Created	2025-01-22T02:56:52.793Z
Updated	2025-01-22T03:12:08.923Z
Milestone	6.1
Labels	rtems::build
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/362
Commit	0a46769ba42d3476b0f37a85db49b3276658d293

Handle no version label in VERSION when a release

Closes #5185

Author: Chris Johns 2025-01-22T02:56:53.007Z

assigned to @chris

Author: Amar Takhar 2025-01-22T02:57:37.472Z

approved this merge request

Author: Kinsey Moore 2025-01-22T03:12:01.473Z

approved this merge request

3.9.2.25 359 - spec/pkgconfig: Account for separate compilation and linking

Id	359
State	merged
Merged by	Gedare Bloom
Merged at	2025-01-19T20:37:48.690Z
Assignee(s)	Kinsey Moore
Created	2025-01-17T01:04:47.690Z
Updated	2025-01-19T20:37:50.616Z
Milestone	6.1
Labels	priority::lowest, resolution::fixed, tickettype::defect
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/359
Commit	f7de6d5425f1867dbfe90715288f839cb740d6a8

Summary

spec/pkgconfig: Account for separate compilation and linking

When compilation and linking are performed separately, some platforms (i.e. RISC-V) may require that ABI flags are provided during the linking step as well as the compilation step.

Closes #5183

Author: Kinsey Moore 2025-01-17T01:04:47.916Z

assigned to @opticron

Author: Chris Johns 2025-01-17T01:14:00.084Z

approved this merge request

Author: Kinsey Moore 2025-01-17T15:06:15.282Z

I'm really confused about how all those labels got added, because *I* didn't do it.

Author: Gedare Bloom 2025-01-19T20:37:38.502Z

approved this merge request

3.9.2.26 320 - SMP: Fix race condition in thread priority changes

Id	320
State	merged
Merged by	Gedare Bloom
Merged at	2024-11-20T03:08:06.943Z
Assignee(s)	Sebastian Huber
Created	2024-11-20T01:34:26.259Z
Updated	2025-01-08T01:51:49.467Z
Milestone	6.1
Labels	qualification, rtems::score, smp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/320
Commit	e661f400e213539cc141193870921787ceb01e3f

Summary

Properly serialize explicit thread priority changes (for example rtems_task_set_priority()) and thread priority changes carried out by thread queues (locking protocols such as priority inheritance).

Author: Sebastian Huber 2024-11-20T01:34:26.398Z

assigned to @sebhub

Author: Sebastian Huber 2024-11-20T01:36:32.967Z

changed title from **{-score: Improve priority node debugging-}** to **{+SMP: Fix race condition in thread priority changes+}**

Author: Sebastian Huber 2024-11-20T01:36:33.011Z

changed the description

Author: Chris Johns 2024-11-20T01:48:24.913Z

Is this a critical fix for %”6.1” ?

Author: Sebastian Huber 2024-11-20T01:48:24.913Z

Yes, this is definitely one of the most serious bugs discovered in the last years.

Author: Chris Johns 2024-11-20T01:48:24.913Z

Thanks

Author: Chris Johns 2024-11-20T01:48:24.938Z

resolved all threads

Author: Chris Johns 2024-11-20T01:48:37.405Z

approved this merge request

Author: Gedare Bloom 2024-11-20T03:07:45.809Z

approved this merge request

Author: Chris Johns 2025-01-08T01:51:49.343Z

mentioned in issue #5159

3.9.2.27 350 - waf: Update to waf-2.1.4

Id	350
State	merged
Merged by	Joel Sherrill
Merged at	2024-12-22T03:18:42.577Z
Assignee(s)	Chris Johns
Reviewer(s)	Kinsey Moore, Amar Takhar, Joel Sherrill
Created	2024-12-21T23:44:22.761Z
Updated	2024-12-22T03:18:45.330Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/350
Commit	d61a739e418d42846012518be57c7e3b08750371

Summary

Update waf to waf-2.1.4

Closes #5167

Closes #5167

Author: Chris Johns 2024-12-21T23:44:22.939Z

requested review from @amar, @joel, and @opticron

Author: Chris Johns 2024-12-21T23:44:22.977Z

assigned to @chris

Author: Amar Takhar 2024-12-22T02:17:51.116Z

approved this merge request

Author: Joel Sherrill 2024-12-22T02:19:51.355Z

approved this merge request

3.9.2.28 342 - build: Improve Makefile.inc

Id	342
State	merged
Merged by	Gedare Bloom
Merged at	2024-12-05T06:42:05.552Z
Assignee(s)	Sebastian Huber
Created	2024-12-05T03:12:04.140Z
Updated	2024-12-05T06:42:07.740Z
Milestone	6.1
Labels	backport, rtems::build
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/342
Commit	a357119bd62a4fac383b12a790fabde24b8829da

Summary

build: Improve Makefile.inc

Support relocated BSP installations by letting the user provide RTEMS_ROOT.

Close #5171.

Author: Sebastian Huber 2024-12-05T03:12:04.425Z

assigned to @sebhub

Author: Chris Johns 2024-12-05T03:28:04.070Z

approved this merge request

Author: Gedare Bloom 2024-12-05T06:42:00.498Z

approved this merge request

3.9.2.29 332 - 6.1: rtems: Remove pre-qualified constraints

Id	332
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-27T13:55:21.568Z
Assignee(s)	Sebastian Huber
Created	2024-11-27T03:48:47.215Z
Updated	2024-11-27T13:55:22.915Z
Milestone	6.1
Labels	api::classic
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/332
Commit	e79dc64c8e20a1f2775a53ca7818150f0e37084e

Summary

The pre-qualified constraints are not applicable to mainline RTEMS.

Author: Sebastian Huber 2024-11-27T03:48:47.321Z

assigned to @sebhub

Author: Sebastian Huber 2024-11-27T03:51:40.472Z

changed title from **{-cpukit/jffs2/rtime: Fix off-by-one error in decompression check-}** to **{+rtems: Remove pre-qualified constraints+}**

Author: Sebastian Huber 2024-11-27T03:51:40.499Z

changed the description

Author: Sebastian Huber 2024-11-27T03:51:40.539Z

changed target branch from `main` to `6`

Author: Chris Johns 2024-11-27T03:52:55.508Z

approved this merge request

Author: Sebastian Huber 2024-11-27T03:53:25.022Z

changed title from **rtems: Remove pre-qualified constraints** to **{+6.1: +}rtems: Remove pre-qualified constraints**

Author: Kinsey Moore 2024-11-27T13:55:14.055Z

approved this merge request

3.9.2.30 330 - 6.1: Fix POSIX sporadic server

Id	330
State	merged
Merged by	Gedare Bloom
Merged at	2024-11-27T03:10:14.262Z
Assignee(s)	Sebastian Huber
Created	2024-11-26T05:41:55.412Z
Updated	2024-11-27T03:10:18.307Z
Milestone	6.1
Labels	api::posix
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/330
Commit	7f00921b078873bc707af107576bb39b13e6d630

Summary

Close #5164.

Author: Sebastian Huber 2024-11-26T05:41:55.547Z

assigned to @sebhub

Author: Sebastian Huber 2024-11-26T05:43:05.238Z

changed title from **{-psxtests/psx09: Use local variables-}** to **{+Fix POSIX sporadic server+}**

Author: Sebastian Huber 2024-11-26T05:43:05.268Z

changed the description

Author: Sebastian Huber 2024-11-26T05:43:05.310Z

changed target branch from `main` to `6`

Author: Sebastian Huber 2024-11-26T05:43:30.380Z

changed title from **Fix POSIX sporadic server** to **{+6.1: +}Fix POSIX sporadic server**

Author: Sebastian Huber 2024-11-26T05:44:34.969Z

added 1 commit

- f2f88160 - score: Support scheduler change inhibitors

Compare with previous version

Author: Chris Johns 2024-11-27T02:17:20.661Z

added 8 commits

- f2f88160...106d0053 - 2 commits from branch `rtems/rtos:6`
- e565dbba - psxtests/psx09: Use local variables
- 5eb93828 - psxtests/psx09: Improve sporadic server tests
- 78e5e765 - psxtests/psx09: Change prio while at low prio
- 65e48031 - posix: Use real priority for sporadic server state
- 63c5d062 - score: Fix _Thread_Priority_change()
- 7f00921b - score: Support scheduler change inhibitors

Compare with previous version

Author: Chris Johns 2024-11-27T02:18:13.791Z

approved this merge request

Author: Gedare Bloom 2024-11-27T03:09:32.833Z

I think remove this `#define` and replace all further uses of it with `if defined(RTEMS_SMP)`. May be there will be other reasons to have these scheduler change inhibitor set.

Author: Gedare Bloom 2024-11-27T03:09:32.833Z

Nevermind, I'm OK with this how it is for now. If we need to change when it gets defined in the future we can.

Author: Gedare Bloom 2024-11-27T03:09:32.863Z

resolved all threads

Author: Gedare Bloom 2024-11-27T03:09:38.162Z

approved this merge request

3.9.2.31 331 - posix/lio_listio: corrected addition of system event

Id	331
State	merged
Merged by	Joel Sherrill
Merged at	2024-11-26T21:07:19.196Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Joel Sherrill
Created	2024-11-26T19:42:40.027Z
Updated	2024-11-26T21:07:20.918Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/331
Commit	106d00537e3d135f77ac8b3b8f0ada535a5b1f6a

Summary

posix/lio_listio: corrected addition of system event

Previously the system event used by lio_listio was manually added to event.h and not using rtems-central. This patch corrects that and renames the event to make it clearer.

Some related dead code has also been removed.

(cherry picked from commit cabc8c3a783627d2f72a09e0806cf615b1fe1c16)

Co-authored-by: alessandronardin <ale.daluch@gmail.com>

Author: Kinsey Moore 2024-11-26T19:42:40.589Z

requested review from @joel

Author: Kinsey Moore 2024-11-26T19:42:42.091Z

assigned to @opticron

Author: Chris Johns 2024-11-26T20:48:59.498Z

approved this merge request

Author: Joel Sherrill 2024-11-26T21:07:14.655Z

approved this merge request

3.9.2.32 328 - cpukit/jffs2/rtime: Fix off-by-one error in decompression check

Id	328
State	merged
Merged by	Chris Johns
Merged at	2024-11-26T05:45:54.213Z
Assignee(s)	Kinsey Moore
Created	2024-11-22T02:23:13.611Z
Updated	2024-11-26T05:45:57.119Z
Milestone	6.1
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/328
Commit	c529694656cdea9b92332c61fad7fd23026beb23

Summary

cpukit/jffs2/rtime: Fix off-by-one error in decompression check

Closes #5072

(cherry picked from commit abaea2b79879d46fbf0499b8fc3eab19cbef4512)

Co-authored-by: Kinsey Moore <kinsey.moore@oarcorp.com>

Author: Chris Johns 2024-11-22T02:23:13.794Z

assigned to @opticron

Author: Kinsey Moore 2024-11-22T02:42:09.086Z

approved this merge request

Author: Gedare Bloom 2024-11-23T05:51:43.412Z

The milestone is 7.1 but the branch target is 6. Should it be milestone 6.2?

Author: Chris Johns 2024-11-23T05:51:43.412Z

Yes. Changed.

Author: Chris Johns 2024-11-23T05:51:43.430Z

resolved all threads

Author: Sebastian Huber 2024-11-26T05:45:15.580Z

approved this merge request

3.9.2.33 327 - cpukit/jffs2/rtime: Fix off-by-one error in decompression check

Id	327
State	merged
Merged by	Chris Johns
Merged at	2024-11-22T02:22:10.999Z
Assignee(s)	Kinsey Moore
Created	2024-11-22T01:01:53.463Z
Updated	2024-11-22T02:22:14.365Z
Milestone	6.1
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/327
Commit	abaea2b79879d46fbf0499b8fc3eab19cbef4512

Summary

cpukit/jffs2/rtime: Fix off-by-one error in decompression check

Closes #5072

> **Author:** Kinsey Moore 2024-11-22T01:01:53.657Z
>
> assigned to @opticron
>
> **Author:** Chris Johns 2024-11-22T01:04:59.798Z
>
> approved this merge request
>
> **Author:** Amar Takhar 2024-11-22T02:12:24.736Z
>
> approved this merge request

3.9.2.34 312 - Add RISCV libdl support

Id	312
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-22T00:17:08.382Z
Assignee(s)	Chris Johns
Created	2024-11-14T10:05:44.799Z
Updated	2024-11-22T00:17:12.831Z
Milestone	6.1
Labels	cpukit::dl
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/312
Commit	e14a740a994c3fda0baac3a8896af606d8a0e380

Add RISCV `libdl` support into the build system.

Closes #5144

Author: Chris Johns 2024-11-14T10:05:44.978Z

assigned to @chris

Author: Gedare Bloom 2024-11-14T14:39:19.846Z

approved this merge request

Author: Chris Johns 2024-11-14T20:10:38.781Z

mentioned in issue #5144

Author: Pavel Pisa 2024-11-22T00:17:01.265Z

I have applied your changes and tried to call `dlopen` on BeaglV-Fire from my test application

https://github.com/ppisa/rtems-devel/tree/master/rtems-omk-template/appdl

which calls `shell_dlopen` and tries to load simple ELF file

build from https://github.com/ppisa/rtems-devel/blob/master/rtems-omk-template/appdl/examples/appdl_print.c

And the result is exception

```
SHLL [/] # dlopen bin/appdl_print-riscv64.o

*** FATAL ***
fatal source: 9 (RTEMS_FATAL_SOURCE_EXCEPTION)
CPU: 0
mstatus 0x8000000a00007880
mcause  0x0000000000000004
mepc    0x00000010000271a8
ra      0x000000100002949c
sp      0x00000010000d9ef0
gp      0x0000001000093800
tp      0x00000010000dabc8
t0      0x0000000000000000
t1      0x0000000000000001
t2      0xffffffffffffffff
s0      0x00000010001b97e6
s1      0x00000010001b8660
a0      0xfffffffffe986c2
a1      0x0000001000089e48
a2      0x00000010001b8940
a3      0x0000006000000013
```

(continues on next page)

(continued from previous page)

```
a4      0x00000010000271a8
a5      0x0000000000051ea8
a6      0x00000010001a67a6
a7      0x0000000000051ea8
s2      0x0000000000051ea8
s3      0x00000010000da008
s4      0x00000010001a67a6
s5      0x00000010001b88e0
s6      0x00000010001b0ea0
s7      0x0000000000000018
s8      0x0000000000000060
s9      0x0000000000000004
s10     0x0000000000000001
s11     0x00000010001b8d60
t3      0x0000000000000038
t4      0x0000000000000000
t5      0x000000580000003c
t6      0x0000000000000038
fcsr    0x00000000
RTEMS version: 6.0.0.e049757c58-modified
RTEMS tools: 13.3.0 20240521 (RTEMS 6, RSB
↪e52d2288c8a0df64466010839ca1eb40c6d243ed, Newlib 1b3dcfd)
executing thread ID: 0x0a010004
executing thread name: SHLL
```

I do not have JTAG cable with special connector yet. So I have trued to decode problem from the reported mepc. GDB decodes location as

```
0x10000271a8 <rtems_rtl_elf_relocate_rela+270>:      lw      a4,0(s0)
```

If I try to decode to line `l * 0x10000271a8`

then it points to the function `rtems_rtl_elf_relocate_rela`

```
0x10000271a8 is in rtems_rtl_elf_relocate_rela (../../../../../git/
↪rtems/cpukit/libdl/rtl-mdreloc-riscv.c:128).
```

But if I try next location then it points to

```
0x10000271aa is in rtems_rtl_elf_relocate_rela (../../../../../git/
↪rtems/cpukit/libdl/rtl-mdreloc-riscv.c:364).
```

```
359       case R_TYPE(CALL): {
360         int64_t hi = SignExtend64(pcrel_val + 0x800, bits);
361         write32le(where, (read32le(where) & 0xFFF) | (hi &
↪0xFFFFF000));
362         int64_t hi20 = SignExtend64(pcrel_val + 0x800, bits);
363         int64_t lo = pcrel_val - (hi20 << 12);
364         write32le(((char *) where) + 4, (read32le(((char *) where)
↪+ 4) & 0xFFFFF) | ((lo & 0xFFF) << 20));
```

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```
365       }
366       break;
```

I have found way how to convert RTEMS generate ELF to HSS payload relatively easily by direct call of `hss-payload-generator`.

I use `rtems-config.yaml`:

```
set-name: 'PolarFire-SoC-HSS::RTEMSImage'
hart-entry-points: {u54_1: '0x1000000000', u54_2: '0x1000000000', u54_
↪3: '0x1000000000', u54_4: '0x1000000000'}
payloads:
rtems-app.elf: {exec-addr: '0x1000000000', owner-hart: u54_1, secondary-
↪hart: u54_2, secondary-hart: u54_3, secondary-hart: u54_4, priv-mode:␣
↪prv_m, skip-opensbi: true, payload-name: "rtems-app"}
```

and then run in terminal

```
hss-payload-generator -c rtems-config.yaml rtems-payload.bin
```

Author: Chris Johns 2024-11-22T00:17:01.265Z

Are you able to run the `libtest/dl??` and what passes?

Author: Pavel Pisa 2024-11-22T00:17:01.265Z

Hello Chris,

I have tested dl01 and it fails as well.

I have added some debug

```
diff --git a/cpukit/libdl/rtl-mdreloc-riscv.c b/cpukit/libdl/rtl-
↪mdreloc-riscv.c
index 3409a12a2d..a813df96c8 100644
--- a/cpukit/libdl/rtl-mdreloc-riscv.c
+++ b/cpukit/libdl/rtl-mdreloc-riscv.c
@@ -168,6 +168,13 @@ rtems_rtl_elf_reloc_rela (rtems_rtl_obj*      obj,
// Final PCREL value
Elf_Word pcrel_val = symvalue - ((Elf_Word)(uintptr_t) where);

+  printf ("rtl: rtems_rtl_elf_reloc_rela s.base %p s.offset 0x%lx info␣
↪0x%lx where %p *where %p in %s\\n",
+          (void *)sect->base, (unsigned long)rela->r_offset,
+          (unsigned long)rela->r_info, where, (void*)0,
+          rtems_rtl_obj_oname (obj));
+  fflush(stdout);
+  sleep(1);
+
```

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```
if (syminfo == STT_SECTION) {
return rtems_rtl_elf_rel_no_error;
}
```

The *where is disabled for now, because I have fear, that it causes problems.

It is suspicious that sect->base is zero. It should be zero for debugging sections etc. but I expect that such relocs should be skipped. May it be that they are. I can try to dig deeper tomorrow. I would expect that actual area allocated for the ELF image starts at 0x100004bde0 and that these relocs are form .text section.

```
*** BEGIN OF TEST libdl (RTL) 1 ***
*** TEST VERSION: 6.0.0.e049757c58-modified
*** TEST STATE: EXPECTED_PASS
*** TEST BUILD: RTEMS_POSIX_API RTEMS_SMP
*** TEST TOOLS: 13.3.0 20240521 (RTEMS 6, RSB e52d2288c8a0df64466010839ca1eb40c6d243ed, Newlib 1b3dcfd)
load: /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0xc info 0x3600000017 where 0xc *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0xc info 0x33 where 0xc *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x10 info 0x3700000018 where 0x10 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x10 info 0x33 where 0x10 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x14 info 0x3800000017 where 0x14 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x14 info 0x33 where 0x14 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x18 info 0x3900000018 where 0x18 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x18 info 0x33 where 0x18 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x1c info 0x7100000017 where 0x1c *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x1c info 0x33 where 0x1c *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x20 info 0x3a00000018 where 0x20 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x20 info 0x33 where 0x20 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x26 info 0x7200000013 where 0x26 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x26 info 0x33 where 0x26 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x2e info 0x3e00000010 where 0x2e *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x3a info 0x3b00000017 where 0x3a *where 0 in /dl01-o1.o
```

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```
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x3a info 0x33 where␣
↪0x3a *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x3e info 0x3c00000018␣
↪where 0x3e *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x3e info 0x33 where␣
↪0x3e *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x42 info 0x7100000017␣
↪where 0x42 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x42 info 0x33 where␣
↪0x42 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x46 info 0x3d00000018␣
↪where 0x46 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x46 info 0x33 where␣
↪0x46 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x54 info 0x7200000013␣
↪where 0x54 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x54 info 0x33 where␣
↪0x54 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x5e info 0x3f00000010␣
↪where 0x5e *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0x100004bde0 s.offset 0xc info␣
↪0x3600000017 where 0x100004bdec *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0x100004bde0 s.offset 0x10 info␣
↪0x3700000018 where 0x100004bdf0 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0x100004bde0 s.offset 0x14 info␣
↪0x3800000017 where 0x100004bdf4 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0x100004bde0 s.offset 0x18 info␣
↪0x3900000018 where 0x100004bdf8 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0x100004bde0 s.offset 0x1c info␣
↪0x7100000017 where 0x100004bdfc *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0x100004bde0 s.offset 0x20 info␣
↪0x3a00000018 where 0x100004be00 *where 0 in /dl01-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0x100004bde0 s.offset 0x26 info␣
↪0x7200000013 where 0x100004be06 *where 0 in /dl01-o1.o

*** FATAL ***
fatal source: 9 (RTEMS_FATAL_SOURCE_EXCEPTION)
CPU: 0
mstatus 0x8000000a00007880
mcause  0x0000000000000004
mepc    0x000000100000b538
ra      0x000000100000b4de
sp      0x000000100003d0c0
gp      0x0000001000032800
tp      0x000000100003d5d8
t0      0x0000000000000001
t1      0x0000000000000000
t2      0x0000000000000000
s0      0x000000100003d160
```

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```
s1      0x0000000000002952
a0      0x0000000000000000
a1      0x000000100003ce60
a2      0x0000001000033d00
a3      0x0000007200000013
a4      0x000000100002d578
a5      0x000000100000b538
a6      0x0000000000000000
a7      0x0000010000324b0
s2      0x0000000000000010
s3      0x000000100004abd0
s4      0xfffffffffffb6b4c
s5      0x000000100004be06
s6      0x000000100004ae30
s7      0x0000000000000018
s8      0x0000000000000120
s9      0x000000000000000c
s10     0x0000000000000001
s11     0x000000100004b2b0
t3      0x0000000000000000
t4      0x0000000000000022
t5      0x02961afe000f4240
t6      0x000010c6f7a0b5ec
fcsr    0x00000000
RTEMS version: 6.0.0.e049757c58-modified
RTEMS tools: 13.3.0 20240521 (RTEMS 6, RSB␣
↪e52d2288c8a0df64466010839ca1eb40c6d243ed, Newlib 1b3dcfd)
executing thread ID: 0x0a010001
executing thread name: UI1
```

The second test fails as well

```
*** BEGIN OF TEST libdl (RTL) 2 ***
*** TEST VERSION: 6.0.0.e049757c58-modified
*** TEST STATE: EXPECTED_PASS
*** TEST BUILD: RTEMS_POSIX_API RTEMS_SMP
*** TEST TOOLS: 13.3.0 20240521 (RTEMS 6, RSB␣
↪e52d2288c8a0df64466010839ca1eb40c6d243ed, Newlib 1b3dcfd)
load: /dl02-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x8 info 0x11500000017␣
↪where 0x8 *where 0 in /dl02-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x8 info 0x33 where 0x8␣
↪*where 0 in /dl02-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0xc info 0x8300000018␣
↪where 0xc *where 0 in /dl02-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0xc info 0x33 where 0xc␣
↪*where 0 in /dl02-o1.o
```

...

```
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x182 info 0x11600000013 where 0x182 *where 0 in /dl02-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x182 info 0x33 where 0x182 *where 0 in /dl02-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0 s.offset 0x18e info 0xae0000002d where 0x18e *where 0 in /dl02-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0x1000055ae0 s.offset 0x8 info 0x11500000017 where 0x1000055ae8 *where 0 in /dl02-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0x1000055ae0 s.offset 0xc info 0x8300000018 where 0x1000055aec *where 0 in /dl02-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0x1000055ae0 s.offset 0x10 info 0x8400000017 where 0x1000055af0 *where 0 in /dl02-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0x1000055ae0 s.offset 0x14 info 0x8500000018 where 0x1000055af4 *where 0 in /dl02-o1.o
rtl: rtems_rtl_elf_reloc_rela s.base 0x1000055ae0 s.offset 0x1a info 0x11600000013 where 0x1000055afa *where 0 in /dl02-o1.o

*** FATAL ***
fatal source: 9 (RTEMS_FATAL_SOURCE_EXCEPTION)
CPU: 0
mstatus 0x8000000a00007880
mcause  0x0000000000000004
mepc    0x000000100000b594
ra      0x000000100000b53a
sp      0x00000010000450b0
gp      0x000000100003a800
tp      0x00000010000455d8
t0      0x0000000000000001
t1      0x0000000000000000
t2      0x0000000000000000
s0      0x0000001000045150
s1      0x00000000000029ae
a0      0x0000000000000000
a1      0x0000001000044e50
a2      0x000000100003bd00
a3      0x0000011600000013
a4      0x0000001000034dc8
a5      0x000000100000b594
a6      0x0000000000000000
a7      0x000000100003a4b0
s2      0x0000000000000010
s3      0x0000001000052c60
s4      0xffffffffffffaceb4
s5      0x0000001000055afa
s6      0x0000001000052ec0
s7      0x0000000000000018
s8      0x00000000000000c0
s9      0x0000000000000008
s10     0x0000000000000001
s11     0x0000001000053570
```

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```
t3      0x0000000000000000
t4      0x0000000000000084
t5      0x086f1447000f4240
t6      0x000010c6f7a0b5ec
fcsr    0x00000000
RTEMS version: 6.0.0.e049757c58-modified
RTEMS tools: 13.3.0 20240521 (RTEMS 6, RSB␣
↪e52d2288c8a0df64466010839ca1eb40c6d243ed, Newlib 1b3dcfd)
executing thread ID: 0x0a010001
executing thread name: UI1
```

Author: Pavel Pisa 2024-11-22T00:17:01.265Z

It is suspicious that the failure follows info ending to `0x....0013` so it seems that the relocation for case 0x13 .. 19 .. R_RISCV_CALL_PLT is broken.

Author: Pavel Pisa 2024-11-22T00:17:01.265Z

When I decode `mcause` it reports 4 Load address misaligned and when I analyze the initial case then it is `lw a4,0(s0)` where `s0` is `0x00000010001b97e6`. So this matches. It seems that misaligned accesses are disabled on CPU level. But GCC and ISA expects that they are enabled. So RTEMS startup code should enable them. I try to find how they are enabled and supported on PolarFire.

Author: Pavel Pisa 2024-11-22T00:17:01.265Z

From

PolarFire SoC MSS Technical Reference Manual

3.1.2.5 Data Cache (Ask a Question)

The U54 dCache has an 8-way set-associative 32 KB write-back, VIPT data cache memory with a line size of 64 bytes. Access latency is two clock cycles for words and double-words, and three clock cycles for smaller quantities. Misaligned accesses are not supported in hardware and result in a trap. dCache is kept coherent with a directory-based cache coherence manager, which resides in the L2 cache.

So it seems that misaligned accesses are not supported in hardware and has to be emulate by software.

So it seems that for RISC-V ABI compliance (misaligned accesses are allowed in software), there is mandatory to install emulation handler when RTEMS is running in M-mode and no SBI is present. The HSS integrates OpenSBI for this purpose and relevant code is available at

https://github.com/polarfire-soc/hart-software-services/blob/master/thirdparty/opensbi/lib/sbi/sbi_misaligned_ldst.c

https://github.com/polarfire-soc/hart-software-services/blob/master/thirdparty/opensbi/lib/sbi/sbi_trap.c#L294

Author: Chris Johns 2024-11-22T00:17:01.771Z

created #5163 to continue this discussion

Author: Kinsey Moore 2024-11-20T15:32:52.797Z

approved this merge request

Author: Kinsey Moore 2024-11-20T15:33:01.209Z

added 22 commits

- 949931e3...ae7a21c5 - 20 commits from branch `rtems/rtos:main`
- bb980e3b - cpukit/libdl/riscv: Fix warnings
- 322ee24c - spec/cpukit: Add libdl RISCV support

Compare with previous version

Author: Kinsey Moore 2024-11-20T15:33:40.875Z

unapproved this merge request

Author: Kinsey Moore 2024-11-22T00:13:41.008Z

added 9 commits

- 322ee24c...9e42e61e - 7 commits from branch `rtems/rtos:main`
- 4a00b66b - cpukit/libdl/riscv: Fix warnings
- e14a740a - spec/cpukit: Add libdl RISCV support

Compare with previous version

Author: Kinsey Moore 2024-11-22T00:14:39.662Z

approved this merge request

Author: Chris Johns 2024-11-22T00:17:01.294Z

resolved all threads

Author: Chris Johns 2024-11-22T00:17:01.809Z

mentioned in issue #5163

3.9.2.35 315 - bsps/aarch64/zynqmp: Factor out the CFC-400X management console

Id	315
State	merged
Merged by	Amar Takhar
Merged at	2024-11-22T00:08:08.887Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Chris Johns
Created	2024-11-15T22:56:53.218Z
Updated	2024-11-22T00:08:14.131Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/315
Commit	9e42e61e6e047b33af08a2887ac89015aeb3a202

Summary

bsps/aarch64/zynqmp: Factor out the CFC-400X management console

This moves the management console implementation into its own file so that BSPs which do not need it do not carry the code around with them.

Closes #5120

Author: Kinsey Moore 2024-11-15T22:56:53.416Z

assigned to @opticron

Author: Kinsey Moore 2024-11-15T23:04:12.316Z

requested review from @chris

Author: Kinsey Moore 2024-11-16T17:27:42.031Z

added 2 commits

- 133b335b - 1 commit from branch `rtems/rtos:main`
- 63d4cebd - bsps/aarch64/zynqmp: Factor out the CFC-400X management console

Compare with previous version

Author: Kinsey Moore 2024-11-21T23:52:41.274Z

marked this merge request as **ready**

Author: Chris Johns 2024-11-22T00:06:15.990Z

approved this merge request

Author: Kinsey Moore 2024-11-22T00:06:21.854Z

added 21 commits

- 63d4cebd...24c964e8 - 20 commits from branch `rtems/rtos:main`
- 9e42e61e - bsps/aarch64/zynqmp: Factor out the CFC-400X management console

Compare with previous version

Author: Amar Takhar 2024-11-22T00:08:02.440Z

approved this merge request

3.9.2.36 317 - confdefs: do not CONFIGURE_FILESYSTEM_NFS in ALL

Id	317
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-22T00:03:37.448Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Chris Johns
Created	2024-11-17T00:18:32.816Z
Updated	2024-11-22T00:03:41.456Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/317
Commit	24c964e83c991958b5affe2b554f6ea30dcfb99c

Summary

confdefs: do not CONFIGURE_FILESYSTEM_NFS in ALL

Fixes #5118.

I tested with a normal build, but I did not test with a build of any NFS applications. Requires a change in the release notes to warn users that they need to explicitly use `CONFIGURE_FILESYSTEM_NFS` if they want it.

Author: Gedare Bloom 2024-11-17T00:18:33.034Z

assigned to @chris

Author: Amar Takhar 2024-11-17T00:27:03.365Z

What did you want this for?

Author: Gedare Bloom 2024-11-17T00:27:03.365Z

weird, I changed it to 6.1 in the dialog box. Guess it didn't take. Happened also with my related https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/17. I don't know why.

Author: Gedare Bloom 2024-11-17T00:27:03.382Z

resolved all threads

Author: Gedare Bloom 2024-11-18T15:55:30.407Z

requested review from @chris

Author: Gedare Bloom 2024-11-18T15:55:33.191Z

assigned to @gedare and unassigned @chris

Author: Kinsey Moore 2024-11-22T00:03:10.471Z

approved this merge request

Author: Kinsey Moore 2024-11-22T00:03:24.058Z

added 20 commits

- d3acb436...7d1a9348 - 19 commits from branch `rtems/rtos:main`
- 24c964e8 - confdefs: do not CONFIGURE_FILESYSTEM_NFS in ALL

Compare with previous version

Author: Chris Johns 2024-11-22T00:03:32.630Z

approved this merge request

3.9.2.37 319 - bsps/shared/flash: Add a JFFS2 flashdev driver

Id	319
State	merged
Merged by	Amar Takhar
Merged at	2024-11-21T23:46:16.804Z
Assignee(s)	Kinsey Moore
Created	2024-11-19T01:41:33.369Z
Updated	2024-11-21T23:46:23.546Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/319
Commit	7d1a9348843b07169895d4c57b1f0f167bf2cb6c

Summary

bsps/shared/flash: Add a JFFS2 flashdev driver

This adds generic JFFS2 interworking code that allows JFFS2 to be used on top of any flashdev backend. It currently only supports NOR flashdev backends.

Closes #5157

Author: Kinsey Moore 2024-11-19T01:41:33.558Z

assigned to @opticron

Author: Chris Johns 2024-11-19T01:48:15.407Z

added 2 commits

- 133b335b - 1 commit from branch `rtems/rtos:main`
- 170f23d5 - bsps/shared/flash: Add a JFFS2 flashdev driver

Compare with previous version

Author: Aaron Nyholm 2024-11-19T02:57:36.198Z

I tested this on a Microzed. Ok I have built and run the MR branch and it works. I was able to mount a JFFS2 FS open, edit and create files through power cycles. We should add some tests to the testsuite for this in future. I've opened a issue for that here 5158.

Author: Chris Johns 2024-11-19T14:10:11.026Z

Can we please add compression control to the interface?

Author: Kinsey Moore 2024-11-19T14:10:11.026Z

This has been added via the patch provided in the associated issue.

Author: Chris Johns 2024-11-19T14:10:18.894Z

Can we please set compression control via the API call?

Author: Kinsey Moore 2024-11-19T14:09:41.468Z

changed this line in version 3 of the diff

Author: Kinsey Moore 2024-11-19T14:10:18.894Z

This has been added via the patch provided in the associated issue.

Author: Chris Johns 2024-11-19T03:36:31.945Z

requested changes

Author: Kinsey Moore 2024-11-19T14:09:41.754Z

added 1 commit

- 6e5ca094 - bsps/shared/flash: Add a JFFS2 flashdev driver

Compare with previous version

Author: Kinsey Moore 2024-11-19T14:10:18.920Z

resolved all threads

Author: Chris Johns 2024-11-21T07:33:09.719Z

added 18 commits

- 6e5ca094...f45ccfa1 - 17 commits from branch `rtems/rtos:main`
- e8d85e62 - bsps/shared/flash: Add a JFFS2 flashdev driver

Compare with previous version

Author: Chris Johns 2024-11-21T07:33:50.423Z

approved this merge request

Author: Kinsey Moore 2024-11-21T23:44:44.420Z

added 2 commits

- 9d6367fd - 1 commit from branch `rtems/rtos:main`
- 7d1a9348 - bsps/shared/flash: Add a JFFS2 flashdev driver

Compare with previous version

Author: Amar Takhar 2024-11-21T23:46:06.181Z

approved this merge request

3.9.2.38 325 - bsps/xilinx-zynq: Fixed QSPI Flash sector erase

Id	325
State	merged
Merged by	Chris Johns
Merged at	2024-11-21T23:41:53.696Z
Assignee(s)	Aaron Nyholm
Created	2024-11-21T05:55:34.288Z
Updated	2024-11-21T23:41:58.156Z
Milestone	6.1
Labels	arch:arm, device
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/325
Commit	9d6367fd4f24dd23c014ad9e2b5eb27fd8336e87

Summary

bsps/xilinx-zynq: Fixed QSPI Flash sector erase

Erases of exactly the sector size only erase one sector instead of two.

Closes #5161

Author: Chris Johns 2024-11-21T05:59:56.145Z

assigned to @eagleirony

Author: Kinsey Moore 2024-11-21T14:53:04.268Z

approved this merge request

Author: Chris Johns 2024-11-21T23:41:43.330Z

approved this merge request

3.9.2.39 324 - build: Fix native Windows build

Id	324
State	merged
Merged by	Chris Johns
Merged at	2024-11-21T03:51:08.723Z
Assignee(s)	Sebastian Huber
Reviewer(s)	Chris Johns
Created	2024-11-21T03:24:10.694Z
Updated	2024-11-21T03:51:10.911Z
Milestone	6.1
Labels	rtems::build
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/324
Commit	f45ccfa1673e39f8c9db0a138fc82e8992c25e7f

Summary

build: Fix native Windows build

Replace the Windows path separator to get proper UIDs.

Author: Sebastian Huber 2024-11-21T03:24:10.804Z

assigned to @sebhub

Author: Gedare Bloom 2024-11-21T03:38:15.553Z

@sebhub do you intend to delete `yaml/lib/yaml`?

Author: Sebastian Huber 2024-11-21T03:38:33.106Z

Yes, while testing on Windows I removed also some Python 2 quirks.

Author: Sebastian Huber 2024-11-21T03:38:15.569Z

resolved all threads

Author: Chris Johns 2024-11-21T03:50:05.230Z

Please mark this as draft. It is not suitable for 6.

Author: Chris Johns 2024-11-21T03:50:05.230Z

Disregard my request, it is only Python 2 support which is no long enabled as `waf` is now only `python3`.

Author: Sebastian Huber 2024-11-21T03:45:36.165Z

On Windows I only used a standard Python from python.org and x86_64-w64-mingw32 tools. No MSYS2 or Cygwin.

Author: Chris Johns 2024-11-21T03:45:36.165Z

Where did YAML come from?

Author: Sebastian Huber 2024-11-21T03:45:36.165Z

I didn't remove the YAML module for Python 3.

Author: Gedare Bloom 2024-11-21T03:45:36.165Z

I tested on MSYS2 with sparc/erc32 build successful.

Author: Chris Johns 2024-11-21T03:45:36.165Z

Oh I see I am sorry. I assumed they are the same thing.

Does this mean these sources are not being used with `waf` on `python3`

Author: Sebastian Huber 2024-11-21T03:45:36.165Z

With this change set, RTEMS builds directly in a PowerShell.

Author: Sebastian Huber 2024-11-21T03:45:36.165Z

The included Python 3 yaml module is in `yaml/lib3/yaml`.

Author: Chris Johns 2024-11-21T03:45:44.607Z

I now understand. @gedare could you please update the labels and milestone?

Author: Chris Johns 2024-11-21T03:45:36.193Z

resolved all threads

Author: Chris Johns 2024-11-21T03:50:05.249Z

resolved all threads

Author: Gedare Bloom 2024-11-21T03:50:36.123Z

requested review from @chris

Author: Gedare Bloom 2024-11-21T03:50:45.784Z

approved this merge request

Author: Chris Johns 2024-11-21T03:50:58.847Z

approved this merge request

3.9.2.40 288 - build: Report normal Git hash

Id	288
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-20T15:14:19.722Z
Assignee(s)	Sebastian Huber
Created	2024-11-03T23:56:57.110Z
Updated	2024-11-20T15:14:22.750Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/288
Commit	ae7a21c5e9a34589457dd81c29259c8b5ba90568

Summary

build: Report normal Git hash

Commit 3d782180eae14d8d9666ff8f9584b6fba7772804 changed the reported Git hash to short. Change this back to the normal Git hash. Existing support code may rely on this. The short hash is generated based on the current repository state. The reported hash should be useful also for future states of the repository. If Git changes the hash algorithm in the future, then the hash length may be used as an indicator for the hash algorithm. With a variable hash length this is more difficult.

Update #5037.

Author: Sebastian Huber 2024-11-03T23:56:57.242Z

assigned to @sebhub

Author: Sebastian Huber 2024-11-03T23:57:39.321Z

added 1 commit

- 04fe7906 - build: Report normal Git hash

Compare with previous version

Author: Chris Johns 2024-11-18T04:58:49.750Z

Yes the change was to short I prefer short. If there is an issue with short hashes I suggest you refer this to the git project for comment. I also see not point in guessing on possible changes to the hash used by git.

Author: Sebastian Huber 2024-11-18T04:58:49.750Z

We had the long version for quite a while. In the commit message, there are three issues with the short version:

1. Existing support code may rely on this.
2. The short hash is generated based on the current repository state. The reported hash should be useful also for future states of the repository
3. If Git changes the hash algorithm in the future, then the hash length may be used as an indicator for the hash algorithm. With a variable hash length this is more difficult.

For the Git hash change, see https://git-scm.com/docs/hash-function-transition.

Author: Chris Johns 2024-11-18T04:58:49.750Z

This MR was discussed in the last weekly meeting and @sebhub said only a full hash defines the commit and if a short hash is captured you can only assume it matches the full hash. You can never recover the full hash. This is not an issue when using releases however if you are using a workflow based around placing code from git into production then the full hash is important.

@gedare is it OK to change this MR to %"6.1" ?

Author: Amar Takhar 2024-11-18T04:58:49.750Z

We could just keep what we have short and also store the full hash as much as cutting it makes sense if the argument is the git hash could change in the future then what's "short" could change, too. So I would store both a pre-shortened version that we use and also store the full hash for others to use in production.

Author: Chris Johns 2024-11-18T04:58:49.750Z

How do you maintain the API we have?

Author: Amar Takhar 2024-11-18T04:58:49.750Z

Well, isn't the issue that we're not making the long hash available for use? Historically it's been the short one hasn't it? So adding a long one how does that change any API if we're just adding data to the VERSION file and what we make available?

Author: Chris Johns 2024-11-18T04:58:49.750Z

It was changed from long to short when I updated the version details thinking it would not ok. See this MR's description. I do not want to add or change the API so I think this change to revert back to the long is fine

Author: Amar Takhar 2024-11-18T04:58:49.750Z

Okay, well do what you feel is right I was suggesting to just leave your change in and add another field with the long version. As long as we don't have super long hashes evrywhere where you're always trying to cut and paste the first random amount of characters. I find that really annoying in other projects when they use a long verison people copy anywhere from 6-12 characters for the version string.

Author: Chris Johns 2024-11-18T04:58:49.750Z

Yes I agree with your view that long hashes are annoying and why I changed it. It is too late to change our API for the 6 release but it may evolve in the future.

Author: Amar Takhar 2024-11-18T04:58:49.750Z

When you say "Change our API" I don't know that I would call adding an extra line to the VERSION file and making it available a huge change. Nothing will be using it but it will be available for anyone to use.

If we make the default long that means anywhere we refer to the hash will have to cut it down and we'll have to be constant. We need to set what the default is and use that everywhere. I won't even use the long one in CI either it's just too annoying and it's not needed if the hash changes in the future then it changes lots of things change all the time.

Author: Chris Johns 2024-11-18T04:58:49.750Z

The version string is embedded into lot of things and that is driven off the API that captures the revision. The MR is a change for this release only. We can revisit the change on the `main` branch.

Author: Amar Takhar 2024-11-18T04:58:49.750Z

Okay then up to you as long as this doesn't break for CI in having to handle version strings differently between this release and 7.1

Author: Chris Johns 2024-11-18T04:58:49.750Z

I cannot answer that as I do not know what CI requires. Do you think the long hash is a problem for CI?

Author: Amar Takhar 2024-11-18T04:58:49.750Z

I think it being different is yes we don't have any official releases with the long hash do we? 5.x won't be under CI but I suspect 6.x will be around for a while.

Author: Gedare Bloom 2024-11-18T04:58:49.750Z

Yes, we should set this to 6.1 milestone to reduce the API breakage.

Sebastian's argument that only the full hash exactly identifies the commit is valid. The short commit is a convenience only, and its length depends on the git repo being used to ensure uniqueness (no collisions), see https://git-scm.com/docs/git-show#Documentation/git-show.txt—abbrev-commit

The short hash length can change if a collision occurs in the future within the current short hash length, which makes the short hash length unreliable.

We can certainly revisit the discussion during 7.1, but given the unreliability of the short hash length, I don't see that we can use abbreviated commit hashes.

Author: Amar Takhar 2024-11-18T04:58:49.750Z

I don't see how are arguments differ? I'm saying to have both stored and to set what we use as the 'short' version by default so we don't get a whole mix them everywhere developres will use anywhere from 8-12 characters.

Right now we are only storing the short version I'm saying to add both one for display and one for using where it matters.

Author: Gedare Bloom 2024-11-18T04:58:49.750Z

I linked the wrong place: https://git-scm.com/docs/git-config#Documentation/git-config.txt-coreabbrev

The command already gives different length short commits in our various repositories, because the appropriate size is inferred by the size of the repo. I get back 11 characters for rtems.git. So for sure an explicit size needs to be set. But any size we set eventually has to be increased to avoid conflicts.

I don't understand what you mean by "have both stored" because this change is about the release label, which is a string used to identify a release. There's no difference between what you display and what you use.

The change here is about what goes in the release label. The release label requires uniqueness and the ability to invert it to get back to the point where the release was made.

We can resolve this thread with an Issue against milestone 7.1.

Author: Gedare Bloom 2024-11-18T04:58:49.966Z

created #5156 to continue this discussion

Author: Gedare Bloom 2024-11-18T04:58:49.770Z

resolved all threads

Author: Gedare Bloom 2024-11-18T04:58:50.182Z

mentioned in issue #5156

Author: Gedare Bloom 2024-11-18T04:59:15.534Z

approved this merge request

Author: Gedare Bloom 2024-11-18T04:59:27.890Z

added 41 commits

- 04fe7906...133b335b - 40 commits from branch `rtems/rtos:main`
- e773abda - build: Report normal Git hash

Compare with previous version

Author: Kinsey Moore 2024-11-20T15:13:50.578Z

added 14 commits

- e773abda...e53dfabe - 13 commits from branch `rtems/rtos:main`
- ae7a21c5 - build: Report normal Git hash

Compare with previous version

Author: Kinsey Moore 2024-11-20T15:14:15.029Z

approved this merge request

3.9.2.41 322 - Workaround for the in GR740 errata: Level-2 Cache Issues H1 2023 (GRLIB-TN-0021)

Id	322
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-20T15:12:14.165Z
Assignee(s)	Sebastian Huber
Created	2024-11-20T03:28:52.088Z
Updated	2024-11-20T15:12:18.560Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/322
Commit	e53dfabe36d58265ad015cec3d6fb62c07091cf8

Summary

Update #4925.

Author: Sebastian Huber 2024-11-20T03:28:52.375Z

assigned to @sebhub

Author: Sebastian Huber 2024-11-20T03:31:21.401Z

changed title from **{-grlib/l2c: Fix whitespace-}** to **{+Workaround for the in GR740 errata: Level-2 Cache Issues H1 2023 (GRLIB-TN-0021)+}**

Author: Sebastian Huber 2024-11-20T03:31:21.439Z

changed the description

Author: Chris Johns 2024-11-20T03:52:51.106Z

This MR has an open %”6.1” issue so is fine to merge if approved.

Author: Chris Johns 2024-11-20T03:52:55.036Z

approved this merge request

Author: Kinsey Moore 2024-11-20T15:08:12.463Z

added 13 commits

- a565b5d3...e5854b2a - 6 commits from branch `rtems/rtos:main`
- ed55634d - grlib/l2c: Fix whitespace

- 0a2c310d - grlib/l2c: Use printk for debug print
- 6198260d - grlib/l2c: Access registers with helper functions
- 1ce63479 - grlib/l2c: Write to flush registers using atomic instructions
- 85add65a - grlib/l2c: Prevent concurrent register access
- 7d5c08db - validation: Check bootloader L2C settings
- e53dfabe - sparc/leon3: Add leon3_l2c_lock

Compare with previous version

Author: Kinsey Moore 2024-11-20T15:12:02.017Z

approved this merge request

3.9.2.42 321 - LEON3: Update power-down function

Id	321
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-20T15:07:54.435Z
Assignee(s)	Sebastian Huber
Created	2024-11-20T02:46:18.066Z
Updated	2024-11-20T15:07:58.748Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/321
Commit	e5854b2a6915dbc0f6905656ae4b577250973c87

Summary

LEON3: Update power-down function

This updates the implementation of the LEON3 processor power-down function.

It now contains the workaround for the GR712RC power-down errata described in GR712RC-UM, version 2.16, section 1.7.8. The workaround is compatible with other LEON3/LEON4 components.

Update #4875.

Author: Sebastian Huber 2024-11-20T02:46:18.291Z

assigned to @sebhub

Author: Gedare Bloom 2024-11-20T03:09:22.195Z

approved this merge request

Author: Kinsey Moore 2024-11-20T15:07:33.520Z

added 6 commits

- 8cebe8ab...e661f400 - 4 commits from branch `rtems/rtos:main`
- 26b11e38 - LEON3: Update power-down function
- e5854b2a - bsps/sparc: Add comments

Compare with previous version

Author: Kinsey Moore 2024-11-20T15:07:38.892Z

approved this merge request

3.9.2.43 316 - RTEMS FDT Add shell read and write handler support

Id	316
State	merged
Merged by	Gedare Bloom
Merged at	2024-11-16T06:50:46.326Z
Assignee(s)	Chris Johns
Reviewer(s)	Gedare Bloom
Created	2024-11-16T03:17:33.008Z
Updated	2024-11-16T06:50:48.461Z
Milestone	6.1
Labels	cpukit::misc, rtems::shell
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/316
Commit	133b335bae86bcbc9ef02eaea8caeeb624320751

This change add shell read and write handler support to allow indirect access to a device using the FDT shell. A user can provide handlers that can map to a bus not directly connected to the bus of the CPU.

Note, this change only adds 2 calls and does not change any other interfaces. The code is only effects a shell command that is used for testing and debugging. I would like to see this change on 6.1.

Author: Chris Johns 2024-11-16T03:17:33.169Z

requested review from @gedare

Author: Chris Johns 2024-11-16T03:17:33.185Z

assigned to @chris

Author: Amar Takhar 2024-11-16T03:18:34.098Z

approved this merge request

Author: Amar Takhar 2024-11-16T03:19:14.896Z

Ohh this is %6.2 interesting .. so we don't have a 6.2 branch and normally what we'd want is this not to have 'main' as a target since 6.2 will never be 'main' should this be Draft:

Author: Amar Takhar 2024-11-16T03:21:58.711Z

Chris asked if this could be moved to %6.1 it's not an invasive change so it's fine Gedare can switch the target if he feels otherwise.

Author: Chris Johns 2024-11-16T05:55:40.461Z

mentioned in issue #5152

Author: Chris Johns 2024-11-16T05:56:01.040Z

Issue https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/5152 has been raised.

Author: Chris Johns 2024-11-16T06:40:45.426Z

added 1 commit

- 133b335b - cpukit/libmisc/rtems-fdt: Add shell read and write handler support

Compare with previous version

Author: Gedare Bloom 2024-11-16T06:50:37.460Z

approved this merge request

3.9.2.44 175 - timespec.h, etc.: Eliminate use of 32-bit for time_t

Id	175
State	merged
Merged by	Chris Johns
Merged at	2024-11-08T00:40:35.182Z
Assignee(s)	Joel Sherrill
Created	2024-08-07T22:01:02.256Z
Updated	2024-11-15T06:36:09.130Z
Milestone	6.1
Labels	cpukit, scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/175
Commit	dc7adff7239fb480b9173477d4f9782a621bab29

Summary

timespec.h, etc.: Eliminate use of 32-bit for time_t

This code had a uint32_t local variable for seconds from a timespec. This was assigning a time_t to a uint32_t and ultimately returning it. This propgated to rtems_timespec_add_to().

Coverity CID 1512527

Closes #5107.

Author: Joel Sherrill 2024-08-07T22:01:02.491Z

assigned to @joel

Author: Amar Takhar 2024-08-08T01:52:52.910Z

approved this merge request

Author: Sebastian Huber 2024-11-08T00:37:24.568Z

Add test case to sptchimespec01 which uses a > 32-bit time?

Author: Gedare Bloom 2024-11-08T00:37:24.568Z

@joel I think a test case addition is a good idea.

Author: Joel Sherrill 2024-11-08T00:37:24.568Z

Writing a test case is on my todo list. Just low. If someone has a good idea and implements it before me, awesome and thanks.

Author: Chris Johns 2024-11-08T00:37:24.751Z

created #5146 to continue this discussion

Author: Gedare Bloom 2024-08-15T15:40:48.372Z

requested changes

Author: Chris Johns 2024-09-20T22:51:21.484Z

marked this merge request as **draft**

Author: Chris Johns 2024-11-08T00:37:24.585Z

resolved all threads

Author: Chris Johns 2024-11-08T00:37:24.981Z

mentioned in issue #5146

Author: Chris Johns 2024-11-08T00:38:17.340Z

approved this merge request

Author: Chris Johns 2024-11-08T00:38:30.268Z

added 237 commits

- 5a8249ed...f4875c8f - 236 commits from branch `rtems/rtos:main`
- dc7adff7 - timespec.h, etc.: Eliminate use of 32-bit for time_t

Compare with previous version

Author: Chris Johns 2024-11-08T00:39:19.523Z

marked this merge request as **ready**

Author: Chris Johns 2024-11-08T00:40:29.476Z

bypassed reviews on this merge request

Author: Amar Takhar 2024-11-15T06:36:09.008Z

mentioned in merge request !314

3.9.2.45 206 - bsps/stm32h7/spi: Add full duplex and interrupt support

Id	206
State	merged
Merged by	Amar Takhar
Merged at	2024-11-15T01:12:08.400Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Sebastian Huber
Created	2024-09-06T20:18:58.848Z
Updated	2024-11-15T01:12:11.536Z
Milestone	6.1
Labels	arch:arm, device::spi
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/206
Commit	b3be636863f494c02b30320e24337d18f6d99ad1

Summary

This patch set adds full duplex support and IRQ support for SPI with BSP configuration to disable interrupt support.

Author: Kinsey Moore 2024-09-06T20:18:59.031Z

assigned to @opticron

Author: Christian Mauderer 2024-09-13T08:12:06.787Z

approved this merge request

Author: Amar Takhar 2024-09-13T08:18:31.861Z

approved this merge request

Author: Amar Takhar 2024-09-13T08:18:37.465Z

added 11 commits

- 25e1e9da...ce1fb41a - 10 commits from branch `rtems/rtos:main`
- b81ef313 - bsps/stm32h7: Add full duplex support for SPI

Compare with previous version

Author: Kinsey Moore 2024-09-16T16:39:14.758Z

added 6 commits

- b81ef313...333a1aee - 5 commits from branch `rtems/rtos:main`

- 91677dd7 - bsps/stm32h7: Add full duplex support for SPI

Compare with previous version

Author: Kinsey Moore 2024-09-16T16:46:21.828Z

added 2 commits

- 25e1e9da - bsps/stm32h7: Add full duplex support for SPI
- 5996d22e - bsps/stm32h7/spi: Add IRQ support

Compare with previous version

Author: Kinsey Moore 2024-09-16T16:46:33.908Z

reset approvals from @c-mauderer and @amar by pushing to the branch

Author: Kinsey Moore 2024-09-16T16:47:32.093Z

changed title from **bsps/stm32h7: Add full duplex {-support for SPI-}** to **bsps/stm32h7{+/spi+}: Add full duplex {+and interrupt support+}**

Author: Kinsey Moore 2024-09-16T16:47:32.121Z

changed the description

Author: Kinsey Moore 2024-09-16T16:47:54.360Z

added 17 commits

- 5996d22e...333a1aee - 15 commits from branch `rtems/rtos:main`
- 7f41c5e3 - bsps/stm32h7: Add full duplex support for SPI
- 5b60037e - bsps/stm32h7/spi: Add IRQ support

Compare with previous version

Author: Kinsey Moore 2024-09-19T20:40:01.404Z

added 19 commits

- 5b60037e...5e5214b7 - 17 commits from branch `rtems/rtos:main`
- 6808feda - bsps/stm32h7: Add full duplex support for SPI
- eace3ef5 - bsps/stm32h7/spi: Add IRQ support

Compare with previous version

Author: Kinsey Moore 2024-09-25T18:15:36.719Z

added 12 commits

- eace3ef5...617808b9 - 10 commits from branch `rtems/rtos:main`
- 8c25d868 - bsps/stm32h7: Add full duplex support for SPI
- 54447302 - bsps/stm32h7/spi: Add IRQ support

Compare with previous version

Author: Sebastian Huber 2024-11-08T03:36:23.796Z

The return values in this driver make no sense to me. The documentation says:

```
/**
* @brief SPI bus control.
*/
struct spi_bus {
/**
* @brief Transfers SPI messages.
*
* @param[in] bus The bus control.
* @param[in] msgs The messages to transfer.
* @param[in] msg_count The count of messages to transfer.  It must be
* positive.
*
* @retval 0 Successful operation.
* @retval negative Negative error number in case of an error.
*/
int (*transfer)(spi_bus *bus, const spi_ioc_transfer *msgs, uint32_t␣
↪msg_count);
```

Author: Kinsey Moore 2024-11-04T21:44:22.083Z

changed this line in version 9 of the diff

Author: Kinsey Moore 2024-11-08T03:36:23.796Z

This is addressed in the latest push.

Author: Sebastian Huber 2024-11-08T03:36:21.002Z

Using events is a bad approach since this may collide with application events. At least use a system event. You can also use a self-contained condition variable or a binary semaphore.

Author: Kinsey Moore 2024-11-04T21:44:22.665Z

changed this line in version 9 of the diff

Author: Kinsey Moore 2024-11-08T03:36:21.002Z

This is addressed in the latest push.

Author: Kinsey Moore 2024-10-15T13:13:18.562Z

marked this merge request as **draft**

Author: Kinsey Moore 2024-10-15T13:13:35.837Z

Marking this as a draft until I have time to address the comments on it.

Author: Kinsey Moore 2024-11-04T21:44:22.971Z

added 120 commits

- 54447302...c6ad57b1 - 118 commits from branch `rtems/rtos:main`
- 0ac46c1a - bsps/stm32h7: Add full duplex support for SPI
- 3d011932 - bsps/stm32h7/spi: Add IRQ support

Compare with previous version

Author: Kinsey Moore 2024-11-04T21:44:28.272Z

marked this merge request as **ready**

Author: Kinsey Moore 2024-11-06T15:07:37.198Z

added 4 commits

- 3d011932...c4625d8d - 2 commits from branch `rtems/rtos:main`
- dd5f0003 - bsps/stm32h7: Add full duplex support for SPI
- 6f42063e - bsps/stm32h7/spi: Add IRQ support

Compare with previous version

Author: Kinsey Moore 2024-11-07T03:12:41.005Z

added 3 commits

- 87c725b6 - 1 commit from branch `rtems/rtos:main`
- 8036281e - bsps/stm32h7: Add full duplex support for SPI
- e0b265ae - bsps/stm32h7/spi: Add IRQ support

Compare with previous version

Author: Kinsey Moore 2024-11-08T03:36:23.819Z

resolved all threads

Author: Kinsey Moore 2024-11-08T03:36:52.007Z

added 8 commits

- e0b265ae...d6f3cd72 - 6 commits from branch `rtems/rtos:main`
- b207f6d3 - bsps/stm32h7: Add full duplex support for SPI
- 58915640 - bsps/stm32h7/spi: Add IRQ support

Compare with previous version

Author: Chris Johns 2024-11-15T00:47:50.779Z

requested review from @sebhub

Author: Chris Johns 2024-11-15T00:48:03.477Z

added 30 commits

- 58915640...601e52f4 - 28 commits from branch `rtems/rtos:main`
- b1a350a1 - bsps/stm32h7: Add full duplex support for SPI
- b3be6368 - bsps/stm32h7/spi: Add IRQ support

Compare with previous version

Author: Sebastian Huber 2024-11-15T00:51:17.360Z

approved this merge request

Author: Amar Takhar 2024-11-15T01:12:01.041Z

approved this merge request

3.9.2.46 298 - bsps: Fix Doxygen groups

Id	298
State	merged
Merged by	Chris Johns
Merged at	2024-11-15T00:37:13.361Z
Assignee(s)	Sebastian Huber
Created	2024-11-11T01:15:51.265Z
Updated	2024-11-15T00:37:17.044Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/298
Commit	601e52f4955d47d9ff7139a4f18cfdc63e564656

Summary

Author: Sebastian Huber 2024-11-11T01:15:51.362Z

assigned to @sebhub

Author: Kinsey Moore 2024-11-15T00:36:42.492Z

added 28 commits

- 71e95306...6f604aec - 27 commits from branch `rtems/rtos:main`
- 601e52f4 - bsps: Fix Doxygen groups

Compare with previous version

Author: Kinsey Moore 2024-11-15T00:36:58.444Z

approved this merge request

Author: Chris Johns 2024-11-15T00:37:04.158Z

approved this merge request

3.9.2.47 300 - Only restore terminal settings on exit when captured

Id	300
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-15T00:36:04.712Z
Assignee(s)	yang zhang
Reviewer(s)	Chris Johns
Created	2024-11-12T01:49:23.557Z
Updated	2024-11-15T00:36:11.772Z
Milestone	6.1
Labels	rtems::shell
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/300
Commit	6f604aec830bc91c59c9c326ec9cd59afe856365

Summary

libmisc/shell: Only restore terminal settings on exit when captured

Signed-off-by: yang.zhang <zhangyang01@kylinos.cn>

Author: Chris Johns 2024-11-12T01:55:35.759Z

Please fix the commit message to be `libmisc/shell: Only restore terminal settings on exit when captured`.

We have a de-facto standard of adding the area of RTEMS the change relates to. It makes reviewing the git history easier.

Thanks

Author: Chris Johns 2024-11-12T01:56:18.687Z

requested review from @chris

Author: Chris Johns 2024-11-12T01:56:30.592Z

assigned to @yang.zhang

Author: yang zhang 2024-11-12T02:04:45.742Z

changed title from **Only restore terminal settings on exit when {-it can-}** to **{+libmisc/shell: +}Only restore terminal settings on exit when {+captured+}**

Author: yang zhang 2024-11-12T02:04:45.770Z

changed the description

Author: yang zhang 2024-11-12T03:18:44.290Z

I'm trying porting ssh. Currently ssh work on no-pty mode, shell's stdin/stdout/stderr is redirected on socket pair, it does not support tcgetattr and tcsetattr.

When exiting ssh session shell, if tcgetattr failed, i think it is not neccessary to call tcsetattr again to avoid some unnecessary logs. "PTY allocation request failed on channel 0

logs: RTEMS Shell on no console. Use 'help' to list commands. exit hell: cannot reset terminal attributes (no console)"

Author: Chris Johns 2024-11-12T03:18:44.290Z

Nice. Is this the full `ssh`? I almost had tinyssh ported. I could dig out the changes if you are interested?

I am fine with the change. You just need to edit the commit message.

Author: yang zhang 2024-11-12T03:18:44.290Z

Yeah, it is full ssh. But the work just begin, i have lots of prombems todo. You say you almost had tinyssh ported, could you share it, thanks.

Author: Chris Johns 2024-11-12T03:18:44.290Z

Yes. I can share it. I will need to dig it out.

Author: Chris Johns 2024-11-12T02:23:27.166Z

Thanks for updating the MR title however the MR title is not the first line of the commit message which also needs to be changed.

Author: Chris Johns 2024-11-12T03:18:44.308Z

resolved all threads

Author: Sebastian Huber 2024-11-13T01:36:29.942Z

The assignment should move out of the `if`.

Author: Sebastian Huber 2024-11-13T01:36:29.942Z

According to the man page, `tcgetattr()` and `tcsetattr()` return `0` on success. So, the check should be changed accordingly.

Author: yang zhang 2024-11-12T06:31:55.352Z

changed this line in version 2 of the diff

Author: Sebastian Huber 2024-11-13T01:36:33.569Z

Given the various paths in this function, this variable should have a default value.

Author: Chris Johns 2024-11-13T01:36:33.569Z

And called `have_previous_term` so it tracks the state of the `previous_term` data.

Author: yang zhang 2024-11-13T01:36:33.569Z

yeah, i already found the issue, tc_result should be intialized by -1, i'm doing this, but not sure amend a commit, or generate a new MR, i'm learning the rules.

Author: Chris Johns 2024-11-13T01:36:33.569Z

Great you asked so we can help.

To amend the commit message use git and the `git commit --amend` options. This will let you edit the commit. Once done push the commit like you did but add the `--force` option. For example `git push --force origin this-branch` where you use your actual branch.

Author: yang zhang 2024-11-13T01:36:33.569Z

Thank you very much for your prompt and detailed response. I will try.

Author: yang zhang 2024-11-12T06:31:57.009Z

changed this line in version 2 of the diff

Author: yang zhang 2024-11-12T06:31:57.398Z

added 1 commit

- 77c1de79 - libmisc/shell: Only restore terminal settings on exit when captured

Compare with previous version

Author: yang zhang 2024-11-12T08:24:36.147Z

changed title from **{-libmisc/shell: -}Only restore terminal settings on exit when captured** to **Only restore terminal settings on exit when captured**

Author: Gedare Bloom 2024-11-13T01:36:38.290Z

I would just change this to:

`else if (have_previous_term == 0) {`

Author: yang zhang 2024-11-13T01:22:33.178Z

changed this line in version 3 of the diff

Author: Gedare Bloom 2024-11-13T01:36:42.118Z

The wording is strange, because of using 0 for checking for truth. It might be more readable to use:

```
int have_previous_term = 0;
...
have_previous_term = (tcgetattr(...) == 0);
if (have_previous_term) ...
```

Author: Sebastian Huber 2024-11-13T01:36:42.118Z

Maybe `bool have_previous_term = false;`.

Author: yang zhang 2024-11-13T01:22:34.106Z

changed this line in version 3 of the diff

Author: yang zhang 2024-11-13T01:36:42.118Z

Thank you for your suggestionsi have made further revisions, please review. Thanks.

Author: yang zhang 2024-11-13T01:22:34.411Z

added 1 commit

- 39e75fab - libmisc/shell: Only restore terminal settings on exit when captured

Compare with previous version

Author: Sebastian Huber 2024-11-13T01:36:42.136Z

resolved all threads

Author: Sebastian Huber 2024-11-15T00:35:00.497Z

Sorry for being pedantic, but what did you actually `Signed-off-by` with your commit message?

Author: Amar Takhar 2024-11-15T00:35:00.497Z

This is pretty common for DCO - Developers Certificate of Origin. https://developercertificate.org/

Please read the contents within to see what it means.

We will be using this in the future for everyone happy to see it here.

Author: Sebastian Huber 2024-11-15T00:35:00.497Z

I know what this is, but within the RTEMS Project this is meaningless right now. It should be documented in the contributing guidelines, if we want to use it:

https://docs.rtems.org/docs/main/user/support/contrib.html

Author: Chris Johns 2024-11-15T00:35:00.497Z

Is it a reason to block this MR at this point in time?

Author: Sebastian Huber 2024-11-15T00:35:00.497Z

No, this was more a note to the project.

Author: Amar Takhar 2024-11-15T00:35:00.497Z

Sure but it's not like it hasn't happened before from RTEMS:

```
# git log|grep -i signed-off-by|wc -l
381
```

Author: Kinsey Moore 2024-11-15T00:35:00.795Z

created #5151 to continue this discussion

Author: Sebastian Huber 2024-11-15T00:05:07.006Z

resolved all threads

Author: Kinsey Moore 2024-11-15T00:34:27.919Z

resolved all threads

Author: Kinsey Moore 2024-11-15T00:35:00.526Z

resolved all threads

Author: Kinsey Moore 2024-11-15T00:35:00.927Z

mentioned in issue #5151

Author: Chris Johns 2024-11-15T00:35:28.326Z

approved this merge request

Author: Kinsey Moore 2024-11-15T00:35:34.843Z

added 26 commits

- 39e75fab...d0b9c07b - 25 commits from branch `rtems/rtos:main`
- 6f604aec - libmisc/shell: Only restore terminal settings on exit when captured

Compare with previous version

Author: Kinsey Moore 2024-11-15T00:35:52.208Z

approved this merge request

3.9.2.48 306 - doxgen: Document build system provided files

Id	306
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-15T00:20:23.242Z
Assignee(s)	Sebastian Huber
Created	2024-11-13T01:02:40.586Z
Updated	2024-11-15T00:20:27.061Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/306
Commit	d0b9c07b20736e88178b823197376c6232880784

Summary

doxgen: Document build system provided files

Use the #include path.

Update #3707.

Author: Sebastian Huber 2024-11-13T01:02:40.700Z

assigned to @sebhub

Author: Chris Johns 2024-11-15T00:19:56.059Z

added 9 commits

- e5b63aeb...83dccef4 - 8 commits from branch `rtems/rtos:main`
- d0b9c07b - doxgen: Document build system provided files

Compare with previous version

Author: Chris Johns 2024-11-15T00:20:01.803Z

approved this merge request

Author: Kinsey Moore 2024-11-15T00:20:18.392Z

approved this merge request

3.9.2.49 310 - validation: Clarify SMP EDF test case

Id	310
State	merged
Merged by	Amar Takhar
Merged at	2024-11-14T01:53:36.867Z
Assignee(s)	Sebastian Huber
Created	2024-11-14T00:34:08.878Z
Updated	2024-11-14T01:53:39.392Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/310
Commit	f7b04e72f86e6c26028f774c85beacb1e063c87e

Summary

validation: Clarify SMP EDF test case

Update #3716.

Author: Sebastian Huber 2024-11-14T00:34:09.345Z

assigned to @sebhub

Author: Gedare Bloom 2024-11-14T01:49:25.606Z

approved this merge request

Author: Amar Takhar 2024-11-14T01:53:30.922Z

approved this merge request

3.9.2.50 299 - rtems: Remove <rtems/rtemsdialer.h>

Id	299
State	merged
Merged by	Amar Takhar
Merged at	2024-11-13T23:30:40.657Z
Assignee(s)	Sebastian Huber
Created	2024-11-11T01:16:38.591Z
Updated	2024-11-13T23:30:43.319Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/299
Commit	d386baedb548c903b08105423e10d9cc05cee59b

Summary

rtems: Remove <rtems/rtemsdialer.h>

This header file belongs to the network stacks.

Author: Sebastian Huber 2024-11-11T01:16:38.675Z

assigned to @sebhub

Author: Gedare Bloom 2024-11-13T23:21:55.265Z

Is there a related MR to add the header file to the network stacks?

Author: Sebastian Huber 2024-11-13T23:21:55.265Z

It was already in libbsd. I noticed a double installation. I added a MR for the legacy network stack https://gitlab.rtems.org/rtems/pkg/rtems-net-legacy/-/merge_requests/5.

Author: Gedare Bloom 2024-11-13T23:21:55.265Z

Ok. I think the general direction we'd like to go with these is to move them into `rtems-net-services` but how we do that is still not that clear to me.

Author: Sebastian Huber 2024-11-13T23:20:36.797Z

resolved all threads

Author: Gedare Bloom 2024-11-13T23:21:55.283Z

resolved all threads

Author: Gedare Bloom 2024-11-13T23:22:03.491Z

approved this merge request

Author: Amar Takhar 2024-11-13T23:30:16.978Z

approved this merge request

Author: Amar Takhar 2024-11-13T23:30:26.346Z

added 23 commits

- 010305a9...be85180e - 22 commits from branch `rtems/rtos:main`
- d386baed - rtems: Remove <rtems/rtemsdialer.h>

Compare with previous version

3.9.2.51 308 - spfatal34/spfatal36: Avoid RTEMS_UNREACHABLE()

Id	308
State	merged
Merged by	Amar Takhar
Merged at	2024-11-13T23:05:44.784Z
Assignee(s)	Sebastian Huber
Created	2024-11-13T01:06:06.952Z
Updated	2024-11-13T23:05:47.677Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/308
Commit	5ed0bf34570125efe85a516ddb92429824f4dc1d

Summary

spfatal34/spfatal36: Avoid RTEMS_UNREACHABLE()

The RTEMS_UNREACHABLE() is a hint to the compiler that this code location is unreachable. The compiler may use this information to optimize the code. If a test case fails and we reach this code location, then unpredictable things may happen making the test case debugging more difficult than necessary.

Author: Sebastian Huber 2024-11-13T01:06:07.034Z

assigned to @sebhub

Author: Gedare Bloom 2024-11-13T22:42:46.301Z

approved this merge request

Author: Amar Takhar 2024-11-13T23:05:07.999Z

approved this merge request

Author: Amar Takhar 2024-11-13T23:05:32.209Z

added 3 commits

- f57652dc - 1 commit from branch `rtems/rtos:main`
- 85facac3 - spfatal26: Fix recursive test end
- 5ed0bf34 - spfatal34/spfatal36: Avoid RTEMS_UNREACHABLE()

Compare with previous version

3.9.2.52 307 - powerpc/qoriq: Enable RTEMS_SMP for BSP family

Id	307
State	merged
Merged by	Amar Takhar
Merged at	2024-11-13T23:05:05.198Z
Assignee(s)	Sebastian Huber
Created	2024-11-13T01:03:28.686Z
Updated	2024-11-13T23:05:07.574Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/307
Commit	f57652dcda041729328ba4cbb7f68830a766ae4a

Summary

Author: Sebastian Huber 2024-11-13T01:03:28.765Z

assigned to @sebhub

Author: Gedare Bloom 2024-11-13T22:42:06.685Z

approved this merge request

Author: Amar Takhar 2024-11-13T23:05:01.525Z

approved this merge request

3.9.2.53 282 - Improve event record handling

Id	282
State	merged
Merged by	Chris Johns
Merged at	2024-11-12T22:43:54.375Z
Assignee(s)	Sebastian Huber
Reviewer(s)	Gedare Bloom
Created	2024-10-29T10:33:01.515Z
Updated	2024-11-12T22:43:58.666Z
Milestone	6.1
Labels	api
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/282
Commit	30fc123f8d65310772a07926acb7b0413e28b624

Summary

The event record handling had some reliability issues especially on SMP systems. This is fixed by a new approach to fetch the event records. See also: https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/36

Author: Sebastian Huber 2024-10-29T10:33:01.602Z

assigned to @sebhub

Author: Sebastian Huber 2024-10-29T10:40:41.738Z

changed title from **{-record02: Fix test end-}** to **{+Improve event record handling+}**

Author: Sebastian Huber 2024-10-29T10:40:41.762Z

changed the description

Author: Sebastian Huber 2024-10-29T10:41:02.717Z

mentioned in merge request rtems/tools/rtems-tools!36

Author: Kinsey Moore 2024-10-29T12:59:39.954Z

added 12 commits

- cd4af836...6ae5a047 - 2 commits from branch `rtems/rtos:main`
- 4e5aa747 - record02: Fix test end
- 58c8acab - record: Remove drain header from record control
- 8f62809d - record: Add rtems_record_fetch()
- 20584722 - record: Remove rtems_record_drain()
- 4e05041d - record: Rework client
- b2fe35b9 - record: Reorganize system event numbers
- f11041c1 - record: Improve uptime association
- b6cb11aa - record: Avoid non-monotonic event times
- bf11c64a - record: Dump only once in fatal handling
- 5c54ea1a - record: Add uptime event to fatal dump

Compare with previous version

Author: Gedare Bloom 2024-11-09T19:48:45.111Z

I will try to take a pass through the code changes soon, but I wanted to give my first impression is that this is a big API-level change to be trying to get in before the release of 6.1. It's not clear to me though which of these changes are for external use, or for the internal implementation.

The API changes I noticed: * new function `rtems_record_fetch_recommended_item_count()` * new function `rtems_record_fetch_initialize()` * new function `rtems_record_fetch()` * new structure `rtems_record_fetch_control` * new type (enum) `rtems_record_fetch_status` * structure name change `uptime` to `rtems_record_client_uptime` (this is an improvement to avoid polluting the global namespace) * return type change for `rtems_record_client_init` * increment the `RTEMS_RECORD_THE_VERSION` with associated restructuring of the `rtems_record_event` structure

And the deprecated and obsoleted call: * `rtems_record_drain` * `rtems_record_writev`

It is unusual to directly deprecate and obsolete an API call, but, it seems this function was not documented and was not being used by the external tooling, so I'm willing

to let that slide. It should still be noted and treated as a deprecation, even if it was a "hidden interface" just on the chance someone happened to be using it for something.

Relatedly, it would help as part of this refactoring if you can keep the public API cleanly defined in installed `cpukit/include/record*.h` headers, and hide the implementation details a bit more. This API leaks a lot of implementation details and doesn't offer a great abstraction for creating the client-side tools, as seen in the associated https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/36/ which basically duplicates a lot of this MR. It's not clear to me why the header files are being duplicated between rtems.git and rtems-tools.git, instead of having the tool pick up the header from an installed build. This expectation should be documented within the header file.

I would like to see some better separation between what you view as the "stable API" of the `rtems_record_xxx` interface, and what may be a bit more flexible. It is good the tooling is updated also, but if someone created their own tools based on the Record Interface, those would become badly broken. That is unlikely but I'm taking a more careful view about API changes these days.

I can't tell if these changes need updates to the documentation in `user/tracing/eventrecording.rst` also, as I cannot tell what parts of the header files are internal and what parts are for the external/tools use.

Author: Sebastian Huber 2024-11-09T19:48:45.111Z

It is unlikely that a user will notice the API changes. The user can configure the event recording through application configuration options (which didn't change). The user can also generate events with functions not changed by this patch set. Getting the event records to the host is done through the dump functions (which didn't change) or a TCP stream. Since the record format version changed, you need matching tools.

I am sure there are lots of ways to improve how this is organized, however, I have only a limited amount of time which I can dedicate to this work. The patch set fixes some serious reliability issues. It was on my TODO list for a long time. I prioritized the work just for the release.

Author: Gedare Bloom 2024-11-09T19:48:45.111Z

Yes that is fine. We can just make note of these things in the release notes. As stated, it is unlikely anyone else has created their own external tools to process the records, and the rest of the API is the same. I will be fine to resolve this thread with an Issue to address some of these improvements in the future (and with update to the release notes).

Author: Gedare Bloom 2024-11-09T19:48:45.325Z

created #5148 to continue this discussion

Author: Gedare Bloom 2024-10-30T04:47:57.018Z

requested review from @gedare

Author: Sebastian Huber 2024-11-01T05:58:34.931Z

I will mark this as a draft, since I noticed a test failure on SMP configurations.

Author: Sebastian Huber 2024-11-01T05:58:47.481Z

marked this merge request as **draft**

Author: Sebastian Huber 2024-11-01T06:41:21.563Z

added 26 commits

- 5c54ea1a...c6ad57b1 - 16 commits from branch `rtems/rtos:main`
- 00df038d - record02: Fix test end
- a29655cc - record: Remove drain header from record control
- 4903d4ac - record: Add rtems_record_fetch()
- 05fbddfe - record: Remove rtems_record_drain()
- beebd6ed - record: Rework client
- 3d0d8ebd - record: Reorganize system event numbers
- eb85a2d7 - record: Improve uptime association
- e4b72e57 - record: Avoid non-monotonic event times
- 419ce5f4 - record: Dump only once in fatal handling
- c2024685 - record: Add uptime event to fatal dump

Compare with previous version

Author: Sebastian Huber 2024-11-01T06:41:48.855Z

marked this merge request as **ready**

Author: Gedare Bloom 2024-11-09T19:43:20.920Z

`size_t` usually should be used for sizes with units in bytes. I think this is just a count and it should be `uintxx_t` for some appropriate amount.

Author: Sebastian Huber 2024-11-09T19:43:20.920Z

The `size_t` should be not only used for things which are in bytes. It should be used for things which are somehow related to object sizes. For example, in `calloc()` the number of elements is also a `size_t` parameter. On a 64-bit system, you could have more than 4G items in principle.

Author: Chris Johns 2024-11-09T19:43:20.920Z

I am using `size_t` for "sizes" as it is simpler within a team to avoid warnings and casts. I also looked at `calloc` and came to the same conclusion.

Author: Gedare Bloom 2024-11-09T19:43:20.920Z

I don't agree with the analogy. `calloc` uses both its parameters to construct a size in bytes, so the types need to be multiplied safely together to create a `size_t`. I can live with it here though.

Author: Sebastian Huber 2024-11-11T01:31:48.843Z

changed this line in version 7 of the diff

Author: Gedare Bloom 2024-11-09T19:43:24.881Z

ditto.

Author: Sebastian Huber 2024-11-03T14:13:39.105Z

changed this line in version 4 of the diff

Author: Gedare Bloom 2024-11-09T19:41:30.353Z

same here with `size_t`. What does "recommended" mean? The name of this function is strange, because at first it seems like it should be fetching items. I think add `get` to the name, like, `rtems_record_get_fetch_recommended_item_count()` or `rtems_record_fetch_get_recommended_item_count()` still a bit strange but less likely to be confusing. At any rate, the documentation should be clear what is meant by recommended item count.

Author: Sebastian Huber 2024-11-09T19:41:30.353Z

I will rename it to `rtems_record_get_item_count_for_fetch()`. What about this comment:

```
/**
* @brief Returns the count of items which allows getting all available␣
↪items
*   for one processor through one call to rtems_record_fetch().
*/
size_t rtems_record_get_item_count_for_fetch( void );
```

Author: Sebastian Huber 2024-11-03T14:13:39.664Z

changed this line in version 4 of the diff

Author: Gedare Bloom 2024-11-09T19:41:30.353Z

that's great, thanks. I'm still not quite satisfied about the `size_t` but that topic is open elsewhere.

Author: Gedare Bloom 2024-11-09T19:41:47.823Z

`items` and `count` are not documented. Again use a different type than `size_t`. You could make the `count` an in,out parameter also?

Author: Sebastian Huber 2024-11-03T14:13:40.072Z

changed this line in version 4 of the diff

Author: Sebastian Huber 2024-11-09T19:41:47.823Z

I changed the fetch function to use only the control parameter.

Author: Gedare Bloom 2024-11-09T19:46:48.726Z

`bintime` would be more clear than `bt`

Author: Sebastian Huber 2024-11-09T19:46:48.726Z

In this isolated spot yes, however, the `_bt` abbreviation is used several times in this code area.

Author: Gedare Bloom 2024-11-09T19:46:48.726Z

at least it should have a comment as in other places. the structure could benefit from doxygen, since it is user-facing

Author: Gedare Bloom 2024-11-09T19:42:26.427Z

This appears to be a constant value. Probably the documentation should indicate how this is determined.

Author: Sebastian Huber 2024-11-09T19:42:26.427Z

The value depends on the application configuration. It is used to get the buffers for the TCP stream.

Author: Sebastian Huber 2024-11-03T14:13:41.026Z

changed this line in version 4 of the diff

Author: Gedare Bloom 2024-11-02T04:30:57.145Z

The code looks mostly quite good. Just a note about fixing the use of `size_t`, it looks like `unsigned int` is used already for the `item_count` in the configuration, so that would be ok or an explicitly sized `uint32_t`.

Author: Sebastian Huber 2024-11-03T11:30:10.184Z

The `unsigned int` is an implementation detail. The `size_t` is the right type for the API level from my point of view.

Author: Sebastian Huber 2024-11-03T14:13:41.253Z

added 8 commits

- d38d4a60 - record: Add rtems_record_fetch()
- 58a0d15a - record: Remove rtems_record_drain()
- e2eeacff - record: Rework client
- a9848989 - record: Reorganize system event numbers
- e29f4aec - record: Improve uptime association
- 47285e59 - record: Avoid non-monotonic event times
- 56e38173 - record: Dump only once in fatal handling
- 5dcd54ae - record: Add uptime event to fatal dump

Compare with previous version

Author: Sebastian Huber 2024-11-06T01:13:26.537Z

added 12 commits

- 5dcd54ae...c4625d8d - 2 commits from branch `rtems/rtos:main`
- 5c9df399 - record02: Fix test end
- 79d2fb60 - record: Remove drain header from record control
- ccf0485f - record: Add rtems_record_fetch()
- 71f7a997 - record: Remove rtems_record_drain()
- d5334650 - record: Rework client
- 0537f885 - record: Reorganize system event numbers
- 32413bff - record: Improve uptime association
- d9ffbfd3 - record: Avoid non-monotonic event times
- 6d200897 - record: Dump only once in fatal handling
- 9c52b8a1 - record: Add uptime event to fatal dump

Compare with previous version

Author: Chris Johns 2024-11-08T00:20:12.249Z

Will this be resolved by 6.1?

Author: Sebastian Huber 2024-11-08T00:26:32.048Z

I fixed everything from my point of view.

Author: Gedare Bloom 2024-11-09T19:48:45.130Z

resolved all threads

Author: Gedare Bloom 2024-11-09T19:48:45.433Z

mentioned in issue #5148

Author: Gedare Bloom 2024-11-11T02:16:56.544Z

I can live with the `size_t`, although I don't agree. The `size_t` has a well-defined origin as the return type of `sizeof`. It doesn't make a lot of sense to use it for something that is not related to object sizes in the units of sizeof. If the `cpu_todo` is multipled by the size of the record to get the number of bytes to transfer, then I would be convinced. But it is not, it is just being used to keep track of how many items are left. Positive counters should just be some kind of unsigned integer type. It's a minor point, but this structure is part of the API between the record event recording and the client, so it should be done properly. In this case, the `size_t` becomes an opaque type for a counter which is awkward but I'm not going to block the MR on this account.

I suggest some doxygen in the recordclient.h, but also won't hold up the change on that account.

We should have release notes for any API Changes even if we think the API is only used by private tooling. The notes I put in this MR can be used directly. I turned that into an open issue for 6.1.

Author: Chris Johns 2024-11-11T02:16:56.544Z

@gedare I suggest you reach out to the Open Group to ask why the object number in `calloc` is `size_t`? It would be interesting to know their view. It could be related to C++'s view of std::size_t:

> `std::size_t` is commonly used for array indexing and loop counting. Programs that use other types, such as unsigned int, for array indexing may fail on, e.g. 64-bit systems when the index exceeds UINT_MAX or if it relies on 32-bit modular arithmetic.
>
> My experience of `int` of `unsigned int` being used as counts or sizes with code from a team of developers is problems soon appear. Signed vs unsigned is not often considered when selecting the size type nor is 32bit vs 64bit and that leads to a web of compiler warnings, sometime complex, often only seen on some compilers when porting code. MSC is good at being trough on this stuff. To deal with this quickly a team starts adding casts around comparisons and loops or calls, eg to `calloc` or C++ containers, to suppress the warnings and as the number of casts grow they become a source of bugs because they could be suppressing valid warnings. In C++ code I work on you need to have a _very_ good reason to have a cast and using `size_t` for size with counts and loop helps.

Author: Sebastian Huber 2024-11-11T02:16:56.544Z

I changed the structure to make it more clear which members are for the user and which are internal.

The `size_t` definition implies that it can be used for array indices. Since the `cpu_todo` is related to an array index, this is the right type. You can't use `uint32_t` for array indices on a 64-bit platform in general. Using `uint64_t` on 32-bit platforms could be a performance issue. These two issues are not present if you use `size_t`.

Author: Gedare Bloom 2024-11-11T02:16:56.544Z

Thanks this makes sense. I guess this guidance has probably changed over time. I'll try to remember this now!

Author: Gedare Bloom 2024-11-09T19:49:33.560Z

approved this merge request

Author: Sebastian Huber 2024-11-11T01:18:09.693Z

added 17 commits

- 9c52b8a1...d6f3cd72 - 7 commits from branch `rtems/rtos:main`
- 2072f349 - record02: Fix test end
- 5b60024d - record: Remove drain header from record control
- 53d267aa - record: Add rtems_record_fetch()
- 9b59f619 - record: Remove rtems_record_drain()
- 111dcbc5 - record: Rework client
- e5bfdd8f - record: Reorganize system event numbers
- c98511fd - record: Improve uptime association
- f3307262 - record: Avoid non-monotonic event times
- b4d79bff - record: Dump only once in fatal handling
- 2450b8fa - record: Add uptime event to fatal dump

Compare with previous version

Author: Sebastian Huber 2024-11-11T01:31:50.162Z

added 10 commits

- 040bdc88 - record02: Fix test end
- eb46ed1d - record: Remove drain header from record control
- f300025d - record: Add rtems_record_fetch()
- 34b05eb8 - record: Remove rtems_record_drain()
- e4ed8335 - record: Rework client
- 9ba96ef2 - record: Reorganize system event numbers
- 6e2515a0 - record: Improve uptime association
- 683948f1 - record: Avoid non-monotonic event times
- 6c6cd516 - record: Dump only once in fatal handling
- 9c929749 - record: Add uptime event to fatal dump

Compare with previous version

Author: Sebastian Huber 2024-11-11T01:32:07.874Z

reset approvals from @gedare by pushing to the branch

Author: Gedare Bloom 2024-11-11T02:16:19.855Z

resolved all threads

Author: Gedare Bloom 2024-11-11T02:16:56.565Z

resolved all threads

Author: Gedare Bloom 2024-11-11T02:17:08.084Z

approved this merge request

Author: Sebastian Huber 2024-11-11T06:12:08.169Z

added 1 commit

- 3c34c0a1 - record: Use only related uptime low/high events

Compare with previous version

Author: Sebastian Huber 2024-11-11T06:12:19.440Z

reset approvals from @gedare by pushing to the branch

Author: Sebastian Huber 2024-11-12T22:33:28.706Z

I am really sorry, I found another corner case which needed a fix. For the background, I use this tool currently for debugging.

Author: Kinsey Moore 2024-11-12T22:33:28.706Z

Does this mean this needs to be set back to draft until you work it out?

Author: Gedare Bloom 2024-11-12T22:33:28.706Z

He added a patch (“record: Use only related uptime low/high events”) that I Assumed fixed that corner case. It appears to be a low/high timer read sync issue where the High is read during an overflow. He added a simple 1-bit state machine to make sure the High is only read if the Low was also read since the previous read of High.

Author: Sebastian Huber 2024-11-12T22:33:28.706Z

Yes, exactly this is already fixed, but it did reset the approval again.

Author: Gedare Bloom 2024-11-12T04:03:43.156Z

approved this merge request

Author: Sebastian Huber 2024-11-12T22:33:28.728Z

resolved all threads

Author: Chris Johns 2024-11-12T22:43:28.241Z

approved this merge request

Author: Chris Johns 2024-11-12T22:43:42.035Z

added 17 commits

- 3c34c0a1...3f7fdcc7 - 6 commits from branch `rtems/rtos:main`
- 3721dea3 - 1 earlier commit
- 31ac9cd5 - record: Remove drain header from record control
- 049b9b5c - record: Add rtems_record_fetch()
- be764f7d - record: Remove rtems_record_drain()
- 920f8d88 - record: Rework client
- 4655a7df - record: Reorganize system event numbers
- d4762dba - record: Improve uptime association
- e72ee949 - record: Avoid non-monotonic event times
- 0f2721c8 - record: Dump only once in fatal handling
- 464a37ac - record: Add uptime event to fatal dump
- 30fc123f - record: Use only related uptime low/high events

Compare with previous version

3.9.2.54 304 - shell01: Fix test failure

Id	304
State	merged
Merged by	Gedare Bloom
Merged at	2024-11-12T16:25:27.405Z
Assignee(s)	Sebastian Huber
Created	2024-11-12T05:04:53.502Z
Updated	2024-11-12T16:25:29.800Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/304
Commit	3f7fdcc711963d62b8212dd4abb44067eb60a8c8

Summary

shell01: Fix test failure

Test failure was introduced by commit:

commit c4f97590686e7cc62864dc5671900efde4a17cc8 Author: shuhua hua <huang-shuhua@kylinos.cn> Date: Thu Sep 12 02:36:13 2024 +0000

libtests/shell01:add test empty and NULL usernames check

Author: Sebastian Huber 2024-11-12T05:04:53.619Z

assigned to @sebhub

Author: Kinsey Moore 2024-11-12T14:31:28.452Z

approved this merge request

Author: Gedare Bloom 2024-11-12T16:25:02.748Z

approved this merge request

Author: Gedare Bloom 2024-11-12T16:25:12.431Z

added 5 commits

- 6437a837...9fabe95d - 4 commits from branch `rtems/rtos:main`
- 3f7fdcc7 - shell01: Fix test failure

Compare with previous version

3.9.2.55 303 - fstests: Fix name of JFFS2 NAND tests

Id	303
State	merged
Merged by	Gedare Bloom
Merged at	2024-11-12T16:23:25.140Z
Assignee(s)	Sebastian Huber
Created	2024-11-12T04:50:31.091Z
Updated	2024-11-12T16:23:27.036Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/303
Commit	9fabe95dc607dd17186b7be6ba52159ca9e0d87a

Summary

Author: Sebastian Huber 2024-11-12T04:50:31.165Z

assigned to @sebhub

Author: Kinsey Moore 2024-11-12T14:20:41.715Z

approved this merge request

Author: Gedare Bloom 2024-11-12T16:22:58.495Z

approved this merge request

Author: Gedare Bloom 2024-11-12T16:23:08.375Z

added 4 commits

- d7f1ccc4...2c64cf1b - 3 commits from branch `rtems/rtos:main`
- 9fabe95d - fstests: Fix name of JFFS2 NAND tests

Compare with previous version

3.9.2.56 302 - dev/serial/sc16is752-spi: Fix warnings

Id	302
State	merged
Merged by	Gedare Bloom
Merged at	2024-11-12T16:21:32.546Z
Assignee(s)	Sebastian Huber
Created	2024-11-12T04:38:00.228Z
Updated	2024-11-12T16:21:34.484Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/302
Commit	2c64cf1bd83e84cd267e94e54317acc09e9bbbd2

Summary

dev/serial/sc16is752-spi: Fix warnings

Fix several may be used uninitialized warnings.

Author: Sebastian Huber 2024-11-12T04:38:00.308Z

assigned to @sebhub

Author: Kinsey Moore 2024-11-12T14:56:09.954Z

approved this merge request

Author: Gedare Bloom 2024-11-12T16:21:16.444Z

approved this merge request

Author: Gedare Bloom 2024-11-12T16:21:23.747Z

added 3 commits

- 742f9725...f2088609 - 2 commits from branch `rtems/rtos:main`
- 2c64cf1b - dev/serial/sc16is752-spi: Fix warnings

Compare with previous version

3.9.2.57 301 - dev/slcr: Fix warning

Id	301
State	merged
Merged by	Gedare Bloom
Merged at	2024-11-12T16:18:37.142Z
Assignee(s)	Sebastian Huber
Created	2024-11-12T04:32:41.073Z
Updated	2024-11-12T16:18:39.354Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/301
Commit	f2088609819fc98970f8af840749755804ce4292

Summary

Author: Sebastian Huber 2024-11-12T04:32:41.183Z

assigned to @sebhub

Author: Kinsey Moore 2024-11-12T14:47:32.584Z

approved this merge request

Author: Gedare Bloom 2024-11-12T16:18:16.067Z

approved this merge request

Author: Gedare Bloom 2024-11-12T16:18:27.309Z

added 2 commits

- 32b46899 - 1 commit from branch `rtems/rtos:main`
- f2088609 - dev/slcr: Fix warning

Compare with previous version

3.9.2.58 305 - spec/bsps/xilinx-microzed: Fix the default setting for the Avnet Microzed PCLK

Id	305
State	merged
Merged by	Gedare Bloom
Merged at	2024-11-12T16:16:35.012Z
Assignee(s)	Chris Johns
Created	2024-11-12T05:19:41.643Z
Updated	2024-11-12T16:16:38.510Z
Milestone	6.1
Labels	arch:arm, bsp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/305
Commit	32b46899a39c71be01de71356e9dc9e67cf70914

Summary

spec/bsps/xilinx-microzed: Fix the default setting for the Avnet Microzed PCLK

Closes #5149

Closes #5149

Author: Chris Johns 2024-11-12T05:19:41.817Z

assigned to @chris

Author: Kinsey Moore 2024-11-12T14:30:53.582Z

approved this merge request

Author: Gedare Bloom 2024-11-12T16:16:28.457Z

approved this merge request

3.9.2.59 295 - bsps/xilinx-zynq: Add QSPI flash driver

Id	295
State	merged
Merged by	Joel Sherrill
Merged at	2024-11-12T01:14:09.808Z
Assignee(s)	Aaron Nyholm
Reviewer(s)	Kinsey Moore
Created	2024-11-07T00:07:03.739Z
Updated	2024-11-12T01:14:09.797Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/295
Commit	177a8c57eaf05cbdcb374f48440d12d0dea2754f

Summary

Adds QSPI Flash driver for ZYNQ7000 boards. Includes a flashdev wrapper. Tested on a microzed.

Author: Chris Johns 2024-11-07T00:08:17.753Z

assigned to @eagleirony

Author: Chris Johns 2024-11-07T00:08:27.718Z

requested review from @opticron

Author: Aaron Nyholm 2024-11-07T00:10:05.381Z

changed the description

Author: Chris Johns 2024-11-07T04:43:34.243Z

Interrupt mode?

Author: Aaron Nyholm 2024-11-07T04:42:48.771Z

changed this line in version 2 of the diff

Author: Aaron Nyholm 2024-11-07T04:43:34.243Z

Updated. Now uses interrupts.

Author: Aaron Nyholm 2024-11-07T04:42:48.987Z

added 1 commit

- 10576528 - bsps/xilinx-zynq: Add QSPI flash driver

Compare with previous version

Author: Aaron Nyholm 2024-11-07T04:43:34.259Z

resolved all threads

Author: Kinsey Moore 2024-11-08T01:40:30.624Z

RTEMS style guide puts the opening brace of a function on its own line. “Put the opening brace of a function definition one line after the closing parenthesis of its prototype.”

Author: Kinsey Moore 2024-11-08T01:24:18.276Z

Any reason not to use “chip select” instead? This should be adjusted elsewhere as well.

Author: Aaron Nyholm 2024-11-08T01:41:21.500Z

changed this line in version 3 of the diff

Author: Kinsey Moore 2024-11-08T01:24:36.822Z

Unnecessary parens.

Author: Aaron Nyholm 2024-11-08T01:41:21.888Z

changed this line in version 3 of the diff

Author: Kinsey Moore 2024-11-08T01:28:24.131Z

All conditionals need braces as the style guide does not mention their omission. “Put braces on the same line as and one space after the conditional expression ends.”

This needs to be applied elsewhere.

Author: Aaron Nyholm 2024-11-08T01:41:22.295Z

changed this line in version 3 of the diff

Author: Kinsey Moore 2024-11-08T01:32:39.972Z

When performing rx-only, transfer->start never gets reset to 0. Is that intentional?

Author: Aaron Nyholm 2024-11-08T01:32:39.972Z

Yeah intentional. There is always a TX component to each transfer. You have to send the read command and to receive data.

Author: Kinsey Moore 2024-11-08T01:40:20.550Z

I don’t see these two functions used anywhere.

Author: Aaron Nyholm 2024-11-08T01:40:20.550Z

They're used in `zynq-qspi-flash.c`. They're there to allow apps to run some code before and after a flash write in the case of the flash chip having the WriteEnable pin tied to a GPIO pin.

Author: Kinsey Moore 2024-11-08T03:32:17.840Z

Sorry, must have been an issue with dynamic page loading even though I expanded that file.

Author: Kinsey Moore 2024-11-07T14:58:35.343Z

requested changes

Author: Aaron Nyholm 2024-11-08T01:40:30.643Z

resolved all threads

Author: Aaron Nyholm 2024-11-08T01:41:23.588Z

added 1 commit

- 1bee1313 - bsps/xilinx-zynq: Add QSPI flash driver

Compare with previous version

Author: Kinsey Moore 2024-11-08T03:34:54.802Z

added 7 commits

- 1bee1313...d6f3cd72 - 6 commits from branch `rtems/rtos:main`
- 177a8c57 - bsps/xilinx-zynq: Add QSPI flash driver

Compare with previous version

Author: Kinsey Moore 2024-11-08T03:34:57.654Z

approved this merge request

Author: Joel Sherrill 2024-11-12T01:14:00.295Z

approved this merge request

3.9.2.60 290 - libmisc/rtems-fdt: Path find need a sorted index table

Id	290
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-08T03:29:59.239Z
Assignee(s)	Chris Johns
Created	2024-11-04T02:18:31.010Z
Updated	2024-11-08T03:30:03.116Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/290
Commit	d6f3cd72eeaf1e4c7c21500b76f15edb06658f79

Path find need a sorted index table so sort the index entries.

Author: Chris Johns 2024-11-04T02:18:31.188Z

assigned to @chris

Author: Amar Takhar 2024-11-08T00:23:00.213Z

added 7 commits

- 09b3204f...84fe3d83 - 6 commits from branch `rtems/rtos:main`
- d707824f - libmisc/rtems-fdt: Path find need a sorted index table

Compare with previous version

Author: Amar Takhar 2024-11-08T00:23:06.032Z

approved this merge request

Author: Kinsey Moore 2024-11-08T03:28:28.151Z

added 3 commits

- d707824f...dc7adff7 - 2 commits from branch `rtems/rtos:main`
- d6f3cd72 - libmisc/rtems-fdt: Path find need a sorted index table

Compare with previous version

Author: Kinsey Moore 2024-11-08T03:29:45.379Z

approved this merge request

3.9.2.61 289 - build: Fix spec cache

Id	289
State	merged
Merged by	Amar Takhar
Merged at	2024-11-08T00:24:42.015Z
Assignee(s)	Sebastian Huber
Created	2024-11-04T00:15:01.865Z
Updated	2024-11-08T00:24:44.614Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/289
Commit	f4875c8f4decce7cd177f5ae2ed77f037bc3f7d3

Summary

build: Fix spec cache

The updated waf version deletes the waf cache directory in the build tree. This removes also the build specification item cache. Move the cache directory so that it works across configure commands.

Author: Sebastian Huber 2024-11-04T00:15:01.947Z

assigned to @sebhub

Author: Chris Johns 2024-11-08T00:24:12.793Z

approved this merge request

Author: Amar Takhar 2024-11-08T00:24:15.265Z

approved this merge request

Author: Amar Takhar 2024-11-08T00:24:27.291Z

added 7 commits

- 676cad4b...84fe3d83 - 6 commits from branch `rtems/rtos:main`
- f4875c8f - build: Fix spec cache

Compare with previous version

3.9.2.62 293 - spec: Update smallmem test list

Id	293
State	merged
Merged by	Amar Takhar
Merged at	2024-11-08T00:14:02.399Z
Assignee(s)	Kinsey Moore
Created	2024-11-06T14:59:13.966Z
Updated	2024-11-08T00:14:07.057Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/293
Commit	84fe3d830c0255c03d110822f6df89f29588fd59

Summary

This adds the test that I found incapable of linking properly for some variants of the STM32H7 due to lack of available memory.

Author: Kinsey Moore 2024-11-06T14:59:14.166Z

assigned to @opticron

Author: Kinsey Moore 2024-11-06T14:59:27.809Z

added 3 commits

- 0cc78b5f...c4625d8d - 2 commits from branch `rtems/rtos:main`
- 4ef68a27 - spec: Update smallmem test list

Compare with previous version

Author: Kinsey Moore 2024-11-07T03:13:11.935Z

added 2 commits

- 87c725b6 - 1 commit from branch `rtems/rtos:main`
- 260c85d3 - spec: Update smallmem test list

Compare with previous version

Author: Chris Johns 2024-11-08T00:07:27.866Z

approved this merge request

Author: Amar Takhar 2024-11-08T00:13:37.452Z

approved this merge request

Author: Amar Takhar 2024-11-08T00:13:51.991Z

added 3 commits

- 260c85d3...c59b6c38 - 2 commits from branch `rtems/rtos:main`
- 84fe3d83 - spec: Update smallmem test list

Compare with previous version

3.9.2.63 292 - spec: Update no-rfs test list

Id	292
State	merged
Merged by	Amar Takhar
Merged at	2024-11-08T00:09:24.262Z
Assignee(s)	Kinsey Moore
Created	2024-11-06T14:57:37.728Z
Updated	2024-11-08T00:09:26.889Z
Milestone	6.1
Labels	filesystem::rfs
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/292
Commit	c59b6c38252438ee1b2c453f510271fa2bfc656a

Summary

Author: Kinsey Moore 2024-11-06T14:57:37.899Z

assigned to @opticron

Author: Kinsey Moore 2024-11-06T14:59:33.682Z

added 3 commits

- 863943bb...c4625d8d - 2 commits from branch `rtems/rtos:main`
- 7309b73e - spec: Update no-rfs test list

Compare with previous version

Author: Kinsey Moore 2024-11-07T03:13:03.130Z

added 2 commits

- 87c725b6 - 1 commit from branch `rtems/rtos:main`
- 4197fda1 - spec: Update no-rfs test list

Compare with previous version

Author: Chris Johns 2024-11-08T00:07:57.019Z

approved this merge request

Author: Amar Takhar 2024-11-08T00:09:07.324Z

approved this merge request

Author: Amar Takhar 2024-11-08T00:09:15.473Z

added 2 commits

- e87f5ebe - 1 commit from branch `rtems/rtos:main`
- c59b6c38 - spec: Update no-rfs test list

Compare with previous version

3.9.2.64 287 - Arm PMSA improvements

Id	287
State	merged
Merged by	Gedare Bloom
Merged at	2024-11-05T21:04:36.552Z
Assignee(s)	Kinsey Moore
Created	2024-11-01T20:26:13.382Z
Updated	2024-11-05T21:04:38.540Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/287
Commit	c4625d8d86be1497c62ceca26a96fba2bc32c03a

Summary

This patch set contains a bug fix for the existing PMSA code and adds functionality to search for unused regions.

Author: Kinsey Moore 2024-11-01T20:26:13.550Z

assigned to @opticron

Author: Kinsey Moore 2024-11-01T20:27:21.693Z

changed title from **Arm {-pmsa-} improvements** to **Arm {+PMSA+} improvements**

Author: Kinsey Moore 2024-11-01T20:27:21.715Z

changed the description

Author: Kinsey Moore 2024-11-01T21:56:07.334Z

added 2 commits

- a506c7f7 - cpukit/arm/pmsa: Correctly determine the total number of MPU regions
- fdaa73d5 - cpukit/arm/pmsa: Add ability to find empty MPU regions

Compare with previous version

Author: Gedare Bloom 2024-11-04T22:56:20.981Z

What targets did you test this on?

Author: Kinsey Moore 2024-11-04T22:56:20.981Z

I tested this on the R5 on the zynqmp platform.

Author: Kinsey Moore 2024-11-04T22:56:20.981Z

For additional context, I have a patch waiting for lwip to enable networking on the R5 that uses this functionality.

Author: Gedare Bloom 2024-11-04T22:56:11.509Z

prefer to declare all variables at the start of the block

Author: Kinsey Moore 2024-11-02T05:09:22.513Z

changed this line in version 3 of the diff

Author: Kinsey Moore 2024-11-04T22:56:11.509Z

Fixed in the latest push.

Author: Kinsey Moore 2024-11-02T05:09:22.733Z

added 1 commit

- ea88bb33 - cpukit/arm/pmsa: Add ability to find empty MPU regions

Compare with previous version

Author: Sebastian Huber 2024-11-04T22:56:27.539Z

I would rename it to `_ARMV7_PMSA_Is_region_empty()`. It is not that clear what the return status of a check is.

Author: Sebastian Huber 2024-11-04T22:56:27.539Z

Maybe it should be better named `_ARMV7_PMSA_Is_region_enabled()`.

Author: Kinsey Moore 2024-11-04T16:12:01.669Z

changed this line in version 4 of the diff

Author: Kinsey Moore 2024-11-04T22:56:27.539Z

Done

Author: Sebastian Huber 2024-11-04T22:55:56.603Z

The internal functions should use a minimum of error checks to avoid potential dead code. I would make this an assert.

Author: Kinsey Moore 2024-11-04T16:12:02.167Z

changed this line in version 4 of the diff

Author: Kinsey Moore 2024-11-04T22:55:56.603Z

Done

Author: Sebastian Huber 2024-11-04T22:56:00.100Z

I would simplify this to `return (_ARMV7_Read_drsr() & ARMV7_RSR_EN) == 0;`.

Author: Kinsey Moore 2024-11-04T16:12:02.669Z

changed this line in version 4 of the diff

Author: Kinsey Moore 2024-11-04T22:56:00.100Z

Done

Author: Sebastian Huber 2024-11-04T22:56:01.801Z

`int` type is not in line with the parameter type, should be `uint32_t`.

Author: Kinsey Moore 2024-11-04T16:12:03.171Z

changed this line in version 4 of the diff

Author: Kinsey Moore 2024-11-04T22:56:01.801Z

Done

Author: Kinsey Moore 2024-11-04T16:12:03.430Z

added 1 commit

- b1e748a3 - cpukit/arm/pmsa: Add ability to find empty MPU regions

Compare with previous version

Author: Kinsey Moore 2024-11-04T16:14:06.066Z

added 1 commit

- ff03837b - cpukit/arm/pmsa: Add ability to find empty MPU regions

Compare with previous version

Author: Sebastian Huber 2024-11-04T22:55:47.645Z

approved this merge request

Author: Sebastian Huber 2024-11-04T22:56:27.557Z

resolved all threads

Author: Sebastian Huber 2024-11-04T23:23:59.508Z

This style is quite unusual in cpukit, I would change it to `if (! _ARMV7_PMSA_Is_region_enabled(index)) {`.

Author: Kinsey Moore 2024-11-04T23:17:33.305Z

changed this line in version 6 of the diff

Author: Kinsey Moore 2024-11-04T23:23:59.508Z

Fixed in the latest push.

Author: Kinsey Moore 2024-11-04T23:17:33.606Z

added 1 commit

- c4625d8d - cpukit/arm/pmsa: Add ability to find empty MPU regions

Compare with previous version

Author: Kinsey Moore 2024-11-04T23:17:49.892Z

reset approvals from @sebhub by pushing to the branch

Author: Sebastian Huber 2024-11-04T23:23:59.527Z

resolved all threads

Author: Sebastian Huber 2024-11-04T23:24:04.128Z

approved this merge request

Author: Gedare Bloom 2024-11-05T21:04:31.352Z

approved this merge request

3.9.2.65 194 - Add BSP for BeagleV-Fire board

Id	194
State	merged
Merged by	Amar Takhar
Merged at	2024-10-25T21:36:11.190Z
Reviewer(s)	Chris Johns, Gedare Bloom
Created	2024-08-25T14:09:44.563Z
Updated	2024-11-04T17:49:01.465Z
Milestone	6.1
Labels	arch:riscv
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/194
Commit	eaaeebedda43a9e9886078389b3af05d0c267a7a

Add Board Support Package (BSP) for the BeagleV-Fire board, originally developed by Dario (Francescodario Cuzzocrea, bosconovic@gmail.com), with key improvements and testing outcomes. The BSP has undergone renaming from bvf to beaglevfire to enhance clarity and align with standard naming conventions.

Key Changes: * Introduce BeagleV-Fire BSP: Integrate the BeagleV-Fire Board Support Package (BSP), developed by Dario, into the codebase. This BSP includes essential configurations, startup sequences, and hardware-specific implementations for clock management and interrupt handling tailored to the BeagleV-Fire board. * Rename BSP from bvf to beaglevfire: Rename the BSP from `bvf` to `beaglevfire` to improve clarity and consistency across the project. This change ensures that the BSP name accurately reflects the board's identity and adheres to established naming conventions. * Conduct Hardware Validation: Validate the BeagleV-Fire BSP on actual hardware using the Hart Software Services (HSS) method. This testing confirms the BSP's compatibility and reliability with the BeagleV-Fire board. * Execute RTEMS Tests: Test the BSP with RTEMS using selected test cases from the `samples`, `sptests`, and `smptests` suites. While the rtems-test framework is not fully equipped to run the entire testsuite on this BSP, the successfully executed tests confirm that the BSP operates correctly on the BeagleV-Fire hardware.

Signed-off-by: Francescodario Cuzzocrea <bosconovic@gmail.com> Signed-off-by: purviyeshi <purvayeshi550@gmail.com>

Author: Hesham Almatary 2024-10-25T20:50:50.620Z

Does it work without Dario's first commit? Or is it required here

Author: Purva Yeshi 2024-10-25T20:50:50.620Z

I'm not sure about the exact impact of Dario's first commit yet. I'll test the BSP without that commit to see if it's required and get back to you with the results.

Author: Francescodario Cuzzocrea 2024-10-25T20:50:50.620Z

It will work also without that commit, altough I believe that the commit is needed because a potential misaligned access might happen when parsing the fdt. In particular the issue showed up when I built RTEMS 6 for the E51 core of Polarfire SoC, and that's why I had to do that.

Author: Joel Sherrill 2024-10-25T20:50:50.620Z

I think adding a comment above this explaining the same thing as your comment will help the next person who looks at this code.

Author: Francescodario Cuzzocrea 2024-10-25T20:50:50.620Z

Directly in the code or maybe with a better commit message?

Author: Hesham Almatary 2024-10-25T20:50:50.620Z

@fcuzzocrea So usually if the processor/BSP don't handle unaligned accesses (and there's no M-Mode emulation for it), it will just pass `-mstrict-align` flag. I wonder if you tried that and got the same issue? If it works fine with this flag, I'd drop

this commit and instead add the flag to the BSP build options, instead of changing shared code.

Author: Hesham Almatary 2024-10-25T20:50:50.620Z

Also E51 is a monitor/boot core. This MR is mainly targeting and tested for the `U54-MC` processor that I assume does handle unaligned accesses fine? The question of whether to support E51 (and how) is another issue we could address later (but I assume it's just a matter of changing the CPU_FLAGS to build for RV64IMAC and with the mentioned `mstrict-align`)

Author: Francescodario Cuzzocrea 2024-10-25T20:50:50.620Z

If I remember correctly I tried with mstrict-align and it didn't work. I would keep the code because we don't know when the misaligned access could happen.

For e51 another mod is needed, see https://github.com/fcuzzocrea/rtems/commit/76ec318b575cb8cf7df9ca80fae0f8b8fb1b3d26

If you believe the community may benefit from this I can open a mr (i don't use HSS at all so this is why I need rtems on e51).

Author: Hesham Almatary 2024-10-25T20:50:50.620Z

@fcuzzocrea Definitely! Supporting E51 would be quite useful for the community as well, and that'll be much appreciated. I wonder if we could combine both U54 and E51 under a unified `beaglevfire` BSP and building for either with an config option?

We would really want to make sure `-mstrict-align` doesn't work, and why. It's rather a compiler issue I'd say.

May I ask how are you booting RTEMS on E51 without HSS? And what are you using RTEMS there for? Do you run other stuff on U54?

Author: Francescodario Cuzzocrea 2024-10-25T20:50:50.620Z

Actually instead of beaglevfire would be polarfire soc :slight_smile: .

I do not know if it is feasible to switch with a config options with the current build system, because the 2 different configurations requires 2 different device trees.

What would be great instead would be to avoid relying on a prebuilt device tree have the device tree being compiled before the compilation of rtems. This could let us easily add support for different boards using polarfire soc by including a common mpfs.dtsi. I always wanted to do this but never find the time sadly.

I can give another try at mstrict-align after I am back from vacations :slight_smile: .

To boot rtems on E51 on icile kit I use a custom bootloader developed with polarfire soc baremetal library. I store the image on an external spi flash (or I load it directly

in ram with a debugger). On beagle v fire one can think of storing the rtems image on the qspi flash instead.

On U54 I run Linux (one can start if from the rtems image which is loaded on E51 using opensbi). Otherwise it is also possible to run another rtems instance on the U54s (with SMP).

Author: Hesham Almatary 2024-10-25T20:50:50.620Z

@fcuzzocrea While the SoC is PolarFire, we still have different peripherals for BeagleV Fire? I assume you already know there exists `RISCV_ENABLE_MPFS_SUPPORT` option (and DTS) in RTEMS. Do you think that can be (re)used to run on the board?

Author: Hesham Almatary 2024-10-25T20:50:50.620Z

https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/bsps/riscv/riscv/dts/mpfs.dts?ref_type=heads

Author: Francescodario Cuzzocrea 2024-10-25T20:50:50.620Z

On any Polarfire SoC FPGA based device you can have different controllers on or off, depending on how you configure the FPGA design and if you instantiate soft-IP controllers. I do not fully understand how to (re)use the RISCV_ENABLE_MPFS_SUPPORT for DTS though.

Author: Hesham Almatary 2024-10-25T20:50:50.620Z

The DTS for the existing `mpfs` BSP is exactly the same as the one in this MR, except for the UART; so I wonder 1) if you tried to build and run the existing mpfs BSP on beaglefire board and/or 2) if we can just the MPFS BSP for beaglefire by adding a second UART (uart1)

Author: Francescodario Cuzzocrea 2024-10-25T20:50:50.620Z

The existing MPFS DTS for mpfs BSP will not work on Beagle V Fire.

That MPFS DTS it is valid only on ICICLE Kit with Microchip reference design loaded on it, which is configured to have 4 UARTs (UART0,1,2,3), with UART0 being reserved for HSS. With this configuration, when you load RTEMS, on UART0 there will be the output of the HSS and on UART1 there is the output of RTEMS.

Beagle V Fire FPGA reference design is configured differently. It is configured to only have one UART (UART0) and HSS is configured to release UART0 after booting the payload, so UART0 can be used by the payload, which can be either RTEMS, Linux, or any other RTOS/OS.

DTS on Polarfire SoC FPGA based devices it is stricly coupled with the FPGA design which is loaded on the SoC itself, and as a consequence must be adapted according

to the hard controllers which are enabled in the Polarfire SoC configurator and to the soft controllers that are eventually added in the FPGA design.

Indeed I believe that in current RTEMS tree the DTS naming is misleading, that should really be mpfs-icicle-kit.dts, because it is valid for ICICLE Kit with reference design only.

What I was proposing in my previous comment was to rework DTS handling in the same way the Linux kernel handles it :

https://github.com/torvalds/linux/tree/master/arch/riscv/boot/dts/microchip

as you can see in here there is a common mpfs.dtsi, which includes the configuration for all the hard controllers which are present on the Polarfire SoC FPGA, defaulting with each controller being disabled.

Then, for each Polarfire SoC FPGA supported device there is a -fabric.dtsi fragment with the configuration for the soft peripherals.

Finally, for each board there is the mpfs-board-name.dts which inherits from the common and the fabric dtsi and enables the hard controllers which are configured on the board.

I believe this is the most common and straightforward way to use devicetree to configure those Microchip Polarfire SoC devices, but it requires some modification to the build system as I said before (we need to compile DTB at RTEMS build time instead of relying on a prebuilt DTB).

Author: Joel Sherrill 2024-10-25T20:50:50.620Z

@fcuzzocrea Your response sounds like the kind of information that needs to end up in the User Guide. It is hard to see the similarities and differences between different implementations of the same SOC/FPGA.

Author: Francescodario Cuzzocrea 2024-10-25T20:50:50.620Z

@joel indeed you are super right! Since Polarfire SoC FPGA is basically an FPGA with an ASIC inside (which is the Microprocessor SubSystem, the MSS) and the ASIC is configured using the Polarfire SoC configurator (which comes as part of Libero SoC), the user must always look at the Libero design to understand how it is configured the SoC and if there is any soft-ip core.

Author: Gedare Bloom 2024-10-25T20:50:50.880Z

created #5137 to continue this discussion

Author: Joel Sherrill 2024-09-12T22:12:35.847Z

changed title from **Add BSP {-to-} BeagleV-Fire board** to **Add BSP {+for+} BeagleV-Fire board**

Author: Gedare Bloom 2024-10-25T21:23:03.185Z

Reword your commit message `Rename files from 'bvf' to 'beaglevfire'` to include a starting tag, probably `bsps/riscv`.

The `fixup!` commit should get rebased into the preceding commit, e.g.,

`git rebase --autosquash HEAD~3` should do this for you directly

Author: Chris Johns 2024-10-24T23:16:07.851Z

requested review from @chris and @gedare

Author: Chris Johns 2024-10-24T23:17:20.764Z

added 163 commits

- ddacf41d...83c1a305 - 160 commits from branch `rtems/rtos:main`
- f3421597 - fixup! bsp/riscv: Work area size based on /memory node in fdt
- 320ea6b2 - bsps/riscv: add bsp for beagle v fire
- 255310b0 - Rename files from 'bvf' to 'beaglevfire'

Compare with previous version

Author: Chris Johns 2024-10-24T23:17:22.366Z

marked this merge request as **draft** from purva_yeshi/rtems-bvf@f3421597e63f0ad196de0b6c7355c378e6a32750

Author: Gedare Bloom 2024-10-25T20:50:50.929Z

mentioned in issue #5137

Author: Gedare Bloom 2024-10-25T21:21:28.978Z

added 3 commits

- eb9762d1 - riscv: Work area size based on /memory node in fdt
- a17ec158 - riscv: add bsp for beagle v fire
- d413d388 - riscv/beaglevfire: Rename 'bvf' to 'beaglevfire'

Compare with previous version

Author: Gedare Bloom 2024-10-25T21:23:03.207Z

resolved all threads

Author: Gedare Bloom 2024-10-25T21:23:09.410Z

marked this merge request as **ready**

Author: Gedare Bloom 2024-10-25T21:23:31.757Z

added 7 commits

- d413d388...0d154874 - 4 commits from branch `rtems/rtos:main`
- 0e3792ed - riscv: Work area size based on /memory node in fdt
- 9d45cf1b - riscv: add bsp for beagle v fire
- eaaeebed - riscv/beaglevfire: Rename 'bvf' to 'beaglevfire'

Compare with previous version

Author: Gedare Bloom 2024-10-25T21:23:36.301Z

approved this merge request

Author: Gedare Bloom 2024-10-25T21:25:33.201Z

Build succeeds with

```
[riscv/beaglevfire]
BUILD_TESTS = True
```

Author: Amar Takhar 2024-10-25T21:36:07.046Z

approved this merge request

Author: Gedare Bloom 2024-10-26T19:12:12.652Z

Author: Kinsey Moore 2024-11-04T17:49:01.163Z

mentioned in issue rtems/programs/gsoc#59

3.9.2.66 285 - microblaze: fix warnings about the clock.

Id	285
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-31T22:59:00.488Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Kinsey Moore
Created	2024-10-31T01:46:26.253Z
Updated	2024-11-01T00:45:30.246Z
Milestone	6.1
Labels	arch:microblaze
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/285
Commit	90c4d36cb3ab88dc08e3ea209bd7c6d5746e1ffe

Summary

See issue #5141

Closes #5141

Author: Amar Takhar 2024-10-31T03:05:38.405Z

Can you edit the commit title and change it to `microblaze: fix warnings about microblaze clock`

Thank you we try to prefix the commit title with what it's about makes it easier to track.

Author: Amar Takhar 2024-10-31T03:26:21.866Z

This also needs the 'Closes #5141' in the commit message body please.

Author: Sam Price 2024-10-31T03:35:44.960Z

added 1 commit

- c62affe4 - microblaze: fix warnings about clock.

Compare with previous version

Author: Sam Price 2024-10-31T03:36:10.986Z

changed title from **{-[#5141] F-}ix {-W-}arnings about {-microblaz-}e clock.** to **{+microblaze: f+}ix {+w+}arnings about {+th+}e clock.**

Author: Sam Price 2024-10-31T03:36:11.019Z

changed the description

Author: Sam Price 2024-10-31T03:36:54.348Z

added 1 commit

- e9973cee - microblaze: fix warnings about clock.

Compare with previous version

Author: Gedare Bloom 2024-10-31T23:59:30.204Z

Compiles and the warnings went away. side note, `dl0x` tests don't link.

Author: Sam Price 2024-10-31T23:59:30.204Z

Did dl0x link before this change? I thought I saw all of the tests link.

Author: Kinsey Moore 2024-10-31T23:59:30.204Z

Verified that dl0x tests failed before adding this patch as well as after. This resolves the warnings.

Author: Kinsey Moore 2024-10-31T23:59:30.204Z

The error is:

```
error: machine-type: unknown machine type: 189
```

Author: Kinsey Moore 2024-11-01T00:01:07.049Z

Produced by the "rtems-syms -e -S" call

Author: Chris Johns 2024-11-01T00:05:36.452Z

The `microblaze` machine type is not in the list of supported machine types in RTEMS Tools ELF support in the took kit. I will create an MR to add the machine type.

Author: Gedare Bloom 2024-10-31T20:51:52.365Z

approved this merge request

Author: Kinsey Moore 2024-10-31T22:53:07.122Z

assigned to @opticron

Author: Kinsey Moore 2024-10-31T22:53:41.988Z

added 12 commits

- e9973cee...45308bcc - 11 commits from branch `rtems/rtos:main`
- 90c4d36c - microblaze: fix warnings about clock.

Compare with previous version

Author: Chris Johns 2024-10-31T22:54:12.807Z

requested review from @opticron

Author: Kinsey Moore 2024-10-31T22:58:47.288Z

resolved all threads

Author: Kinsey Moore 2024-10-31T22:58:52.135Z

approved this merge request

Author: Amar Takhar 2024-11-01T00:45:30.078Z

mentioned in merge request rtems/tools/rtems-tools!37

3.9.2.67 279 - riscv: fix FDT loads during work area init

Id	279
State	merged
Merged by	Amar Takhar
Merged at	2024-10-31T23:14:23.248Z
Created	2024-10-28T20:14:35.881Z
Updated	2024-10-31T23:14:26.519Z
Milestone	6.1
Labels	arch:riscv
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/279
Commit	c6ad57b10237c5f08d274a99de026b8d65828762

Summary

riscv: fix FDT loads during work area init

Fixes #5139

Author: Gedare Bloom 2024-10-28T20:15:05.468Z

Tested with `beaglevfire` and `rv64imafdc`

Author: Kinsey Moore 2024-10-28T20:39:40.131Z

added 3 commits

- 0d08445e...5d074a26 - 2 commits from branch `rtems/rtos:main`
- 15e4f9b1 - riscv: fix FDT loads during work area init

Compare with previous version

Author: Frank Kuehndel 2024-10-29T11:52:03.700Z

I re-run our Rust-RTEMS CI pipeline on this merge request and it succeeded.

- RTEMS: `15e4f9b14cf03288aa8d428b1ffaf3dd407f68f0`
- RSB: `78680c889c2458f26170fe6e4a05c37791aacc87`

Thank you @gedare for searching and fixing issue #5139.

Author: Gedare Bloom 2024-10-30T04:58:04.213Z

added 5 commits

- 15e4f9b1...8820b8e6 - 4 commits from branch `rtems/rtos:main`
- d414fe61 - riscv: fix FDT loads during work area init

Compare with previous version

Author: Chris Johns 2024-10-31T22:59:12.609Z

added 13 commits

- d414fe61...90c4d36c - 12 commits from branch `rtems/rtos:main`
- 26412459 - riscv: fix FDT loads during work area init

Compare with previous version

Author: Chris Johns 2024-10-31T22:59:20.769Z

approved this merge request

Author: Amar Takhar 2024-10-31T23:14:06.161Z

approved this merge request

Author: Amar Takhar 2024-10-31T23:14:14.047Z

added 2 commits

- a1eb04be - 1 commit from branch `rtems/rtos:main`
- c6ad57b1 - riscv: fix FDT loads during work area init

Compare with previous version

3.9.2.68 276 - riscv/beaglevfire: disable BSP_START_COPY_FDT_FROM_U_BOOT by default

Id	276
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-31T23:00:25.111Z
Created	2024-10-28T18:59:57.944Z
Updated	2024-10-31T23:00:27.415Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/276
Commit	a1eb04be6687dece388dc522956eb824041c510a

Summary

U-boot is not used on this BSP so disable this in the bspdefaults.

Author: Chris Johns 2024-10-31T22:58:32.590Z

approved this merge request

Author: Amar Takhar 2024-10-31T22:58:40.947Z

added 21 commits

- 807de496...45308bcc - 20 commits from branch `rtems/rtos:main`
- d49c9cd7 - riscv/beaglevfire: disable BSP_START_COPY_FDT_FROM_U_BOOT by default

Compare with previous version

Author: Amar Takhar 2024-10-31T22:58:56.051Z

approved this merge request

Author: Amar Takhar 2024-10-31T22:59:20.942Z

added 2 commits

- 90c4d36c - 1 commit from branch `rtems/rtos:main`
- a1eb04be - riscv/beaglevfire: disable BSP_START_COPY_FDT_FROM_U_BOOT by default

Compare with previous version

3.9.2.69 286 - bsp/xilinx-zynq: Resolve MR review comments

Id	286
State	merged
Merged by	Amar Takhar
Merged at	2024-10-31T03:40:33.440Z
Assignee(s)	Chris Johns
Reviewer(s)	Gedare Bloom
Created	2024-10-31T03:07:14.516Z
Updated	2024-10-31T03:40:36.882Z
Milestone	6.1
Labels	bsp, device
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/286
Commit	45308bcc3272b0a70ae046a5bf29eba525afd049

This MR fixes the issues in #5142 that are the result of the review in !238.

Closes #5142

Author: Chris Johns 2024-10-31T03:07:14.684Z

requested review from @gedare

Author: Chris Johns 2024-10-31T03:07:14.719Z

assigned to @chris

Author: Chris Johns 2024-10-31T03:10:23.673Z

changed title from **bsp/xilinx-zynq: {-Add SPDX to devcfg and slcr file-}s** to **bsp/xilinx-zynq: {+Resolve MR review comment+}s**

Author: Gedare Bloom 2024-10-31T03:34:29.025Z

approved this merge request

Author: Amar Takhar 2024-10-31T03:40:25.859Z

approved this merge request

3.9.2.70 283 - bsp/xilinx-zynq: Add devcfg and slcr drivers

Id	283
State	merged
Merged by	Amar Takhar
Merged at	2024-10-30T23:06:01.724Z
Assignee(s)	Chris Johns
Created	2024-10-30T06:17:33.645Z
Updated	2024-10-30T23:06:04.443Z
Milestone	6.1
Labels	bsp, device
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/283
Commit	bc8ffae115e7e7da87af4185c58d2f1d98bf845d

Add devcfg and slcr drivers to the XIlinx Zynq BSP.

The devfg driver loads the PL with a bitfile image. The driver can also support scrubbing.

These drivers are from Patrick Gauvin (pggauvin at gmail.com) and a thread on the devel list: https://lists.rtems.org/pipermail/devel/2017-May/017705.html

Author: Chris Johns 2024-10-30T06:17:33.808Z

assigned to @chris

Author: Chris Johns 2024-10-30T06:19:13.859Z

changed the description

Author: Chris Johns 2024-10-30T06:19:33.685Z

added 1 commit

- cd1768d4 - bsp/xilinx-zynq: Add devcfg and slcr drivers

Compare with previous version

Author: Amar Takhar 2024-10-30T07:38:29.453Z

That is an old patch very cool that it's finally getting in!

Author: Ranulfo Raphael 2024-10-30T20:24:24.490Z

There are some remaining directories from the original patch: ``c/src/lib/libbsp/arm/xilinx-zynq``

Author: Kinsey Moore 2024-10-30T20:18:17.534Z

Good catch. It looks like the moved files got added to the last commit instead of getting moved.

Author: Chris Johns 2024-10-30T20:18:17.534Z

Yeah great catch and thanks.

Author: Chris Johns 2024-10-30T20:18:17.534Z

I have removed the original patches. I thought I had moved to a new branch but I had not.

Author: Kinsey Moore 2024-10-30T20:04:56.114Z

added 6 commits

- cd1768d4...64fe53a8 - 3 commits from branch `rtems/rtos:main`
- d16b075c - bsp/xilinx-zynq: Add SLCR driver
- c4d84530 - bsp/xilinx-zynq: Add device configuration driver
- 002305f9 - bsp/xilinx-zynq: Add devcfg and slcr drivers

Compare with previous version

Author: Chris Johns 2024-10-30T20:16:59.120Z

added 1 commit

- 4b2905f0 - bsp/xilinx-zynq: Add devcfg and slcr drivers

Compare with previous version

Author: Chris Johns 2024-10-30T20:18:17.551Z

resolved all threads

Author: Gedare Bloom 2024-10-30T22:16:15.958Z

Add SPDX to all files. Preferably break apart this comment block according to https://docs.rtems.org/branches/master/eng/coding-file-hdr.html#file-templates

Author: Gedare Bloom 2024-10-30T22:16:15.958Z

See #5142

Author: Gedare Bloom 2024-10-30T22:16:27.942Z

including a driver like this shouldn't need stdio? maybe protect it with the DEBUG CPP checks for the print debugging

Author: Gedare Bloom 2024-10-30T22:16:27.942Z

See #5142

Author: Gedare Bloom 2024-10-30T22:16:33.702Z

printk would be preferable at this level. could also wrap this in a DEBUG CPP check especially if printf is needed. looks like ZYNQ_DEVCFG_DEBUG is used below.

Author: Gedare Bloom 2024-10-30T22:16:33.702Z

See #5142

Author: Gedare Bloom 2024-10-30T22:16:55.041Z

these need to be accounted for in confdefs

Author: Gedare Bloom 2024-10-30T22:16:55.041Z

See #5142 with the better idea I had of using self-contained objects.

Author: Chris Johns 2024-10-30T22:15:10.273Z

mentioned in issue #5142

Author: Gedare Bloom 2024-10-30T22:16:55.117Z

resolved all threads

Author: Gedare Bloom 2024-10-30T22:17:07.968Z

approved this merge request

Author: Amar Takhar 2024-10-30T23:04:34.235Z

approved this merge request

Author: Amar Takhar 2024-10-30T23:04:48.524Z

added 4 commits

- 4b2905f0...a1c3d4ba - 3 commits from branch `rtems/rtos:main`
- bc8ffae1 - bsp/xilinx-zynq: Add devcfg and slcr drivers

Compare with previous version

3.9.2.71 257 - waf: Fix handling of the VERSION file in a release

Id	257
State	merged
Merged by	Joel Sherrill
Merged at	2024-10-30T22:43:38.084Z
Assignee(s)	Chris Johns
Reviewer(s)	Gedare Bloom, Joel Sherrill
Created	2024-10-11T04:22:31.172Z
Updated	2024-10-30T22:43:42.755Z
Milestone	6.1
Labels	tool::waf
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/257
Commit	a1c3d4ba8e1d248434b215b817a13f9af4d8e381

Fix handling of the `VERSION` file in a release. The change output with the 6.1-rc4 `VERSION` file is:

```
*** BEGIN OF TEST HELLO WORLD ***
*** TEST VERSION: 6.1.0.rc4
*** TEST STATE: EXPECTED_PASS
*** TEST BUILD: RTEMS_DEBUG RTEMS_POSIX_API
*** TEST TOOLS: 13.3.0 20240521 (RTEMS 6, RSB␣
↪b95871822032635b2ccbee23b97a19e66d2b003e-modified, Newlib 1b3dcfd)
Hello World

*** END OF TEST HELLO WORLD ***


[ RTEMS shutdown ]
RTEMS version: 6.1.0.rc4
RTEMS tools: 13.3.0 20240521 (RTEMS 6, RSB␣
↪b95871822032635b2ccbee23b97a19e66d2b003e-modified, Newlib 1b3dcfd)
executing thread ID: 0x0a010001
executing thread name: UI1
```

Fixes #5037

Closes #5037

Author: Chris Johns 2024-10-11T04:22:31.573Z

assigned to @chris

Author: Amar Takhar 2024-10-11T04:57:39.700Z

Awesome!

Author: Amar Takhar 2024-10-11T04:57:43.016Z

approved this merge request

Author: Amar Takhar 2024-10-11T04:57:52.955Z

added 29 commits

- e6383d6c...ad378dca - 27 commits from branch `rtems/rtos:main`
- 9682cd29 - waf: Fix handling of the VERSION file in a release
- 8584b8b1 - waf: Format clean up

Compare with previous version

Author: Sebastian Huber 2024-10-11T06:23:22.519Z

What is the bug you want to fix? The VERSION file is already supported. Just place a `VERSION` file like this into the top-level directory:

```
[RTEMS_VERSION]
RTEMS_VERSION_CONTROL_KEY = foobar
__RTEMS_MAJOR__ = 6
__RTEMS_MINOR__ = 88
__RTEMS_REVISION__ = 99
```

This gives you:

```
*** BEGIN OF TEST RECORD 2 ***
*** TEST VERSION: 6.88.99.foobar
*** TEST STATE: EXPECTED_PASS
*** TEST BUILD: RTEMS_SMP
*** TEST TOOLS: 13.3.0 20240521 (RTEMS 6, RSB␣
↪46a5bfdc3fc95d503a63f9bee515e73d9198aa71, Newlib 1b3dcfd)
```

The existing solution works without a hand written special case parser.

Author: Chris Johns 2024-10-21T00:41:27.259Z

I have no idea why you decided to change it and break the release process. I have fixed it.

Author: Sebastian Huber 2024-10-21T00:41:27.259Z

We had a long discussion about this on the mailing list. Could you please explain what is broken?

Author: Chris Johns 2024-10-21T00:41:27.259Z

The VERSION file is more complex than just your values. The format has been documented for a while https://gitlab.rtems.org/rtems/tools/rtems-tools/-/blob/main/rtemstoolkit/version.py?ref_type=heads#L32

Why do you care?

Author: Sebastian Huber 2024-10-21T00:41:27.259Z

In the patch review, you said you want to update the release scripts:

https://lists.rtems.org/pipermail/devel/2023-August/076064.html

I still don't understand what is broken. Is the VERSION file in RTEMS used by external consumers?

I care because I use the existing VERSION file approach in our projects.

Author: Chris Johns 2024-10-21T00:41:27.259Z

The ticket has existed for a while so it was always going to be made consistent. I have no intention of changing all the other places.

The release scripts update was for gitlab not this.

Author: Sebastian Huber 2024-10-21T00:41:27.259Z

I immediately replied once the issue was opened. I still don't know what is broken. Why can't RTEMS use whatever VERSION format is suitable? Changing the release script to generate a VERSION file of the expected format is not an issue.

Author: Chris Johns 2024-10-21T00:41:27.259Z

Your version is your version. You comment no one else should care while at the same time you do care so I kind of feel you are answering your questions. The format I made a long time ago should persist. I am sorry this causes you problems but I have done my best to make it standard and maintain that.

Author: Sebastian Huber 2024-10-21T00:41:27.259Z

I think you are a bit unfair here, these changes were reviewed a while ago and now you act as this didn't happen.

Author: Chris Johns 2024-10-21T00:41:27.259Z

I am sorry you think that. I have done nothing more than be consistent with the release format used.

I took the time a long time ago to design the format and make all parts of the eco-system consistent.

Author: Sebastian Huber 2024-10-21T00:41:27.259Z

I have to maintain a bunch of build system patches which you don't like, so changing this stuff causes always extra work for me.

I am fine with the VERSION file format change. But the patch should be split up into more parts. The formatting changes should be in a separate commit. The VERSION format change should be an isolated commit. Adding the VERSION support to the options should be a separate commit. I think the `if key == "git"` related changes don't work.

Author: Chris Johns 2024-10-21T00:41:27.259Z

Thanks for the feedback. I ran yapf and it had changes which surprised me. I will update the MR. The git bit is specific where the format allows any label. I decided to change that in the code.

Author: Sebastian Huber 2024-10-21T00:41:27.259Z

So, you mean that someone uses a VERSION file like

```
[version]
revision = 6.0.git
```

and then gets the Git commit? I would say this is a feature and not a bug.

Author: Chris Johns 2024-10-21T00:41:27.259Z

My comment was wrong and meant to say I decided not to change the VC related bits other than remove the default. I will review it when I can.

Author: Chris Johns 2024-10-21T00:41:40.206Z

The VC key interface can remain for RTEMS 6 and be removed in RTEMS 7. The term key and git repositories is overloaded and can mean a sign in key or a key to sign a repo. The git hash is a type of release label and there are other types of release labels that are no git hashes or related to git or version control systems.

Author: Sebastian Huber 2024-10-21T00:39:26.541Z

Independent of the VERSION format changes, why is this change necessary?

Author: Sebastian Huber 2024-10-21T00:39:26.541Z

Did you test that after a new Git commit, the version header file in the build is updated?

Author: Chris Johns 2024-10-21T00:39:26.541Z

Ah no, thanks. I will take a look when I can.

Author: Sebastian Huber 2024-10-21T00:44:05.326Z

Why do we have to load the VERSION file for the options command?

Author: Chris Johns 2024-10-21T00:44:05.326Z

The help displays the path

Author: Chris Johns 2024-10-21T00:33:40.434Z

changed this line in version 3 of the diff

Author: Sebastian Huber 2024-10-21T00:39:19.197Z

Replacing an

```
if key == "git":
```

with

```
if key != "":
if key == "git":
```

is here the same as

```
if key != "" and key == "git":
```

which is the same as

```
if key == "git":
```

Author: Chris Johns 2024-10-21T00:33:41.289Z

changed this line in version 3 of the diff

Author: Chris Johns 2024-10-21T00:33:41.807Z

added 16 commits

- 8584b8b1...e7ee3768 - 13 commits from branch `rtems/rtos:main`
- 709654e8 - waf: Reformat using yapf
- f8c17dac - waf: Fix handling of the VERSION file in a release
- b45cf444 - version: Add the release label interfaces

Compare with previous version

Author: Chris Johns 2024-10-21T00:33:56.481Z

reset approvals from @amar by pushing to the branch

Author: Chris Johns 2024-10-21T00:44:05.346Z

resolved all threads

Author: Chris Johns 2024-10-21T00:44:42.566Z

mentioned in issue #5037

Author: Amar Takhar 2024-10-21T03:02:40.959Z

What is a VS key?

Author: Chris Johns 2024-10-21T03:02:40.959Z

Thanks. Typo on my part. I will fix.

Author: Chris Johns 2024-10-21T03:02:53.053Z

changed this line in version 4 of the diff

Author: Sebastian Huber 2024-10-21T01:09:36.015Z

We have now so many communication channels (in contrast to a simply devel@rtems.org) that I loose track of were things are discussed. Could you please point me to the place were these API changes and additions are discussed.

Author: Chris Johns 2024-10-21T01:09:36.015Z

It is happening here and in the issue.

Author: Sebastian Huber 2024-10-25T06:17:03.661Z

This is the wrong place to document this. Possible locations:

- https://docs.rtems.org/branches/master/eng/release-mgmt.html
- https://docs.rtems.org/branches/master/eng/build-system.html

Author: Chris Johns 2024-10-25T06:17:03.661Z

Yes. I mentioned in the issue I would. I would like this to be here as well.

Author: Sebastian Huber 2024-10-25T06:17:03.661Z

We have too many places were things are documented and things can get out of sync easily. I would prefer to have this stuff only documented in the RTEMS Software Engineering manual.

Author: Sebastian Huber 2024-10-25T06:17:03.661Z

For example, the format of the VERSION file. It would be more helpful to have this documented in the manual and not just in some source file somewhere.

Author: Chris Johns 2024-10-25T06:17:03.661Z

Yes I agree and I have not done that properly so it was on me for it not happening.

Can we merge the doco fragment and I then update the documentation so it is clear. I can then remove this fragment and reference the documentation. I would like see a reference to the documentation once present so someone looking at the code can see where it is defined?

Author: Sebastian Huber 2024-10-25T06:17:03.661Z

I would place a comment in the code which simply references the manual and the section.

Author: Sebastian Huber 2024-10-25T06:17:03.661Z

What is documented here in the comment and what is documented here https://docs.rtems.org/branches/master/eng/release-process.html#release-version-numbering doesn't match (for example the revision number). This chapter is relatively new and already inconsistent.

Author: Chris Johns 2024-10-25T06:17:03.661Z

I added this about 4 years ago before the VC key changes happened and well before `waf`. I am working on this documentation.

Author: Chris Johns 2024-10-25T06:21:23.561Z

changed this line in version 6 of the diff

Author: Sebastian Huber 2024-10-25T06:21:56.660Z

It would be really great if this could be discussed first and then documented in the RTEMS Software Engineering manual. The `rtems_version_control_key()` is already present in the RTEMS 5 release.

Author: Chris Johns 2024-10-25T06:21:56.660Z

Yes and it is also wrong in 5. There are many interfaces that have changed over the years and this is one we need to clean up.

The VC key is not being removed in 6 and I am giving notice it needs to be removed. We should not overlap functionality in interfaces and VC key is to specific and does not fit the needed purpose of the release label.

I am sorry I have not been more accurate about this in the past. I have now had to time to deal with this and I believe this interface will serve us into the future.

Author: Sebastian Huber 2024-10-25T06:21:56.660Z

Is there any difference between `rtems_version_control_key()` and `rtems_version_release_label()` except the name?

Author: Chris Johns 2024-10-25T23:32:19.133Z

Functionally there is none. The git hash or VC key is a **_kind of_** release label and there are other types of release labels. The release process uses the release label to identify an RC release. I had documented this as an **_identifier_** and in this change I am sharpening the definition by moving to the term **_release label_**.

My original view over 4 years ago was this label can used by service providers or users who have extra changes to label a release to aid their deployment and our public support processes.

Only the RTEMS project can make a release with an empty release label.

Author: Chris Johns 2024-10-21T03:03:04.451Z

added 1 commit

- 515a9fc6 - version: Add the release label interfaces

Compare with previous version

Author: Sebastian Huber 2024-10-25T06:21:43.367Z

Why do we have `RTEMS_VERSION_LABEL` and `rtems_version_release_label()`? Should this be `RTEMS_VERSION_RELEASE_LABEL`?

Author: Chris Johns 2024-10-25T06:21:43.367Z

Yes and thanks it should be. I am working on the release documentation so you have something to review this against.

Author: Chris Johns 2024-10-25T06:21:28.238Z

changed this line in version 6 of the diff

Author: Chris Johns 2024-10-25T06:21:43.367Z

Changed.

Author: Sebastian Huber 2024-10-25T06:22:13.144Z

The rest of the file uses `"x"` for strings and not `'x'`.

Author: Chris Johns 2024-10-25T06:22:13.144Z

Force of habit. I will change. All other python I have done in this project over many years uses `'x'` and you selected something different here.

Author: Chris Johns 2024-10-25T06:21:32.086Z

changed this line in version 6 of the diff

Author: Chris Johns 2024-10-25T06:22:13.144Z

Fixed.

Author: Sebastian Huber 2024-10-25T06:14:06.323Z

What is a valid release label?

Author: Chris Johns 2024-10-25T06:14:06.323Z

Please see the updated documentation.

Author: Chris Johns 2024-10-25T06:21:34.276Z

added 11 commits

- 515a9fc6...d0e9ec85 - 8 commits from branch `rtems/rtos:main`
- 42d91e77 - waf: Reformat using yapf
- 92128abb - waf: Fix handling of the VERSION file in a release
- 5328675d - version: Add the release label interfaces

Compare with previous version

Author: Chris Johns 2024-10-25T06:22:13.195Z

resolved all threads

Author: Chris Johns 2024-10-25T06:23:03.750Z

requested review from @gedare

Author: Gedare Bloom 2024-10-28T04:17:49.066Z

This needs a release note.

Author: Chris Johns 2024-10-28T04:17:49.066Z

Yes. I will do this once the MR is merged.

Author: Gedare Bloom 2024-10-28T04:17:24.076Z

please use a verb in API function calls, I suggest `rtems_version_get_release_label` – we might not have this documented, but it is preferred.

Author: Chris Johns 2024-10-28T04:17:24.076Z

The call was a 1:1 replacement for the VC key call. I will change the interface to include `get`.

Author: Gedare Bloom 2024-10-26T21:47:26.741Z

Does this mean the function returns `false` for an RTEMS release (using `release_label=""`)?

Author: Chris Johns 2024-10-26T21:47:26.741Z

Yes. Only the RTEMS project can set the release label to `""`. This is a 1:1 replacement for the VC key call.

Author: Gedare Bloom 2024-10-28T04:17:15.989Z

This appears to exclude using `.` in a revision label?

Author: Chris Johns 2024-10-28T04:17:15.989Z

Yes the VC key (`git` hash) was delimited with a `..` I prefer it to be `-` but that would not be compatible with the labeling up to this point in the `^` code. If we are happy to make the change I can do that?

It would make this piece of the documentation simpler:

https://gitlab.rtems.org/rtems/docs/rtems-docs/-/blob/main/eng/release-process.rst?ref_type=heads&plain=1#L116

Author: Chris Johns 2024-10-28T04:16:06.506Z

changed this line in version 7 of the diff

Author: Gedare Bloom 2024-10-26T21:52:55.817Z

i'm not sure what this is for

Author: Chris Johns 2024-10-26T21:52:55.817Z

The `prefix` is version specific so it changes when the major number changes. The code was refactored to parse `VERSION` and set these values when the help is displayed as it was incorrectly printing the defaults before.

Also the prefix as it is does not handle Windows cleanly but that is a separate issue.

Author: Gedare Bloom 2024-10-28T04:16:59.151Z

The “RTEMS_REVISION” is not being set/used. The documentation should be clear on this.

Author: Chris Johns 2024-10-28T04:16:59.151Z

It can be used when someone is deploying a release. It is documented here:

https://gitlab.rtems.org/rtems/docs/rtems-docs/-/blob/main/eng/release-process.rst?ref_type=heads&plain=1#L116

This looks like a bug. I will fix it.

Author: Chris Johns 2024-10-28T04:16:59.151Z

Fixed

Author: Chris Johns 2024-10-28T04:16:09.388Z

added 8 commits

- 5328675d...eaaeebed - 5 commits from branch `rtems/rtos:main`
- 4a9e4517 - waf: Reformat using yapf
- 50e1f4ad - waf: Fix handling of the VERSION file in a release
- 9219fab2 - version: Add the release label interfaces

Compare with previous version

Author: Chris Johns 2024-10-28T04:17:49.101Z

resolved all threads

Author: Gedare Bloom 2024-10-28T04:33:37.254Z

approved this merge request

Author: Chris Johns 2024-10-28T21:05:54.449Z

requested review from @joel

Author: Chris Johns 2024-10-28T21:06:13.799Z

requested review from @gedare and removed approval

Author: Chris Johns 2024-10-28T21:07:00.989Z

added 8 commits

- 9219fab2...5d074a26 - 5 commits from branch `rtems/rtos:main`
- 84f310bc - waf: Reformat using yapf
- f851cc0d - waf: Fix handling of the VERSION file in a release
- ff78619b - version: Add the release label interfaces

Compare with previous version

Author: Gedare Bloom 2024-10-28T21:27:22.366Z

approved this merge request

Author: Gedare Bloom 2024-10-29T21:35:36.339Z

For deprecating an interface, we have some steps to follow: https://docs.rtems.org/branches/master/eng/coding-deprecating.html

Author: Joel Sherrill 2024-10-30T22:39:56.526Z

approved this merge request

Author: Joel Sherrill 2024-10-30T22:40:30.525Z

added 10 commits

- ff78619b...64fe53a8 - 7 commits from branch `rtems/rtos:main`
- 2c4c73fd - waf: Reformat using yapf
- 3d782180 - waf: Fix handling of the VERSION file in a release
- a1c3d4ba - version: Add the release label interfaces

Compare with previous version

3.9.2.72 284 - Fix Zynq SMP on QEMU

Id	284
State	merged
Merged by	Amar Takhar
Merged at	2024-10-30T20:03:41.974Z
Assignee(s)	Kinsey Moore
Created	2024-10-30T18:36:58.895Z
Updated	2024-10-30T20:03:44.370Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/284
Commit	1b5549ae690e4e4c7f597a7bc8a5fac126b72175

Summary

When running Zynq on Xilinx QEMU (xilinx_zynq_a9_qemu) using the arm-generic-fdt-7series machine model for SMP support, QEMU starts both cores simultaneously causing the second core to enable the MMU before the page tables are configured. It then encounters repeating prefetch aborts. This fixes that by forcing the second core to wait until the first core is ready for it to start. The new code is only present on the QEMU BSP variant.

Author: Kinsey Moore 2024-10-30T18:36:59.078Z

assigned to @opticron

Author: Kinsey Moore 2024-10-30T18:56:25.357Z

For reference/reproduction, the full QEMU command line used is:

```
../xtools/bin/qemu-system-aarch64 -M arm-generic-fdt-7series -m 256M -
↪no-reboot -nographic -serial null -serial mon:stdio -dtb /desktop/
↪zynq-arm.dtb -kernel build/arm/xilinx_zynq_a9_qemu/testsuites/
↪smptests/smp09.exe
```

`../xtools/bin/qemu-system-aarch64` is the Xilinx QEMU installed from the RSB and `/desktop/zynq-arm.dtb` is provided in the default install of Xilinx Vitis.

Author: Kinsey Moore 2024-10-30T18:56:25.357Z

Also note that while I'm using the -aarch64 variant here, behavior of the -arm variant does not produce meaningfully different behavior (though it does vary slightly in timing on occasion).

Author: Kinsey Moore 2024-10-30T18:56:25.374Z

resolved all threads

Author: Kinsey Moore 2024-10-30T18:56:40.489Z

added 6 commits

- be9c4f08...8820b8e6 - 4 commits from branch `rtems/rtos:main`
- 95d904b0 - spec: Apply CLOCK_DRIVER_USE_ONLY_BOOT_PROCESSOR where expected
- 1b5549ae - bsps/arm/zynq: Make secondary core wait on QEMU

Compare with previous version

Author: Gedare Bloom 2024-10-30T18:58:38.222Z

approved this merge request

Author: Amar Takhar 2024-10-30T20:03:34.779Z

approved this merge request

3.9.2.73 278 - waf: Update waf to version 2.1.3

Id	278
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-28T20:37:50.420Z
Reviewer(s)	Chris Johns
Created	2024-10-28T19:24:19.097Z
Updated	2024-10-28T20:37:52.576Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/278
Commit	5d074a263b4d5e510d8b5fb163baa4838e9a9659

Summary

Pick up waf bugfix workaround for mingw python subprocess pipe stdin failure in pre-forked processes (https://gitlab.com/ita1024/waf/-/issues/2452)

Author: Amar Takhar 2024-10-28T20:23:15.355Z

Is it worth waiting to see if any other changes need to be made or is this it you think?

Author: Gedare Bloom 2024-10-28T20:23:15.355Z

I'm not aware of any other problems we're having with waf that are affecting `6`.

Author: Amar Takhar 2024-10-28T20:23:15.355Z

Okay I was more asking if this fixes all the issues you were having if it does then that's good thanks!

Author: Gedare Bloom 2024-10-28T20:18:36.889Z

marked this merge request as **ready**

Author: Gedare Bloom 2024-10-28T20:18:51.658Z

Tested on MSYS2 and on Ubuntu

Author: Gedare Bloom 2024-10-28T20:19:31.783Z

requested review from @chris

Author: Amar Takhar 2024-10-28T20:23:15.373Z

resolved all threads

Author: Amar Takhar 2024-10-28T20:23:18.275Z

approved this merge request

Author: Kinsey Moore 2024-10-28T20:37:29.691Z

added 2 commits

- 1bba3494 - 1 commit from branch `rtems/rtos:main`
- 5d074a26 - waf: Update waf to version 2.1.3

Compare with previous version

Author: Kinsey Moore 2024-10-28T20:37:42.392Z

approved this merge request

3.9.2.74 271 - bsps: Remove imported Xilinx headers

Id	271
State	merged
Merged by	Joel Sherrill
Merged at	2024-10-28T19:46:42.941Z
Assignee(s)	Kinsey Moore
Created	2024-10-24T20:10:32.116Z
Updated	2024-10-28T19:46:46.916Z
Milestone	6.1
Labels	arch:aarch64, arch:arm, arch:microblaze
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/271
Commit	1bba3494786772272c54bd29fb922e005c06fdcf

Summary

bsps: Remove imported Xilinx headers

This removes the headers imported from the embeddedsw repository in favor of a much thinner shim. This also removes the complicated build system configuration necessary to support use of these headers. The primary reason for removal is that certain external Xilinx libraries also require use of these headers and this causes version mismatches and header conflicts that can be avoided.

Author: Kinsey Moore 2024-10-24T20:10:32.473Z

assigned to @opticron

Author: Sebastian Huber 2024-10-28T14:52:25.446Z

This should be in <bsp/xil-compat-common.h>.

Author: Sebastian Huber 2024-10-28T14:52:25.446Z

I had a look at the changes. It looks good. I also built all BSPs. I didn't check for new warnings.

Author: Kinsey Moore 2024-10-28T14:51:33.284Z

changed this file in version 2 of the diff

Author: Kinsey Moore 2024-10-28T14:52:25.446Z

Path updated in latest patch.

Author: Sebastian Huber 2024-10-28T11:09:58.336Z

Thanks, this is a really helpful clean up.

Author: Kinsey Moore 2024-10-28T14:51:33.476Z

added 10 commits

- 007b9098...ee34dd12 - 9 commits from branch `rtems/rtos:main`
- 01949cef - bsps: Remove imported Xilinx headers

Compare with previous version

Author: Kinsey Moore 2024-10-28T14:52:25.475Z

resolved all threads

Author: Sebastian Huber 2024-10-28T14:54:57.959Z

approved this merge request

Author: Sebastian Huber 2024-10-28T14:56:45.150Z

@joel This need your approval due to microblaze changes.

Author: Kinsey Moore 2024-10-28T15:34:17.292Z

added 1 commit

- 59ea90ff - bsps: Remove imported Xilinx headers

Compare with previous version

Author: Kinsey Moore 2024-10-28T15:34:32.957Z

reset approvals from @sebhub by pushing to the branch

Author: Kinsey Moore 2024-10-28T15:36:04.575Z

The install paths didn't get updated and are now correct with the latest push.

Author: Gedare Bloom 2024-10-28T19:01:30.421Z

approved this merge request

Author: Kinsey Moore 2024-10-28T19:23:54.040Z

added 3 commits

- 59ea90ff...79bed0f1 - 2 commits from branch `rtems/rtos:main`
- 1bba3494 - bsps: Remove imported Xilinx headers

Compare with previous version

Author: Joel Sherrill 2024-10-28T19:46:30.441Z

approved this merge request

3.9.2.75 234 - aarch64/raspberrypi: improve UART

Id	234
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-28T15:12:37.329Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Kinsey Moore, Gedare Bloom
Created	2024-09-20T07:38:46.381Z
Updated	2024-10-28T15:12:41.154Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/234
Commit	79bed0f191e8f63e7a48f1aa41a3434822214541

Summary

aarch64/raspberrypi: improve UART

- Add support for four new ports, UART2-UART5.
- Add build options to allow console device configuration.
- Segregate device-specific definitions from the device family files. X macros

are used to maintain a single source of truth and have the configuration done at compile-time * Add raspberrypi_uart_init() to make it convenient for users to install uart devices

Close #5130

Co-authored-by: Ning Yang <yangn0@qq.com>

Author: Ning Yang 2024-09-20T07:39:13.646Z

added 3 commits

- bf1cc04a...3ec16d5f - 2 commits from branch `rtems/rtos:main`
- 46c0463c - aarch64/raspberrypi: improve UART

Compare with previous version

Author: Chris Johns 2024-10-27T04:23:31.343Z

This looks like a header file. Why the `.def` extension?

Author: Ning Yang 2024-10-27T04:23:31.343Z

I'm waiting for @Barusu to reply, it seems the `.h` extension is more appropriate.

Author: Utkarsh Verma 2024-10-27T04:23:31.343Z

I was using X macros there and Wikibooks recommended to use the .def extension.

https://en.m.wikibooks.org/wiki/C_Programming/Preprocessor_directives_and_macros#X-Macros

It's functionally the same as a header.

Author: Gedare Bloom 2024-10-27T04:23:31.343Z

The way it's being used is more like a header file. It is not being included multiple times in the same source, and it uses a header guard accordingly. Please rename this to .h, and adjust the header guards as _H instead of _DEF

We don't currently have any distinction for header files that contain X-macros.

Author: Gedare Bloom 2024-10-27T04:23:31.343Z

Also the header file name should be more specific, or these macros should just get folded directly into the console-config.c file if they don't need to be exported to the user.

Author: Ning Yang 2024-10-26T04:43:23.502Z

changed this line in version 9 of the diff

Author: Ning Yang 2024-10-27T04:23:31.343Z

I changed `raspeberrypi4B.def` to `raspberrypi-uart.h`. is it ok?

Author: Chris Johns 2024-10-07T14:48:28.727Z

What happens on the other RPys?

Author: Ning Yang 2024-10-07T14:48:28.727Z

Rpi4 have 5 pl011 uart ports, while there are two in rpi0, 1, 2, and 3. So this definition file cannot be universal.

Author: Ning Yang 2024-10-26T04:43:24.415Z

changed this line in version 9 of the diff

Author: Kinsey Moore 2024-09-22T01:41:42.776Z

added 3 commits

- 46c0463c...6003ea9d - 2 commits from branch `rtems/rtos:main`
- 3378faaa - aarch64/raspberrypi: improve UART

Compare with previous version

Author: Ning Yang 2024-10-07T14:48:28.760Z

resolved all threads

Author: Kinsey Moore 2024-10-18T13:41:21.342Z

Please give X a more descriptive name like “DEFINITION_REWRITER” or “CONSOLE_DEVICE_DEFINITION_RENDERER”. In addition, a small comment above this might help with understanding this macro: “This macro exists to serve as a common point of definition for the parameters of the UARTs present in the Raspberry Pi 4. It is used in multiple locations with different rendering macros to prevent duplication of information.”

Author: Kinsey Moore 2024-10-18T13:41:21.342Z

Additionally, this definition style could be shared with the other Raspberry Pi BSPs if they each had their own UART definitions in a local raspberrypi_uarts.def, though I’m not a fan of introducing a differently named header file type in general.

Author: Ning Yang 2024-10-18T13:41:24.555Z

changed this line in version 5 of the diff

Author: Kinsey Moore 2024-10-18T13:41:25.123Z

Does the assert-in-set action not suffice here?

Author: Ning Yang 2024-10-18T13:41:25.123Z

UART1 and UART2 are missing from the set, they are mini-uart. I will add them when creating mini-uart driver MR.

Author: Kinsey Moore 2024-10-18T13:41:25.123Z

That's fine, but why doesn't this use:

```
- assert-in-set:
- UART0
- UART2
- UART3
- UART4
- UART5
```

Author: Ning Yang 2024-10-18T13:41:25.123Z

!`image <https://gitlab.rtems.org/-/project/uploads/b6162cac9e9d7b9e89f46eb01f76836a/image.png>`_

https://github.com/UtkarshVerma/rtems/commit/1c4fc608bc70f0d5324e836a61be54e64767d7fc

@Barusu mentioned this, but I forgot to ask you. I will use `assert-in-set`.

Author: Ning Yang 2024-10-18T13:41:29.583Z

changed this line in version 5 of the diff

Author: Chris Johns 2024-10-18T00:25:26.845Z

approved this merge request

Author: Chris Johns 2024-10-18T00:25:58.768Z

requested review from @opticron

Author: Chris Johns 2024-10-18T00:26:06.515Z

assigned to @opticron

Author: Amar Takhar 2024-10-18T01:20:32.989Z

added 82 commits

- 3378faaa...c978b63c - 81 commits from branch `rtems/rtos:main`
- 733b48c7 - aarch64/raspberrypi: improve UART

Compare with previous version

Author: Ning Yang 2024-10-18T13:41:25.149Z

resolved all threads

Author: Ning Yang 2024-10-18T13:41:30.065Z

added 1 commit

- e18bb9d5 - aarch64/raspberrypi: improve UART

Compare with previous version

Author: Ning Yang 2024-10-18T13:41:44.171Z

reset approvals from @chris by pushing to the branch

Author: Ning Yang 2024-10-18T13:42:38.127Z

added 1 commit

- ae350317 - aarch64/raspberrypi: improve UART

Compare with previous version

Author: Chris Johns 2024-10-24T23:18:19.525Z

requested review from @gedare

Author: Kinsey Moore 2024-10-24T23:21:51.505Z

approved this merge request

Author: Kinsey Moore 2024-10-24T23:22:25.134Z

added 15 commits

- ae350317...83c1a305 - 14 commits from branch `rtems/rtos:main`
- 6087f297 - aarch64/raspberrypi: improve UART

Compare with previous version

Author: Gedare Bloom 2024-10-26T04:44:31.731Z

Not a big deal, but this can just be `return status;` at this point.

Author: Ning Yang 2024-10-26T04:43:25.185Z

changed this line in version 9 of the diff

Author: Gedare Bloom 2024-10-27T05:11:58.835Z

same here, `return status;`

Author: Gedare Bloom 2024-10-26T04:44:38.632Z

I think the `4B` was removed from the other files, any reason to keep it here?

Author: Ning Yang 2024-10-26T04:44:38.632Z

I just forgot to remove them.

Author: Ning Yang 2024-10-26T04:43:26.684Z

changed this line in version 9 of the diff

Author: Gedare Bloom 2024-10-26T04:44:44.425Z

remove `4b`?

Author: Ning Yang 2024-10-26T04:43:27.434Z

changed this line in version 9 of the diff

Author: Gedare Bloom 2024-10-27T04:26:18.312Z

This winds up the only place these macros are used. Will they be used elsewhere in future patches? Otherwise this is a lot of CPP macro complexity for the simple use case.

Author: Ning Yang 2024-10-27T04:26:18.312Z

I think the Raspberrypi5 might use these.

Author: Ning Yang 2024-10-26T04:43:28.192Z

added 1 commit

- 11f3249c - aarch64/raspberrypi: improve UART

Compare with previous version

Author: Ning Yang 2024-10-26T04:43:40.812Z

reset approvals from @opticron by pushing to the branch

Author: Ning Yang 2024-10-26T04:44:58.360Z

requested review from @gedare

Author: Kinsey Moore 2024-10-26T21:00:20.376Z

approved this merge request

Author: Kinsey Moore 2024-10-26T21:00:26.792Z

added 8 commits

- 11f3249c...eaaeebed - 7 commits from branch `rtems/rtos:main`
- 2a21cb99 - aarch64/raspberrypi: improve UART

Compare with previous version

Author: Gedare Bloom 2024-10-27T05:12:01.816Z

I should have been more clear, all 4 lines here 122-125 are equivalent to `return status`

Author: Ning Yang 2024-10-27T05:11:31.354Z

added 2 commits

- 11f3249c - aarch64/raspberrypi: improve UART
- 5b5b7012 - aarch64/raspberrypi: optimize console return

Compare with previous version

Author: Ning Yang 2024-10-27T05:11:45.136Z

reset approvals from @opticron by pushing to the branch

Author: Ning Yang 2024-10-27T05:12:01.835Z

resolved all threads

Author: Ning Yang 2024-10-27T05:12:36.416Z

requested review from @opticron

Author: Gedare Bloom 2024-10-28T04:08:20.386Z

approved this merge request

Author: Kinsey Moore 2024-10-28T15:12:18.282Z

approved this merge request

Author: Kinsey Moore 2024-10-28T15:12:28.707Z

added 10 commits

- 5b5b7012...ee34dd12 - 8 commits from branch `rtems/rtos:main`
- d17116d3 - aarch64/raspberrypi: improve UART
- 79bed0f1 - aarch64/raspberrypi: optimize console return

Compare with previous version

3.9.2.76 274 - spec/aarch64: Rename Versal BPSs to be in line with ZynqMP

Id	274
State	merged
Merged by	Sebastian Huber
Merged at	2024-10-28T08:22:02.391Z
Assignee(s)	Kinsey Moore
Created	2024-10-25T19:51:59.691Z
Updated	2024-10-28T08:22:06.063Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/274
Commit	ee34dd12f41af5bef2b9561ae3e459c7dc6eccf3

Summary

Author: Kinsey Moore 2024-10-25T19:51:59.849Z

assigned to @opticron

Author: Amar Takhar 2024-10-25T19:56:44.192Z

approved this merge request

Author: Sebastian Huber 2024-10-28T08:21:21.714Z

approved this merge request

Author: Sebastian Huber 2024-10-28T08:21:41.006Z

added 4 commits

- d331ad3a...eaaeebed - 3 commits from branch `rtems/rtos:main`
- ee34dd12 - spec/aarch64: Rename Versal BPSs to be in line with ZynqMP

Compare with previous version

3.9.2.77 270 - riscv/niosv: Adding a new NIOS V BSP to RISC-V

Id	270
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-25T13:49:55.826Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Chris Johns, Kinsey Moore
Created	2024-10-23T20:18:07.523Z
Updated	2024-10-25T13:49:59.075Z
Milestone	6.1
Labels	arch:riscv
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/270
Commit	0d15487401d735d2873a83bb5cdb09529fd3d3d3

Summary

Resubmission of !174

Corrected some whitespace issues and squashed all the changes. Removed the zip and 'supporting files'.

Compile-only test with the config.ini from the bsp's README.

Author: Gedare Bloom 2024-10-23T20:18:30.892Z

changed the description

Author: Gedare Bloom 2024-10-23T20:20:05.291Z

@kirspelk

Author: Gedare Bloom 2024-10-23T20:41:39.960Z

added 1 commit

- 6b5ac207 - riscv/niosv: use default values that compile

Compare with previous version

Author: Gedare Bloom 2024-10-23T20:45:25.087Z

added 1 commit

- 6c4aa1e9 - riscv/niosv: use default values that compile

Compare with previous version

Author: Chris Johns 2024-10-24T23:13:06.432Z

added 3 commits

- 83c1a305 - 1 commit from branch `rtems/rtos:main`
- 665e1d1a - riscv/niosv: Adding a new NIOS V BSP to RISC-V
- e6572a2c - riscv/niosv: use default values that compile

Compare with previous version

Author: Chris Johns 2024-10-24T23:13:16.146Z

approved this merge request

Author: Chris Johns 2024-10-24T23:13:27.954Z

requested review from @opticron and @chris

Author: Chris Johns 2024-10-24T23:13:32.369Z

assigned to @gedare

Author: Kinsey Moore 2024-10-25T13:49:33.118Z

approved this merge request

Author: Kinsey Moore 2024-10-25T13:49:43.113Z

added 4 commits

- e6572a2c...d0e9ec85 - 2 commits from branch `rtems/rtos:main`
- e9957cd8 - riscv/niosv: Adding a new NIOS V BSP to RISC-V
- 0d154874 - riscv/niosv: use default values that compile

Compare with previous version

3.9.2.78 256 - GRLIB: Fix Coverity issues

Id	256
State	merged
Merged by	Amar Takhar
Merged at	2024-10-21T07:30:55.940Z
Created	2024-10-08T07:48:58.443Z
Updated	2024-10-25T08:06:28.441Z
Milestone	6.1
Labels	bsp, scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/256
Commit	a5f64ff27d19ca53aeb4d02729745beaa736028f

Summary

Gaisler was asked to fix 8 issues found by Coverity scans. Below is a list of the issues along with the actions taken: * CID 1399762: False Positive, no action taken. * CID 1399764: Dead code removed. * CID 1399770: Dead code removed. * CID 1399772: False Positive, no action taken. * CID 1399774: Bitwise and operation on non-shifted bit position, fixed. * CID 1399775: SLINK specification says that there are 3 IO cards capable of transmitting data but they can take addresses from 0 to 3. Due to this, we need to have 4 queues instead of just 3. This is intentional, no action taken. * CID 1399778: Evaluation order violation, split operation over two lines. * CID 1399782: Evaluation order violation, split operation over two lines.

Author: Amar Takhar 2024-10-09T17:11:21.586Z

Hi there Matteo did you mean to create this merge request from your main? You probably want to do it from a branch that way when you update you won't have conflicts.

Author: Matteo Concas 2024-10-09T17:11:21.586Z

Hi Amar, I had made those changes in a local git originally. I created this fork specifically to push those changes to the main repository. I don't plan on using it again for now.

Author: Amar Takhar 2024-10-09T17:11:21.586Z

Okay no problem just checking! :)

Author: Amar Takhar 2024-10-09T17:11:21.606Z

resolved all threads

Author: Sebastian Huber 2024-10-21T07:01:20.563Z

I am not sure if this is the right change. I guess the `&=` should be just `&`. There is probably no need to have two read modify write operations.

Author: Matteo Concas 2024-10-18T11:25:46.329Z

changed this line in version 2 of the diff

Author: Matteo Concas 2024-10-21T07:01:20.563Z

You are correct, I have changed those lines again.

Author: Sebastian Huber 2024-10-21T07:01:20.563Z

Could you please rebase the commits so that we have only one commit touching bsps/shared/grlib/ascs/grascs.c.

Author: Matteo Concas 2024-10-21T07:01:20.563Z

Done.

Author: Matteo Concas 2024-10-18T11:25:47.643Z

added 1 commit

- 2665b4ef - grlib/ascs: Remove unneeded write operations

Compare with previous version

Author: Sebastian Huber 2024-10-21T07:01:18.232Z

This should be simply `GRPWM_PCTRL_EN`.

Author: Matteo Concas 2024-10-18T14:00:25.645Z

changed this line in version 3 of the diff

Author: Matteo Concas 2024-10-21T07:01:18.232Z

Done.

Author: Matteo Concas 2024-10-18T14:00:26.520Z

added 2 commits

- a41e4bc7 - grlib/pwm: Fix PWM enable bit check, CID 1399774
- 5f689b9b - grlib/ascs: Fix evaluation order violations, CIDs 1399778, 1399782

Compare with previous version

Author: Sebastian Huber 2024-10-21T07:01:23.095Z

If you keep the original formatting, then you have one line less which changes.

Author: Matteo Concas 2024-10-21T06:42:22.693Z

changed this line in version 4 of the diff

Author: Matteo Concas 2024-10-21T07:01:23.095Z

Done.

Author: Matteo Concas 2024-10-21T06:42:23.812Z

added 1 commit

- d6ed6db0 - grlib/ascs: Fix evaluation order violations, CIDs 1399778, 1399782

Compare with previous version

Author: Sebastian Huber 2024-10-21T07:01:12.420Z

approved this merge request

Author: Sebastian Huber 2024-10-21T07:01:23.166Z

resolved all threads

Author: Sebastian Huber 2024-10-21T07:03:11.214Z

added 45 commits

- d6ed6db0...907ded86 - 41 commits from branch `rtems/rtos:main`
- ff22dd6f - grlib/1553: Remove dead code, CID 1399764
- de56c23c - grlib/1553: Remove dead code, CID 1399770
- 93413ed3 - grlib/pwm: Fix PWM enable bit check, CID 1399774
- a5f64ff2 - grlib/ascs: Fix evaluation order violations, CIDs 1399778, 1399782

Compare with previous version

Author: Amar Takhar 2024-10-21T07:30:40.214Z

approved this merge request

Author: Joel Sherrill 2024-10-25T08:06:28.466Z

@matteo.concas Thanks for working on these. Please double check that all eight issues are now fixed in the Coverity reports. The email on the run when this was merged only cited five.

Author: Matteo Concas 2024-10-25T08:07:09.079Z

I have added comments where relevant (CIDs 1399762 and 1399775) and created a new merge request regarding the Coverity issue CID 1399772, link to the merge request.

Author: Gedare Bloom 2024-10-23T19:06:41.795Z

mentioned in issue administration/gitlab#83

3.9.2.79 272 - cpukit/libmisc/shell: Remove shell prompt carriage return

Id	272
State	merged
Merged by	Amar Takhar
Merged at	2024-10-25T03:13:21.110Z
Assignee(s)	Kinsey Moore
Created	2024-10-25T02:28:25.893Z
Updated	2024-10-25T03:13:23.703Z
Milestone	6.1
Labels	cpukit::shell, rtems::shell
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/272
Commit	d0e9ec85b067dbda19fc50e66830c3e1d92fb232

Summary

cpukit/libmisc/shell: Remove shell prompt carriage return

This removes the carriage return printed before the shell prompt as it can cause other output to be overwritten unexpectedly. This was discovered when using the “cat” shell command on a file whose content contained no trailing nr and was short enough to be entirely swallowed by the prompt.

Author: Kinsey Moore 2024-10-25T02:28:26.212Z

assigned to @opticron

Author: Kinsey Moore 2024-10-25T02:28:48.419Z

This MR obsoletes !219

Author: Kinsey Moore 2024-10-25T02:29:53.314Z

mentioned in merge request !219

Author: Kinsey Moore 2024-10-25T02:44:47.649Z

added 3 commits

- 51053024...e0f1c8fe - 2 commits from branch `rtems/rtos:main`
- d0e9ec85 - cpukit/libmisc/shell: Remove shell prompt carriage return

Compare with previous version

Author: Chris Johns 2024-10-25T02:49:30.959Z

approved this merge request

Author: Amar Takhar 2024-10-25T03:13:10.667Z

approved this merge request

3.9.2.80 268 - Set Python scripts to use Python 3

Id	268
State	merged
Merged by	Joel Sherrill
Merged at	2024-10-24T23:29:19.281Z
Assignee(s)	Amar Takhar
Reviewer(s)	Joel Sherrill, Chris Johns
Created	2024-10-21T22:43:24.337Z
Updated	2024-10-24T23:29:21.843Z
Milestone	6.1
Labels	lang::python
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/268
Commit	e0f1c8fe0b20ae486f5b99c3a9155686bc3a11f2

Summary

Set Python scripts to use Python 3

Several of these already required Python 3 and would not run under 2.7.

Author: Amar Takhar 2024-10-21T22:43:24.628Z

assigned to @amar

Author: Amar Takhar 2024-10-21T22:44:09.147Z

I noticed this when trying to run `rtems-bsps`. Several of them already required Python 3 which I'm sure was not intentional but it makes sense to move everything to v3 since waf now requires it.

Author: Chris Johns 2024-10-24T23:26:17.112Z

added 2 commits

- 83c1a305 - 1 commit from branch `rtems/rtos:main`
- e0f1c8fe - Set Python scripts to use Python 3

Compare with previous version

Author: Chris Johns 2024-10-24T23:26:42.528Z

The `waf` script has this so it is required so this change is good and does not break anything we already have.

Author: Chris Johns 2024-10-24T23:26:47.026Z

approved this merge request

Author: Chris Johns 2024-10-24T23:27:01.239Z

requested review from @chris

Author: Chris Johns 2024-10-24T23:27:07.772Z

requested review from @joel

Author: Joel Sherrill 2024-10-24T23:29:08.754Z

approved this merge request

3.9.2.81 123 - cpukit/libfs/jffs2: Prevent memory corruption due to corrupted data

Id	123
State	merged
Merged by	Amar Takhar
Merged at	2024-10-24T22:36:47.889Z
Assignee(s)	Kinsey Moore
Created	2024-07-23T14:38:09.073Z
Updated	2024-10-24T22:36:51.686Z
Milestone	6.1
Labels	filesystem::jffs2
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/123
Commit	83c1a305f71e8a11b5c61e89b0191e09ff28b2a7

Summary

cpukit/libfs/jffs2: Prevent memory corruption due to corrupted data

The rtime decompression routine does not fully check bounds during the entirety of the decompression pass and can corrupt memory outside the decompression buffer if the compressed data is corrupted. This adds the required check to prevent this failure mode.

Updates #5072

Author: Kinsey Moore 2024-07-23T14:38:09.260Z

assigned to @opticron

Author: Kinsey Moore 2024-07-23T14:39:30.720Z

This was discovered upon reviewing the failure mode induced by #5072 with multiple JFFS2 filesystems using the same decompression buffer. I'm waiting for external verification before I mark this draft as ready.

Author: Kinsey Moore 2024-07-23T14:39:49.654Z

This fix will also need to be pushed upstream.

Author: Kinsey Moore 2024-07-23T20:48:23.999Z

added 1 commit

- a0106305 - cpukit/libfs/jffs2: Prevent memory corruption due to corrupted data

Compare with previous version

Author: Kinsey Moore 2024-07-24T13:33:17.875Z

added 2 commits

- e58ff898 - 1 commit from branch `rtems/rtos:main`
- 9f98c2e8 - cpukit/libfs/jffs2: Prevent memory corruption due to corrupted data

Compare with previous version

Author: Kinsey Moore 2024-07-24T14:29:59.642Z

added 2 commits

- 3b96aadd - 1 commit from branch `rtems/rtos:main`
- 46e52b1f - cpukit/libfs/jffs2: Prevent memory corruption due to corrupted data

Compare with previous version

Author: Kinsey Moore 2024-10-24T22:35:34.546Z

I have submitted this patch upstream to the maintainers for the JFFS2 code in the Linux kernel.

Author: Amar Takhar 2024-10-24T22:35:34.546Z

Got a link just so we can have it here?

Author: Kinsey Moore 2024-10-24T22:35:34.546Z

Unfortunately, no. This subsystem doesn't use a ML and the MAINTAINERS file directs you to email two people individually and that they only accept the random odd fix. This subsystem is basically on life support.

Author: Amar Takhar 2024-10-24T22:35:34.546Z

I see! That's not unusual at least it's recorded why there aren't any details. Thanks! :)

Author: Sebastian Huber 2024-10-24T22:35:34.546Z

Any feedback from the Linux maintainers?

Author: Kinsey Moore 2024-10-24T22:35:34.546Z

I've been told it will go into all releases as a bug fix during the next merge window, but I don't have any timing information on that.

Author: Amar Takhar 2024-07-24T20:46:04.056Z

resolved all threads

Author: Kinsey Moore 2024-07-24T21:09:24.438Z

resolved all threads

Author: Amar Takhar 2024-07-24T21:27:49.709Z

resolved all threads

Author: Kinsey Moore 2024-08-28T19:06:19.930Z

marked this merge request as **ready**

Author: Kinsey Moore 2024-08-28T19:06:26.169Z

added 134 commits

- 46e52b1f...cb0a5305 - 133 commits from branch `rtems/rtos:main`
- 01f7f3cf - cpukit/libfs/jffs2: Prevent memory corruption due to corrupted data

Compare with previous version

Author: Sebastian Huber 2024-10-24T22:35:20.822Z

Why do we need the () around the + here and not four lines below?

Author: Kinsey Moore 2024-10-24T22:35:20.822Z

Technically, it doesn't. I tend to enforce readability when mixing arithmetic operators and conditional operators, but I can remove the extra parentheses if you prefer.

Author: Joel Sherrill 2024-10-24T22:35:20.822Z

What's the jffs2 style for this if there is an example?

Personally, I like the parentheses around the addition. Makes it very clear what you intended.

But follow the existing jffs2 style overrides us.

Author: Kinsey Moore 2024-10-24T22:35:20.822Z

I wasn't given any feedback on the patch I submitted (which is this patch minus the ifdef), so I assume it's going in as-is.

Author: Gedare Bloom 2024-10-24T22:35:13.588Z

Are we waiting for this to be upstreamed first?

Author: Kinsey Moore 2024-10-24T22:35:13.588Z

Progress on that front seems to be very slow and with very little feedback due to the nature/status of the JFFS2 stack. I don't know when it will go into a kernel merge window and I would suggest not waiting on that to occur.

Author: Kinsey Moore 2024-10-24T22:35:13.588Z

The Linux 6.12 merge window opened today, so I may poke the maintainer to see if he plans to submit it.

Author: Amar Takhar 2024-10-24T22:35:13.588Z

I would just merge it for now and on the next update if it's upstreamed it'll come down with that change. It's a lot of churn for a fix we know we need.

Author: Kinsey Moore 2024-10-24T22:35:34.569Z

resolved all threads

Author: Chris Johns 2024-10-24T22:35:46.583Z

approved this merge request

Author: Kinsey Moore 2024-10-24T22:35:55.165Z

added 139 commits

- 01f7f3cf...a5f64ff2 - 138 commits from branch `rtems/rtos:main`
- 83c1a305 - cpukit/libfs/jffs2: Prevent memory corruption due to corrupted data

Compare with previous version

Author: Amar Takhar 2024-10-24T22:36:35.065Z

approved this merge request

3.9.2.82 174 - Adding a new NIOS V BSP to the RISC-V architecture

Id	174
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-22T20:39:43.762Z
Created	2024-08-07T19:29:57.447Z
Updated	2024-10-23T20:18:21.810Z
Milestone	6.1
Labels	arch:riscv
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/174
Commit	3c2398db7adb6159915754fffb079404c2a70389

Summary

Issue #5101

Adding a new NIOS V BSP to the RISC-V architecture in the RTEMS repository

Author: Kevin Kirspel 2024-08-09T21:17:02.063Z

added 1 commit

- 039677d1 - adding a flash directory for the EPCQ driver as it is common across BSPs

Compare with previous version

Author: Sebastian Huber 2024-08-14T21:10:59.040Z

This file is not needed. Please remove it.

Author: Kevin Kirspel 2024-08-14T21:09:52.277Z

changed this line in version 3 of the diff

Author: Kevin Kirspel 2024-08-14T21:10:59.040Z

File was removed.

Author: Sebastian Huber 2024-08-14T21:11:57.339Z

Can't you use the shared start file?

Author: Kevin Kirspel 2024-08-14T21:11:57.339Z

Probably, I wanted to clear the registers for debugging purposes. Let me recompile with the shared start file and make sure everything works.

Author: Kevin Kirspel 2024-08-14T21:09:53.103Z

changed this line in version 3 of the diff

Author: Kevin Kirspel 2024-08-14T21:11:57.339Z

start.S file was removed from the NIOS V BSP and the shared start file is now used.

Author: Sebastian Huber 2024-10-17T22:45:52.653Z

If this is needed, why don't we unzip it?

Author: Kevin Kirspel 2024-10-17T22:45:52.653Z

This BSP is just an example NIOS V BSP which uses a Intel Cyclone 10 LP Evaluation Board with a FPGA configuration that is described in the README.md. The supporting.zip file contains files that are referenced in the README.md. The README.md is intended to be used as a guide for creating a real BSP based on a real NIOS V based FPGA system. It contains the steps necessary to start with a Quartus Prime project to building a RTEMS BSP. I could move the README.md contents into the user's manual but it would contain all the Quartus instructions that are unrelated to RTEMS. That is why I just left it in the BSP itself. Even if I move it into the user's manual, the supporting.zip file would still need to be accessible.

Author: Joel Sherrill 2024-10-17T22:45:52.653Z

@gedare @chris Do either of you have input to help resolve this?

@kirspelk Is it OK to add a subdirectory and unzip it into there? It is best to avoid zip's in the repository.

Author: Joel Sherrill 2024-10-17T22:45:52.653Z

@kirspelk Is it OK to add a subdirectory and unzip it into there? It is best to avoid zip's in the repository.

Repeated to get a notification triggered.

Author: Kevin Kirspel 2024-10-17T22:45:52.653Z

OK, I will make a sub directory and put the files in there

Author: Kevin Kirspel 2024-09-24T13:49:49.604Z

changed this file in version 11 of the diff

Author: Kevin Kirspel 2024-10-17T22:45:52.653Z

I just pushed the changes with the sub directory containing the contents of the ZIP file. I also moved the README.md into the sub directory.

Author: Chris Johns 2024-10-17T22:45:52.653Z

I think @amar has specific views on this?

Author: Amar Takhar 2024-10-17T22:45:52.653Z

I'm good with the merge no zip files or archives in repositories it's not a good idea.

Author: Sebastian Huber 2024-08-14T21:12:28.583Z

Please move it as opto3.yml to the same level as opto2.yml. Do you really need -O3 for this BSP? Should we use -O3 for all BSPs?

Author: Chris Johns 2024-08-14T21:12:28.583Z

I think it is too late to move to `-O3` for 6 for all BSPs. Also I thought `-O3` added aggressive unrolling of loops which increases code size and that can effect caching?

Author: Sebastian Huber 2024-08-14T21:12:28.583Z

I am not in favour of switching to -O3. I just wondered why this is the only BSP in the tree which needs -O3.

Author: Chris Johns 2024-08-14T21:12:28.583Z

That is what I thought but I was no certain. Thanks for clarifying this.

Author: Kevin Kirspel 2024-08-14T21:12:28.583Z

I only set it to -O3 because that is what is in the Intel documentation and what they use for their software tools. I don't care if its -O2 or -O3. It sounds like -O2 is preferred for RTEMS so I will configure the BSP to use that.

Author: Kevin Kirspel 2024-08-14T21:09:55.050Z

changed this file in version 3 of the diff

Author: Kevin Kirspel 2024-08-14T21:12:28.583Z

Optimization was changed to -O2.

Author: Amar Takhar 2024-10-04T01:23:17.304Z

@sebhub Sorry I accidentally deleted your comment about the `README.md`. I was making my own comment and accidentally submitted it as a review I was trying to delete that to re-submit but it deleted the whole comment!

Author: Amar Takhar 2024-10-04T01:23:17.304Z

What was going to say is that there are 99 other `README.md` files in `bsps/` so one more won't matter we need to figure out what we're going to do with all of them and having a 'front page' on GitLab isn't such a bad thing I think we need a wider discussion in what should go into a `README.md` and what should go into RTEMS Docs.

Author: Sebastian Huber 2024-10-04T01:23:17.304Z

All the READMEs in bsps/* are legacy documentation. The place for new BSP documentation is here:

https://docs.rtems.org/branches/master/user/bsps/index.html

Author: Kevin Kirspel 2024-10-04T01:23:17.304Z

So my README.md in the bsp directory is less about RTEMS specifically and more about how to build a Quartus Prime project to create a JIC file that can be downloaded to hardware. It's an iterative process between compiling various code bits and compiling in Quartus Prime. My RTEMS BSP specific information is in the user's manual. I will do whatever you guys think is best for RTEMS documentation. I just don't want other developers having to go through what I went through to get a NIOS V application running on real hardware.

Author: Kevin Kirspel 2024-08-14T21:09:55.413Z

added 1 commit

- 0a4c761e - 1. Removed start.S from NIOS V BSP and used share one. 2. Changed optimization...

Compare with previous version

Author: Kevin Kirspel 2024-08-14T21:20:32.708Z

added 17 commits

- 0a4c761e...73918bc7 - 14 commits from branch `rtems/rtos:main`
- 2ecf9c6b - Adding a new NIOS V BSP to the RISC-V architecture
- cec4d016 - adding a flash directory for the EPCQ driver as it is common across BSPs
- 6bc98a83 - 1. Removed start.S from NIOS V BSP and used share one. 2. Changed optimization...

Compare with previous version

Author: Kevin Kirspel 2024-08-16T15:27:52.116Z

added 4 commits

- 606584d0 - 1 commit from branch `rtems/rtos:main`
- 1a1dd678 - Adding a new NIOS V BSP to the RISC-V architecture
- 4b11f86a - adding a flash directory for the EPCQ driver as it is common across BSPs
- a7cab55a - 1. Removed start.S from NIOS V BSP and used share one. 2. Changed optimization...

Compare with previous version

Author: Kevin Kirspel 2024-08-16T16:40:34.165Z

added 1 commit

- 2fdd83a0 - removed config directory from BSP directory structure and added the flash directory

Compare with previous version

Author: Kevin Kirspel 2024-08-23T17:17:14.033Z

added 22 commits

- 2fdd83a0...3332e547 - 18 commits from branch `rtems/rtos:main`
- 15a22ae8 - Adding a new NIOS V BSP to the RISC-V architecture
- 7e675a67 - adding a flash directory for the EPCQ driver as it is common across BSPs
- 2a04b72c - 1. Removed start.S from NIOS V BSP and used share one. 2. Changed optimization...
- 3598b72e - removed config directory from BSP directory structure and added the flash directory

Compare with previous version

Author: Kevin Kirspel 2024-08-23T17:51:12.530Z

added 1 commit

- 172f4192 - Updating bsp_reset() to match the new function prototype introduced in the last rebase

Compare with previous version

Author: Kevin Kirspel 2024-08-23T17:52:39.257Z

added 6 commits

- c2b3a517 - 1 commit from branch `rtems/rtos:main`
- d384fac0 - Adding a new NIOS V BSP to the RISC-V architecture
- 5009f995 - adding a flash directory for the EPCQ driver as it is common across BSPs
- feca75b1 - 1. Removed start.S from NIOS V BSP and used share one. 2. Changed optimization...
- d1fe7d79 - removed config directory from BSP directory structure and added the flash directory
- 515ac447 - Updating bsp_reset() to match the new function prototype introduced in the last rebase

Compare with previous version

Author: Kevin Kirspel 2024-09-24T12:41:27.546Z

added 72 commits

- 515ac447...6003ea9d - 67 commits from branch `rtems/rtos:main`
- 8149ead6 - Adding a new NIOS V BSP to the RISC-V architecture
- 4b10748a - adding a flash directory for the EPCQ driver as it is common across BSPs
- d9724bfb - 1. Removed start.S from NIOS V BSP and used share one. 2. Changed optimization...
- ed752f99 - removed config directory from BSP directory structure and added the flash directory
- 6411b3f4 - Updating bsp_reset() to match the new function prototype introduced in the last rebase

Compare with previous version

Author: Kevin Kirspel 2024-09-24T13:49:50.331Z

added 1 commit

- e7045476 - added a supporting files directory to host the ReadMe.md and the supporting.zip contents

Compare with previous version

Author: Kevin Kirspel 2024-09-24T13:51:03.390Z

resolved all threads

Author: Kinsey Moore 2024-10-08T14:25:25.632Z

Hey, first off, thanks for working on this BSP for RTEMS. It clearly took a lot of work to pull together. This patch set needs to be rebased on the current main branch since it looks like some things in that area have changed.

We don't store test logs in the RTEMS repository, so please remove those.

While you're reworking these patches, please update the commit summaries and descriptions to adhere to the RTEMS commit message guidance.

Author: Kevin Kirspel 2024-10-08T14:25:25.632Z

I removed the test logs from the repo. I updated the commit messages to be less than 80 characters long. I also rebased the patch.

Author: Kevin Kirspel 2024-10-08T13:17:49.796Z

added 56 commits

- e7045476...bd9f5c1e - 49 commits from branch `rtems/rtos:main`
- d42b89ab - Adding a new NIOS V BSP to the RISC-V architecture
- 07c337c3 - adding a flash directory for the EPCQ driver as it is common across BSPs
- a5c0f3ea - 1. Removed start.S from NIOS V BSP and used share one. 2. Changed optimization...
- c5c6e491 - removed config directory from BSP directory structure and added the flash directory
- 5c9f4e26 - Updating bsp_reset() to match the new function prototype introduced in the last rebase
- 21cf047f - added a supporting files directory to host the ReadMe.md and the supporting.zip contents
- 0b1d6527 - removing test results from supporting files directory

Compare with previous version

Author: Kevin Kirspel 2024-10-08T14:23:04.544Z

added 6 commits

- a19e6def - adding a flash directory for the EPCQ driver as it is common across BSPs
- bb38ac1e - NIOSV to use common start.S with optimizations set to -02
- defc2c0b - Removed config directory and added the flash directory in NIOSV BSP
- 7aa9ac39 - Updating bsp_reset() to match function prototype introduced in the last rebase
- 76a73369 - Added a supporting files directory to replace supporting.zip contents
- d9d16536 - Removing test results from supporting files directory

Compare with previous version

Author: Kevin Kirspel 2024-10-08T14:25:25.655Z

resolved all threads

Author: Amar Takhar 2024-10-17T22:45:52.739Z

resolved all threads

Author: Amar Takhar 2024-10-17T22:46:02.524Z

approved this merge request

Author: Amar Takhar 2024-10-17T22:54:12.752Z

mentioned in issue rtems-release#4

Author: Joel Sherrill 2024-10-17T23:12:51.187Z

@kirspelk Please rebase and then we can approve this.

Sorry for us missing the follow up.

Author: Kevin Kirspel 2024-10-22T20:26:21.801Z

added 52 commits

- d9d16536...a5f64ff2 - 45 commits from branch `rtems/rtos:main`
- 05ea6126 - Adding a new NIOS V BSP to the RISC-V architecture
- 94f31791 - adding a flash directory for the EPCQ driver as it is common across BSPs
- 6c7850a7 - NIOSV to use common start.S with optimizations set to -02
- 6a94908f - Removed config directory and added the flash directory in NIOSV BSP
- 8b4940e2 - Updating bsp_reset() to match function prototype introduced in the last rebase
- fef5b3d9 - Added a supporting files directory to replace supporting.zip contents
- 3c2398db - Removing test results from supporting files directory

Compare with previous version

Author: Kevin Kirspel 2024-10-22T20:27:27.923Z

Done

Author: Kinsey Moore 2024-10-22T20:39:30.297Z

approved this merge request

Author: Amar Takhar 2024-10-22T20:50:29.876Z

Sweet! Thank you for the contribution.

Author: Gedare Bloom 2024-10-23T18:08:12.292Z

mentioned in merge request !269

Author: Gedare Bloom 2024-10-23T19:06:41.641Z

mentioned in issue administration/gitlab#83

Author: Gedare Bloom 2024-10-23T20:18:21.781Z

mentioned in merge request !270

3.9.2.83 266 - spec/bsps/aarch64/zynqmp: Complete the transition to consistent naming

Id	266
State	merged
Merged by	Amar Takhar
Merged at	2024-10-21T02:26:22.674Z
Assignee(s)	Kinsey Moore
Created	2024-10-21T02:11:26.785Z
Updated	2024-10-21T02:26:27.691Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/266
Commit	907ded868de161bcb077855a7d5bd3e19c43e482

Summary

spec/bsps/aarch64/zynqmp: Complete the transition to consistent naming

These references were missed in the last renaming patch causing the ILP32 BSP to fail to build.

Closes #5119

Author: Kinsey Moore 2024-10-21T02:11:27.093Z

assigned to @opticron

Author: Kinsey Moore 2024-10-21T02:12:01.597Z

mentioned in issue #5119

Author: Sebastian Huber 2024-10-21T02:24:22.040Z

approved this merge request

Author: Amar Takhar 2024-10-21T02:26:15.594Z

approved this merge request

3.9.2.84 264 - spec/bsps/aarch64/zynqmp: Remove overly specific BSP and rename generic BSP

Id	264
State	merged
Merged by	Sebastian Huber
Merged at	2024-10-20T02:51:23.640Z
Assignee(s)	Kinsey Moore
Created	2024-10-19T03:42:25.475Z
Updated	2024-10-20T02:51:25.632Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/264
Commit	a34bc70dc5d5462374cf51c893c4ac269751fa10

Summary

spec/bsps/aarch64/zynqmp: Remove overly specific BSP and rename generic BSP

Updates #5119

Author: Kinsey Moore 2024-10-19T03:42:25.790Z

assigned to @opticron

Author: Kinsey Moore 2024-10-19T03:46:49.647Z

added 1 commit

- 063dbd6a - spec/bsps/aarch64/zynqmp: Remove overly specific BSP and rename generic BSP

Compare with previous version

Author: Amar Takhar 2024-10-19T18:53:02.344Z

approved this merge request

Author: Sebastian Huber 2024-10-20T02:50:15.808Z

approved this merge request

Author: Sebastian Huber 2024-10-20T02:50:30.674Z

added 2 commits

- 4c75bd88 - 1 commit from branch `rtems/rtos:main`
- a34bc70d - spec/bsps/aarch64/zynqmp: Remove overly specific BSP and rename generic BSP

Compare with previous version

3.9.2.85 258 - Revert “libmisc/stackchk: Change stack checker reporter function signatures”

Id	258
State	merged
Merged by	Amar Takhar
Merged at	2024-10-19T18:51:54.730Z
Assignee(s)	Sebastian Huber
Created	2024-10-18T00:16:19.388Z
Updated	2024-10-19T18:51:58.415Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/258
Commit	4c75bd88f3ce0cc36f4396bb264e24990a80aecc

Summary

Revert “libmisc/stackchk: Change stack checker reporter function signatures”

This reverts commit c1aa06dbd2f055afd14415f3e6f63fb74765d6ff.

Extending the rtems_stack_checker_info like this breaks the existing visitor API used by rtems_stack_checker_iterate(). After review, using an information structure contradicts the intention of the reporter to allow a minimal reporting. Filling up the information structure with all the details would pull in several dependencies, like _Thread_Get_name(). The API should be improved to provide the user with the necessary information from the TCB without having to access members directly.

Author: Sebastian Huber 2024-10-18T00:16:19.505Z

assigned to @sebhub

Author: Sebastian Huber 2024-10-18T09:28:27.202Z

@Hamzi Sorry, I was on holidays and had no time to review !254.

Author: Mohamed Hassan 2024-10-18T09:28:27.202Z

No problem, I hope you enjoyed your holidays. So you suggest to go back to the original functions signature? or we can create another dedicated structure for the reporter's parameters.

Author: Sebastian Huber 2024-10-18T09:28:27.202Z

I had a closer look at the reporter feature and now I think that the original signature was fine. It would require too much code and dependencies to fill a higher level information structure.

Author: Mohamed Hassan 2024-10-19T09:33:40.449Z

Ok, sounds ok to me. When this issue is settled I will go on to add another feature `stack smash protection`.

Author: Sebastian Huber 2024-10-18T09:28:27.224Z

resolved all threads

Author: Joel Sherrill 2024-10-19T15:43:15.864Z

added 8 commits

- 8e10277c...b8bd1a1c - 7 commits from branch `rtems/rtos:main`
- 4c75bd88 - Revert "libmisc/stackchk: Change stack checker reporter function signatures"

Compare with previous version

Author: Joel Sherrill 2024-10-19T15:43:26.251Z

approved this merge request

Author: Amar Takhar 2024-10-19T18:51:45.692Z

approved this merge request

3.9.2.86 262 - spec/bsps/aarch64: Update BSP naming to be more consice

Id	262
State	merged
Merged by	Amar Takhar
Merged at	2024-10-19T02:22:22.969Z
Assignee(s)	Kinsey Moore
Created	2024-10-18T14:31:53.982Z
Updated	2024-10-19T03:26:11.783Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/262
Commit	b8bd1a1ce38886a4ca4cf6431a20737d802e15d9

Summary

spec/bsps/aarch64: Update BSP naming to be more consice

This removes the xilinx and lp64 identifiers from the ZynqMP BSPs and updates those names throughout the build system. The xilinx identifier is being removed because it is implied by zynqmp and lp64 is being removed because it is the default for AArch64.

This also renames grp_zu3eg.yml to grp_hardware.yml to more accurately reflect its purpose.

Updates #5119

Author: Kinsey Moore 2024-10-18T14:31:54.323Z

assigned to @opticron

Author: Sebastian Huber 2024-10-19T02:20:17.794Z

approved this merge request

Author: Amar Takhar 2024-10-19T02:21:45.397Z

approved this merge request

Author: Amar Takhar 2024-10-19T02:22:11.422Z

added 5 commits

- f497d668...e6cadcf0 - 4 commits from branch `rtems/rtos:main`
- b8bd1a1c - spec/bsps/aarch64: Update BSP naming to be more consice

Compare with previous version

Author: Kinsey Moore 2024-10-19T03:26:11.756Z

mentioned in merge request rtems/pkg/rtems-lwip!6

3.9.2.87 260 - spec/bsps: Clean up stale references to minimum.exe in test configurations

Id	260
State	merged
Merged by	Amar Takhar
Merged at	2024-10-19T02:21:37.595Z
Assignee(s)	Kinsey Moore
Created	2024-10-18T03:20:22.396Z
Updated	2024-10-19T02:21:40.027Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/260
Commit	e6cadcf0ccc83fd7b68adf99d0f41db47f0879a7

Summary

spec/bsps: Clean up stale references to minimum.exe in test configurations

Now that minimum.exe is minimum.norun.exe, the tester will not attempt to run this sample test and will therefore not categorize it as a failure since it includes no output. BSP-level test configurations for this test can now be removed since those configurations only existed to prevent it from being run.

Author: Kinsey Moore 2024-10-18T03:20:22.634Z

assigned to @opticron

Author: Amar Takhar 2024-10-18T03:57:48.381Z

approved this merge request

Author: Sebastian Huber 2024-10-19T00:36:34.116Z

approved this merge request

Author: Joel Sherrill 2024-10-19T02:15:13.844Z

approved this merge request

Author: Amar Takhar 2024-10-19T02:21:17.265Z

added 4 commits

- 87aa74c2...685a2631 - 3 commits from branch `rtems/rtos:main`

- e6cadcf0 - spec/bsps: Clean up stale references to minimum.exe in test configurations

Compare with previous version

3.9.2.88 263 - bsps/aarch64/mmu: Update mapping function to new API

Id	263
State	merged
Merged by	Amar Takhar
Merged at	2024-10-19T02:07:28.620Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Sebastian Huber
Created	2024-10-18T14:32:43.273Z
Updated	2024-10-19T02:07:31.693Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/263
Commit	685a26315c17d69a9257fec531621b77cbf74627

Summary

bsps/aarch64/mmu: Update mapping function to new API

This was missed in the API change.

Author: Kinsey Moore 2024-10-18T14:32:43.537Z

requested review from @sebhub

Author: Kinsey Moore 2024-10-18T14:32:43.552Z

assigned to @opticron

Author: Sebastian Huber 2024-10-19T00:35:28.772Z

approved this merge request

Author: Amar Takhar 2024-10-19T02:04:29.662Z

approved this merge request

Author: Amar Takhar 2024-10-19T02:04:44.129Z

added 3 commits

- 106cf86d...a54e0dea - 2 commits from branch `rtems/rtos:main`

- 685a2631 - bsps/aarch64/mmu: Update mapping function to new API

Compare with previous version

3.9.2.89 261 - rtems: Simplify optionsimpl.h

Id	261
State	merged
Merged by	Amar Takhar
Merged at	2024-10-18T20:03:03.768Z
Assignee(s)	Sebastian Huber
Created	2024-10-18T10:01:01.364Z
Updated	2024-10-18T20:03:07.110Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/261
Commit	a54e0deab1f1aaf05215b09e1e9598e403bb1ff4

Summary

rtems: Simplify optionsimpl.h

Replace ternary operator with a boolean expression. Include <stdbool.h> for the bool definition. Fix formatting.

Author: Sebastian Huber 2024-10-18T10:01:01.474Z

assigned to @sebhub

Author: Sebastian Huber 2024-10-18T10:01:55.226Z

mentioned in merge request !236

Author: Gedare Bloom 2024-10-18T19:59:43.122Z

approved this merge request

Author: Amar Takhar 2024-10-18T20:02:32.456Z

approved this merge request

Author: Amar Takhar 2024-10-18T20:02:47.614Z

added 2 commits

- 3562f1d0 - 1 commit from branch `rtems/rtos:main`
- a54e0dea - rtems: Simplify optionsimpl.h

Compare with previous version

3.9.2.90 259 - spec/bsps/arm: Remove the mercury-specific BSP

Id	259
State	merged
Merged by	Sebastian Huber
Merged at	2024-10-18T10:03:34.580Z
Assignee(s)	Kinsey Moore
Created	2024-10-18T02:37:58.659Z
Updated	2024-10-18T10:03:37.591Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/259
Commit	3562f1d0280e40cb44206572a06913b7451833a1

Summary

spec/bsps/arm: Remove the mercury-specific BSP

This BSP has been superceded by the generic BSPs supporting lockstep and each of the cores in split mode.

Updates #5119

> **Author:** Kinsey Moore 2024-10-18T02:37:58.908Z
>
> assigned to @opticron

> **Author:** Amar Takhar 2024-10-18T03:57:42.433Z
>
> approved this merge request

> **Author:** Sebastian Huber 2024-10-18T10:03:29.412Z
>
> approved this merge request

3.9.2.91 244 - cpukit/libdl/arm: Support BLX relocations that require a trampoline

Id	244
State	merged
Merged by	Amar Takhar
Merged at	2024-10-18T01:19:49.905Z
Assignee(s)	Kinsey Moore
Created	2024-09-27T18:51:48.207Z
Updated	2024-10-18T01:19:52.483Z
Milestone	6.1
Labels	arch:arm, cpukit::dl
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/244
Commit	c978b63c3acf3689b62dffc2a2401c06a412ccd5

Summary

cpukit/libdl/arm: Support BLX relocations that require a trampoline

BLX relocations in Thumb code expect the target to be ARM code. This means that the trampoline must be generated in ARM mode.

Author: Kinsey Moore 2024-09-27T18:51:48.462Z

assigned to @opticron

Author: Kinsey Moore 2024-09-27T18:52:10.452Z

added 5 commits

- 841945a9...653dbdcd - 3 commits from branch `rtems/rtos:main`
- 618009f0 - cpukit/libdl: Fix spelling of trampoline
- 6851db4a - cpukit/libdl/arm: Support BLX relocations that require a trampoline

Compare with previous version

Author: Kinsey Moore 2024-09-27T20:02:19.795Z

marked this merge request as **draft**

Author: Kinsey Moore 2024-09-27T20:57:12.040Z

added 2 commits

- 9cfd30cc - cpukit/libdl: Fix spelling of trampoline
- 7d561fc2 - cpukit/libdl/arm: Support BLX relocations that require a trampoline

Compare with previous version

Author: Kinsey Moore 2024-09-27T21:29:45.075Z

added 1 commit

- 58da5054 - cpukit/libdl/arm: Support BLX relocations that require a trampoline

Compare with previous version

Author: Kinsey Moore 2024-09-27T22:11:21.442Z

This was tested using cFS.

Author: Chris Johns 2024-09-28T01:48:41.648Z

Does this still need to be draft?

Author: Kinsey Moore 2024-09-28T01:48:41.648Z

No, sorry. I had clicked the button at the same time as I clicked something else and it only took one of the actions...

Author: Kinsey Moore 2024-09-28T01:48:10.362Z

marked this merge request as **ready**

Author: Kinsey Moore 2024-09-28T01:48:41.665Z

resolved all threads

Author: Amar Takhar 2024-09-28T18:29:45.575Z

added 3 commits

- 38bafce4 - 1 commit from branch `rtems/rtos:main`
- 5240a130 - cpukit/libdl: Fix spelling of trampoline
- 92061c98 - cpukit/libdl/arm: Support BLX relocations that require a trampoline

Compare with previous version

Author: Amar Takhar 2024-09-28T18:30:00.382Z

enabled an automatic merge when all merge checks for 92061c9847316cc0df9d2b941c7fc6250e908bbd pass

Author: Kinsey Moore 2024-10-01T00:48:11.148Z

aborted the automatic merge because target branch was updated

Author: Kinsey Moore 2024-10-17T22:32:56.114Z

added 72 commits

- 92061c98...c1aa06db - 70 commits from branch `rtems/rtos:main`
- 689e9986 - cpukit/libdl: Fix spelling of trampoline

- c978b63c - cpukit/libdl/arm: Support BLX relocations that require a trampoline

Compare with previous version

Author: Chris Johns 2024-10-18T00:24:15.651Z

approved this merge request

Author: Amar Takhar 2024-10-18T00:24:25.906Z

approved this merge request

Author: Joel Sherrill 2024-10-18T00:29:36.796Z

approved this merge request

3.9.2.92 255 - Improve aarch64 BSPs

Id	255
State	merged
Merged by	Joel Sherrill
Merged at	2024-10-11T04:09:56.326Z
Assignee(s)	Sebastian Huber
Created	2024-10-06T06:45:53.121Z
Updated	2024-10-11T04:10:00.944Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/255
Commit	ad378dcaf72ce16cfd67bd39de1c71561d24bc32

Summary

This patch set contains several improvements for aarch64 BSPs. For the `aarch64/xilinx_zynqmp_lp64_a53` BSP 100% code and branch coverage was achieved for C code.

Author: Sebastian Huber 2024-10-06T06:45:53.371Z

assigned to @sebhub

Author: Sebastian Huber 2024-10-06T06:46:48.742Z

added 30 commits

- 21b92de8...bd9f5c1e - 3 commits from branch `rtems/rtos:main`
- bd9f5c1e...1a8dd874 - 17 earlier commits

- 867487cc - bsps/aarch64: Fix AArch64_get_ccsidr_for_level()
- cc77ffd6 - bsps/aarch64: Simplify AArch64_clidr_get_cache_type()
- 80d20932 - bsps/aarch64: Fix entire data cache flush/invalidate
- 4973a617 - bsps/aarch64: Assume that all levels have a data cache
- 4e1cca78 - aarch64/xilinx-zynqmp: Move MMU config table
- 60f07590 - bsps/aarch64: Improve MMU mapping
- 76166c94 - bsps/aarch64: Use dependency injection
- 43f3f78f - bsps/aarch64: Add AARCH64_MMU_PHYSICAL_ADDRESS_RANGE_BITS
- 3fe7893f - bsps/aarch64: Simplify aarch64_mmu_map_block()
- 13167146 - bsps/aarch64: Use clean invalidate

Compare with previous version

Author: Kinsey Moore 2024-10-07T22:58:43.322Z

Why did this get commented out?

Author: Sebastian Huber 2024-10-07T22:57:15.063Z

changed this line in version 3 of the diff

Author: Sebastian Huber 2024-10-07T22:58:43.322Z

Thanks for spotting this. I had to extract the patch set from a larger one and this was a manual error in the process.

Author: Sebastian Huber 2024-10-07T22:57:15.567Z

added 27 commits

- 13167146...fab49f65 - 17 earlier commits
- 6d5e2bea - bsps/aarch64: Fix AArch64_get_ccsidr_for_level()
- 9c97d567 - bsps/aarch64: Simplify AArch64_clidr_get_cache_type()
- 3e242783 - bsps/aarch64: Fix entire data cache flush/invalidate
- 275288e8 - bsps/aarch64: Assume that all levels have a data cache
- 3ad7a439 - aarch64/xilinx-zynqmp: Move MMU config table
- 66d92620 - bsps/aarch64: Improve MMU mapping
- 40c903f8 - bsps/aarch64: Use dependency injection
- 77b7c42c - bsps/aarch64: Add AARCH64_MMU_PHYSICAL_ADDRESS_RANGE_BITS
- 435db89c - bsps/aarch64: Simplify aarch64_mmu_map_block()

- dbbbde35 - bsps/aarch64: Use clean invalidate

Compare with previous version

Author: Sebastian Huber 2024-10-07T22:58:43.455Z

resolved all threads

Author: Kinsey Moore 2024-10-10T23:28:08.530Z

Why is ZynqMP being singled out here? The A53 cores support EL0/1/2/3 just like the generic A53 BSP. The same applies to the EL3 support flag in optstartel3.yml.

Author: Sebastian Huber 2024-10-10T23:28:08.530Z

With the default tooling from Xilinx, RTEMS is started in non-secure EL1. If you have a special configuration, then you can still change this option specifically for your application.

Author: Sebastian Huber 2024-10-10T23:28:08.530Z

We could also disable this option by default for all BSPs.

Author: xiaojun zheng 2024-10-10T23:28:08.530Z

Usually RTEMS is loaded by a bootloader, and runs on top of ATF, so I think RTEMS is started in non-secure EL1 in most cases. The comment below label '_el3_start' provides an explaination about this.

Author: Kinsey Moore 2024-10-10T23:28:08.530Z

I suppose it depends heavily on what you use for tooling. I avoid Vitis as much as possible and build my own BOOT.bin with custom bif definitions half the time, so the starting EL for RTEMS doesn't really have a default.

Author: Sebastian Huber 2024-10-10T23:28:08.530Z

I would say that the standard booting procedure uses the FSBL from Xilinx and the ATF. This means RTMES is started in EL1 by the ATF.

Author: Kinsey Moore 2024-10-10T23:28:08.530Z

At least some older versions of BOOT.bin with u-boot generated by the Xilinx toolchain (XDK, so pre-Vitis) started payloads in EL2 by default. I'm fine with EL3 being turned off on this platform, but EL2 startup does exist on older builds.

Author: Sebastian Huber 2024-10-10T23:28:08.530Z

Vitis launched in 2019, but all right, I changed the default to enable the EL2 boot for ZynqMP.

Author: Sebastian Huber 2024-10-10T23:28:06.202Z

changed this line in version 4 of the diff

Author: xiaojun zheng 2024-10-10T21:02:19.691Z

I think using a singel macro to select either SMC or HVC is sufficent.

Author: Sebastian Huber 2024-10-10T21:02:19.691Z

Yes, we could change it to an `AARCH64_PSCI_CALL_INSTRUCTION` option which is `smc` or `hvc`.

Author: Kinsey Moore 2024-10-10T21:02:19.691Z

I'd have no problem with that versus the current implementation, but that should be in a new MR. This MR isn't introducing this mechanism, it's just adjusting its implementation to reduce dead code.

Author: xiaojun zheng 2024-10-10T21:01:55.496Z

PSCI has many functions(cpu on/off, suspend,reset,migrate...). We have only implemented ON and RESET. Do you think we should put these functions in one file? and use the assembly code as a general service call function. In this way, it may be easier to add functions later.

Author: Sebastian Huber 2024-10-10T21:01:55.496Z

We only need these two functions right now for the BSP. I will not add a general PSCI support for this MR.

Author: Kinsey Moore 2024-10-10T21:01:55.496Z

Agreed, this is beyond the scope of this MR. @zhengxiaojun please create an issue to track this refactoring if you can think of other PSCI services that RTEMS might make use of.

Author: Sebastian Huber 2024-10-10T23:28:08.557Z

resolved all threads

Author: Sebastian Huber 2024-10-10T23:28:20.483Z

added 25 commits

- dbbbde35...77094f11 - 15 earlier commits
- 098f8cb0 - bsps/aarch64: Fix AArch64_get_ccsidr_for_level()
- 064a672f - bsps/aarch64: Simplify AArch64_clidr_get_cache_type()
- aac76058 - bsps/aarch64: Fix entire data cache flush/invalidate
- 41ed4b5d - bsps/aarch64: Assume that all levels have a data cache
- 8c4cc767 - aarch64/xilinx-zynqmp: Move MMU config table
- 4b1e80df - bsps/aarch64: Improve MMU mapping
- 269f4ca5 - bsps/aarch64: Use dependency injection
- bb2cd445 - bsps/aarch64: Add AARCH64_MMU_PHYSICAL_ADDRESS_RANGE_BITS
- 95734e3d - bsps/aarch64: Simplify aarch64_mmu_map_block()
- ad378dca - bsps/aarch64: Use clean invalidate

Compare with previous version

Author: Kinsey Moore 2024-10-10T23:47:56.735Z

approved this merge request

Author: Amar Takhar 2024-10-11T00:50:31.098Z

approved this merge request

Author: Joel Sherrill 2024-10-11T04:09:29.269Z

approved this merge request

3.9.2.93 245 - bsps/aarch64/mmu: Align dynamically mapped blocks

Id	245
State	merged
Merged by	Amar Takhar
Merged at	2024-10-04T17:36:11.505Z
Assignee(s)	Kinsey Moore
Created	2024-09-30T20:56:05.639Z
Updated	2024-10-04T17:36:14.768Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/245
Commit	85ccfe24bf5d3edc869f1cda942a582eb2ebe628

Summary

bsps/aarch64/mmu: Align dynamically mapped blocks

Dynamically mapped blocks must be aligned to the MMU page size just like startup-configured blocks. This was not being enforced and could cause a hang with bad input.

Author: Kinsey Moore 2024-09-30T20:56:05.873Z

assigned to @opticron

Author: Kinsey Moore 2024-09-30T20:59:20.041Z

enabled an automatic merge when all merge checks for 62d0be175d69dae87286403c348e39735bf1b636 pass

Author: Kinsey Moore 2024-10-01T00:48:11.985Z

aborted the automatic merge because target branch was updated

Author: Sebastian Huber 2024-10-04T12:18:11.914Z

Each variable declaration should have its own line.

Author: Kinsey Moore 2024-10-04T12:16:59.076Z

changed this line in version 2 of the diff

Author: Kinsey Moore 2024-10-04T12:18:11.914Z

Thanks, fixed in the latest patch version.

Author: Kinsey Moore 2024-10-04T12:16:59.713Z

added 1 commit

- 0b778609 - bsps/aarch64/mmu: Align dynamically mapped blocks

Compare with previous version

Author: Kinsey Moore 2024-10-04T12:18:11.934Z

resolved all threads

Author: Kinsey Moore 2024-10-04T13:25:56.927Z

added 37 commits

- 0b778609...a616d26d - 36 commits from branch `rtems/rtos:main`
- 85ccfe24 - bsps/aarch64/mmu: Align dynamically mapped blocks

Compare with previous version

Author: Sebastian Huber 2024-10-04T13:52:14.718Z

approved this merge request

Author: Chris Johns 2024-10-04T17:06:37.414Z

This MR is draft. Should it still be draft?

Author: Kinsey Moore 2024-10-04T17:06:37.414Z

It could probably be committed as-is and definitely solves a problem, but I was waiting on more information about a possible second issue with the same code. I'll go ahead and unmark as draft since this should be fine to go in now that it already has an approval.

Author: Kinsey Moore 2024-10-04T17:06:30.885Z

marked this merge request as **ready**

Author: Kinsey Moore 2024-10-04T17:06:37.431Z

resolved all threads

Author: Amar Takhar 2024-10-04T17:35:58.278Z

approved this merge request

3.9.2.94 250 - waf: Update waf to version 2.1.2

Id	250
State	merged
Merged by	Amar Takhar
Merged at	2024-10-03T17:59:49.839Z
Assignee(s)	Chris Johns
Created	2024-10-03T08:46:06.979Z
Updated	2024-10-03T17:59:54.259Z
Milestone	6.1
Labels	rtems::build
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/250
Commit	ea475e871940ab83f89db43d8150dea9618e037c

Update waf to version 2.1.2

Author: Chris Johns 2024-10-03T08:46:07.256Z

assigned to @chris

Author: Kinsey Moore 2024-10-03T15:15:55.970Z

approved this merge request

Author: Amar Takhar 2024-10-03T17:59:09.743Z

approved this merge request

Author: Amar Takhar 2024-10-03T17:59:36.985Z

added 2 commits

- 43e201e2 - 1 commit from branch `rtems/rtos:main`
- ea475e87 - waf: Update waf to version 2.1.2

Compare with previous version

3.9.2.95 249 - git: Remove auto* files from git ignore

Id	249
State	merged
Merged by	Amar Takhar
Merged at	2024-10-03T17:59:07.148Z
Assignee(s)	Chris Johns
Created	2024-10-03T08:40:20.201Z
Updated	2024-10-03T17:59:08.897Z
Milestone	6.1
Labels	rtems::build
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/249
Commit	43e201e21013a2acd6f241ad7daf7d3a9d98aefa

Remove the autotool generated files.

Author: Chris Johns 2024-10-03T08:40:20.498Z

assigned to @chris

Author: Kinsey Moore 2024-10-03T15:13:27.466Z

approved this merge request

Author: Amar Takhar 2024-10-03T17:59:00.647Z

approved this merge request

3.9.2.96 247 - cpukit/aarch64: Fix spelling

Id	247
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-03T03:09:55.936Z
Assignee(s)	Kinsey Moore
Created	2024-10-03T03:02:41.070Z
Updated	2024-10-03T03:09:59.057Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/247
Commit	a9055cbf105574ae72c549f8c97826e860734f12

Summary

Author: Kinsey Moore 2024-10-03T03:02:41.338Z

assigned to @opticron

Author: Kinsey Moore 2024-10-03T03:03:03.261Z

added 33 commits

- a8f3c0c4...f80cee56 - 32 commits from branch `rtems/rtos:main`
- a9055cbf - cpukit/aarch64: Fix spelling

Compare with previous version

Author: Kinsey Moore 2024-10-03T03:03:11.741Z

enabled an automatic merge when all merge checks for a9055cbf105574ae72c549f8c97826e860734f12 pass

Author: Chris Johns 2024-10-03T03:03:54.184Z

approved this merge request

Author: Amar Takhar 2024-10-03T03:05:33.017Z

approved this merge request

Author: Kinsey Moore 2024-10-03T03:09:48.988Z

canceled the automatic merge

3.9.2.97 246 - spec/libtests: Exclude Thumb-only BSPs from building dl13

Id	246
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-03T02:40:40.604Z
Assignee(s)	Kinsey Moore
Created	2024-10-03T02:02:55.320Z
Updated	2024-10-03T02:40:42.597Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/246
Commit	f80cee565baa89cb65ac85f56226582925bf2bbf

Summary

spec/libtests: Exclude Thumb-only BSPs from building dl13

This test requires ARM instruction support and causes build failures on Thumb-only BSPs.

Author: Kinsey Moore 2024-10-03T02:02:55.742Z

assigned to @opticron

Author: Kinsey Moore 2024-10-03T02:03:16.426Z

added 32 commits

- 6df9c0bf...410436b8 - 31 commits from branch `rtems/rtos:main`
- f80cee56 - spec/libtests: Exclude Thumb-only BSPs from building dl13

Compare with previous version

Author: Kinsey Moore 2024-10-03T02:03:25.011Z

enabled an automatic merge when all merge checks for f80cee565baa89cb65ac85f56226582925bf2bbf pass

Author: Amar Takhar 2024-10-03T02:09:29.985Z

approved this merge request

Author: Chris Johns 2024-10-03T02:40:00.726Z

approved this merge request

Author: Kinsey Moore 2024-10-03T02:40:33.226Z

canceled the automatic merge

3.9.2.98 230 - Improve arm/xilinx-zynqmp-rpu BSP familiy

Id	230
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-02T12:44:49.082Z
Assignee(s)	Sebastian Huber
Created	2024-09-19T06:41:21.203Z
Updated	2024-10-02T12:44:51.274Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/230
Commit	410436b8002b15d450db673ac42f59f557df3d91

Summary

Improve various parts of the ZynqMP RPU BSP. Add BSP variants for the ZynqMP RPU in split mode.

Author: Sebastian Huber 2024-09-19T06:41:21.516Z

assigned to @sebhub

Author: Sebastian Huber 2024-09-19T06:43:40.618Z

changed title from **{-arm: -}Improve {-CPU_Exception_frame-}** to **Improve {+arm/xilinx-zynqmp-rpu BSP familiy+}**

Author: Sebastian Huber 2024-09-19T06:43:40.689Z

changed the description

Author: Sebastian Huber 2024-09-19T06:56:37.603Z

added 5 commits

- 372f519a - arm/xilinx-zynqmp-rpu: Add split mode BSP variants
- fbaa1101 - arm/xilinx-zynqmp-rpu: Simplify MPU configuration
- 8e76c269 - arm/xilinx-zynqmp-rpu: Add section for the OCM
- 2f4a1b94 - arm/xilinx-zynqmp-rpu: Implement bsp_reset()
- 56b66bfe - arm/xilinx-zynqmp-rpu: Use UART 0 by default

Compare with previous version

Author: Chris Johns 2024-09-19T08:59:12.145Z

I do not understand this change? Maybe add some details on why this fixes the copyright to the commit message?

Author: Sebastian Huber 2024-09-19T08:59:12.145Z

The files contain nothing from DornerWorks. I will add this to the commit message.

Author: Chris Johns 2024-09-20T03:38:57.550Z

Would this reset the APU? If so this is not a good idea and something else will need to be figured out.

Author: Sebastian Huber 2024-09-20T03:38:57.550Z

Yes, it resets also the APU. This allows to run the tests. In a real application you have to provide your own fatal error handler to do the right application-specific steps.

Author: Chris Johns 2024-09-20T03:38:57.550Z

I prefer we look for other solutions. Is there an RPU reset? Can the PM be asked to reset the RPU?

Author: Sebastian Huber 2024-09-20T03:38:57.550Z

No matter which implementation we choose, there will be always applications for which this choice is wrong. In a complex system like the Zynq UltraScale+ you have to work out your own application-specific reset procedures. With the fatal extension RTEMS has an excellent place for this job.

In my test setup, the RPU is started by the FSBL running on the APU. So for the test runs it was quite handy to reset the overall system.

Author: Chris Johns 2024-09-20T03:38:57.550Z

The PM, also loaded by your FSBL is designed to handle these things.

Author: Sebastian Huber 2024-09-20T03:38:57.550Z

Ok, so what should I do now? Keep the infinite loop?

Author: Chris Johns 2024-09-20T03:38:57.550Z

I have been look at the PM and there an interface to assert a reset but that may be one of the PL reset signals.

My PM via SMC gives:

```
zynqmp [/] # pm features
PM_GET_API_VERSION           (0x0001) : Success
PM_SET_CONFIGURATION         (0x0002) : Success
PM_GET_NODE_STATUS           (0x0003) : Success
PM_GET_OP_CHARACTERISTIC     (0x0004) : Success
PM_REGISTER_NOTIFIER         (0x0005) : Success
PM_REQUEST_SUSPEND           (0x0006) : Success
PM_SELF_SUSPEND              (0x0007) : Success
PM_FORCE_POWERDOWN           (0x0008) : Success
PM_ABORT_SUSPEND             (0x0009) : Success
PM_REQUEST_WAKEUP            (0x000a) : Success
PM_SET_WAKEUP_SOURCE         (0x000b) : Success
PM_SYSTEM_SHUTDOWN           (0x000c) : Success
PM_REQUEST_NODE              (0x000d) : Success
PM_RELEASE_NODE              (0x000e) : Success
PM_SET_REQUIREMENT           (0x000f) : Success
PM_SET_MAX_LATENCY           (0x0010) : Success
PM_RESET_ASSERT              (0x0011) : Success
PM_RESET_GET_STATUS          (0x0012) : Success
PM_MMIO_WRITE                (0x0013) : Success
PM_MMIO_READ                 (0x0014) : Success
PM_INIT_FINALIZE             (0x0015) : Success
PM_FPGA_LOAD                 (0x0016) : Success
PM_FPGA_GET_STATUS           (0x0017) : Success
PM_GET_CHIPID                (0x0018) : Success
PM_SECURE_RSA_AES            (0x0019) : Success
PM_SECURE_SHA                (0x001a) : Success
PM_SECURE_RSA                (0x001b) : Success
PM_PINCTRL_REQUEST           (0x001c) : Success
PM_PINCTRL_RELEASE           (0x001d) : Success
PM_PINCTRL_GET_FUNCTION      (0x001e) : Success
PM_PINCTRL_SET_FUNCTION      (0x001f) : Success
PM_PINCTRL_CONFIG_PARAM_GET  (0x0020) : Success
PM_PINCTRL_CONFIG_PARAM_SET  (0x0021) : Success
PM_IOCTL                     (0x0022) : Success
PM_QUERY_DATA                (0x0023) : Success
PM_CLOCK_ENABLE              (0x0024) : Success
PM_CLOCK_DISABLE             (0x0025) : Success
PM_CLOCK_GETSTATE            (0x0026) : Success
PM_CLOCK_SETDIVIDER          (0x0027) : Success
PM_CLOCK_GETDIVIDER          (0x0028) : Success
PM_CLOCK_SETRATE             (0x0029) : Success
PM_CLOCK_GETRATE             (0x002a) : Success
PM_CLOCK_SETPARENT           (0x002b) : Success
PM_CLOCK_GETPARENT           (0x002c) : Success
PM_SECURE_IMAGE              (0x002d) : Success
PM_FPGA_READ                 (0x002e) : Success
PM_API_RESERVED_1            (0x002f) : Success
PM_PLL_SET_PARAMETER         (0x0030) : Success
PM_PLL_GET_PARAMETER         (0x0031) : Success
```

(continues on next page)

(continued from previous page)

```
PM_PLL_SET_MODE               (0x0032) : Success
PM_PLL_GET_MODE               (0x0033) : Success
PM_REGISTER_ACCESS            (0x0034) : Success
PM_EFUSE_ACCESS               (0x0035) : Success
PM_ADD_SUBSYSTEM              (0x0036) : Not supported
PM_DESTROY_SUBSYSTEM          (0x0037) : Not supported
PM_DESCRIBE_NODES             (0x0038) : Not supported
PM_ADD_NODE                   (0x0039) : Not supported
PM_ADD_NODE_PARENT            (0x003a) : Not supported
PM_ADD_NODE_NAME              (0x003b) : Not supported
PM_ADD_REQUIREMENT            (0x003c) : Not supported
PM_SET_CURRENT_SUBSYSTEM      (0x003d) : Not supported
PM_INIT_NODE                  (0x003e) : Not supported
PM_FEATURE_CHECK              (0x003f) : Success
PM_ISO_CONTROL                (0x0040) : Not supported
PM_ACTIVATE_SUBSYSTEM         (0x0041) : Not supported
PM_WRITE_AES_KEY              (0x0568) : Not supported
PM_LOAD_PDI                   (0x0701) : Not supported
PM_GET_UID_INFO_LIST          (0x0705) : Not supported
PM_GET_META_HEADER_INFO_LIST  (0x0706) : Not supported
GET_CALLBACK_DATA             (0x0a01) : Success
PM_SET_SUSPEND_MODE           (0x0a02) : Success
PM_GET_TRUSTZONE_VERSION      (0x0a03) : Success
TF_A_PM_REGISTER_SGI          (0x0a04) : Not supported
PM_BBRAM_WRITE_KEY            (0x0b01) : Not supported
PM_BBRAM_ZEROIZE              (0x0b02) : Not supported
PM_BBRAM_WRITE_USERDATA       (0x0b03) : Not supported
PM_BBRAM_READ_USERDATA        (0x0b04) : Not supported
PM_BBRAM_LOCK_USERDATA        (0x0b05) : Not supported
```

but there maybe more since I defined the id set.

There is this https://xilinx-wiki.atlassian.net/wiki/spaces/A/pages/18841820/Zynq+UltraScale+MPSoC+Restart+solution#ZynqUltraScale+MPSoCRestartsolution-RPUSubsystemRestart?

I see a couple of conflicting parts here, your desire to have a simple test solution and this is the case with the change and the ability to evolve this BSP and not break yours or others test setup. At the moment I cannot see us meeting both with this change.

Author: Sebastian Huber 2024-09-20T03:38:57.550Z

As I said, no matter which implementation we choose, there will be always applications for which this choice is wrong. In a complex system like the Zynq UltraScale+ you have to work out your own application-specific reset procedures. The default behaviour should be simple and targeted to RTEMS test suite runs. You can't expect that a BSP solves all your application issues.

The APU issues right now also a system reset. Is this good if your safety functions run on the RPU?

Author: Chris Johns 2024-09-20T03:38:57.550Z

I am assuming the APU is responsible for the RPU units but it could the other way around. As long as this can evolve then I am OK with this.

Will you document the FSBL BIF etc need to run the tests?

Could you please add a comment to the register write indicating the reset is system wide?

Author: Sebastian Huber 2024-09-20T03:38:57.550Z

Ok, I will update the comment. The important thing is that it is documented in the user manual.

Author: Chris Johns 2024-09-19T08:54:50.185Z

Please add a comment that Xilinx defaults to using OCM for u-boot and ATF and using it on the RPU could conflict with that.

Author: Sebastian Huber 2024-09-19T08:54:50.185Z

Ok.

Author: Chris Johns 2024-09-19T08:45:52.976Z

Does this effect other BSPs which use this code?

Author: Sebastian Huber 2024-09-19T08:45:52.976Z

No, because it enables more uses of this code. I doesn't restrict the usage.

Author: Chris Johns 2024-09-19T08:11:44.354Z

Interesting solution and I like it. Is this standard C code or a gcc extension?

Author: Sebastian Huber 2024-09-19T08:11:44.354Z

Anonymous unions were added in C11. Before it was a GCC extension.

Author: Chris Johns 2024-09-19T07:23:41.699Z

I have some specific questions but I am wondering how and in what mode of operation the RPU is being used on the ZynqMP, for example only LPD devices are running, the RPU and APU cores are all running?

Does this change effect the documentation in the User Manual?

Author: Sebastian Huber 2024-09-20T03:22:41.994Z

I don't know, I worked only with the BSP and no real application so far.

Author: Chris Johns 2024-09-20T03:22:41.994Z

If you had to develop an application would that change this MR?

Author: Sebastian Huber 2024-09-20T03:22:41.994Z

There are always reasons to change something. With respect to the user manual. I will have a look at it once this MR is integrated.

Author: Sebastian Huber 2024-09-19T08:58:53.943Z

added 9 commits

- a878a9ac - arm/xilinx-zynqmp-rpu: Fix file header and copyrights
- b7c639d0 - arm/xilinx-zynqmp-rpu: Remove superfluous option
- 0ccad02a - arm/xilinx-zynqmp-rpu: Remove superfluous defines
- 4631ff9b - arm/xilinx-zynqmp-rpu: Simplify startup
- cb9a856d - arm/xilinx-zynqmp-rpu: Add split mode BSP variants
- f83e6576 - arm/xilinx-zynqmp-rpu: Simplify MPU configuration
- c341207b - arm/xilinx-zynqmp-rpu: Add section for the OCM
- 3da307be - arm/xilinx-zynqmp-rpu: Implement bsp_reset()
- f1132002 - arm/xilinx-zynqmp-rpu: Use UART 0 by default

Compare with previous version

Author: Sebastian Huber 2024-09-19T08:59:12.180Z

resolved all threads

Author: Kinsey Moore 2024-09-20T03:02:56.480Z

Regarding the UART changes, how are you typically starting the RPU image from the automated tester? I start it from the A53 u-boot and sharing the console with

u-boot on the first UART instance is somewhat limiting since both try to access it simultaneously.

Author: Sebastian Huber 2024-09-20T03:02:56.480Z

I did all the test runs for the APU and RPU sequentially using the same UART. Once the boot loader did its job to load the image it was silent.

Author: Sebastian Huber 2024-09-19T23:31:06.510Z

added 22 commits

- 5e5214b7 - 1 commit from branch `rtems/rtos:main`
- 5e5214b7...c5a3dcc1 - 11 earlier commits
- 68b40539 - arm/xilinx-zynqmp-rpu: Add cache manager support
- d6fa9a4e - arm/xilinx-zynqmp-rpu: Fix file header and copyrights
- fa5ed0da - arm/xilinx-zynqmp-rpu: Remove superfluous option
- 7379ea9e - arm/xilinx-zynqmp-rpu: Remove superfluous defines
- e40227c4 - arm/xilinx-zynqmp-rpu: Simplify startup
- 66540cfd - arm/xilinx-zynqmp-rpu: Add split mode BSP variants
- 9ab15d5d - arm/xilinx-zynqmp-rpu: Simplify MPU configuration
- 08519e48 - arm/xilinx-zynqmp-rpu: Add section for the OCM
- 19ffcf89 - arm/xilinx-zynqmp-rpu: Implement bsp_reset()
- 6465ec20 - arm/xilinx-zynqmp-rpu: Use UART 0 by default

Compare with previous version

Author: Kinsey Moore 2024-09-22T01:46:02.798Z

This is missing a description.

Author: Sebastian Huber 2024-09-22T01:46:02.798Z

It has intentionally no description since this is an internal option which should not be set directly by the user.

Author: Kinsey Moore 2024-09-22T01:46:02.798Z

So an appropriate description might be “This is an internal option to shuffle program sections between the ATCM and BTCM depending on available space due to split versus lock configuration and should not be set by the user in config.ini.”

Author: Sebastian Huber 2024-09-22T01:46:02.798Z

If you have a `description: null` it will not show up in the BSP defaults. With this note it will show up with the default value. When you adjust other settings the default value is no longer the right one and you have a misconfiguration.

Author: Kinsey Moore 2024-09-22T01:46:02.798Z

Given that it's not supposed to be user-visible, this form of the logic doesn't provide documentation, and it's only used in one place, is there a reason it isn't a conditional in the linker script?

Author: Sebastian Huber 2024-09-22T01:46:02.798Z

It is used for a memory region definition. I am not a aware the linker script language provides conditional expressions at this level.

Author: Kinsey Moore 2024-09-22T01:46:02.798Z

Linker scripts support the DEFINED() macro as well as arbitrary inequalities in conjunction with the ternary operator. There are usage examples of != and > in spec/build/bsps/riscv/linkcmdsbase.yml and spec/build/bsps/arm/atsam/linkcmds.yml.

Author: Sebastian Huber 2024-09-21T15:27:02.428Z

changed this line in version 6 of the diff

Author: Sebastian Huber 2024-09-22T01:46:02.798Z

This environment variable is used to define a memory region. The linker doesn't support expressions with memory regions.

I added new build option actions "comment" and "set-value-enabled-by" and moved the stuff into `spec/build/bsps/arm/xilinx-zynqmp-rpu/optlockstep.yml`.

Author: Kinsey Moore 2024-10-02T12:43:47.112Z

I'm a bit hesitant to rename this many options, but since it's not yet in a release we should also rename the base BSP to include some indication that it's running in lockstep mode since I'm currently using it in split mode and this set of changes will break that expectation.

Author: Kinsey Moore 2024-10-02T12:43:47.112Z

test

Author: Kinsey Moore 2024-09-20T01:16:28.890Z

requested changes

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

This BSP was contributed early this year. So I think there is no issue to rename things before the release.

How did you manage to run on both cores in split mode with the current BSP?

Author: Kinsey Moore 2024-10-02T05:10:52.541Z

I've only been running on the first core in split mode. I assumed that running the second core in split mode would incur additional complications.

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

You can still do this, the new `xilinx_zynqmp_rpu_0` is intended for split mode core 0.

Author: Kinsey Moore 2024-10-02T05:10:52.541Z

Yes, the original BSP has been repurposed for lockstep operation and that will be surprising for existing users. It would be better to force those users to re-evaluate available options.

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

I would agree if it was already released, but this BSP is basically brand new. I added the `xilinx_zynq_rpu` myself in March this year and it was always intended to be used for lockstep mode. This patch set is from roughly the same time frame, but I had other patch sets in the queue up to now.

Author: Kinsey Moore 2024-10-02T05:10:52.541Z

Regardless of the intent, the generically named BSP was created as an exact clone of the other BSP and still exists in that state (this patch set not withstanding). Neither reference lockstep at all. If it's going to be intended for lockstep usage, that should be clear since I've been using it in split mode. As you said, naming here is still fluid since none of this has been released, yet. I'd be happy with the mercuryxu5 BSP going away in favor of these configurations you're adding, but I can take care of that later if you don't want to add it to this patch set.

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

What do you suggest instead? Rename `xilinx_zynqmp_rpu` in `xilinx_zynqmp_rpu_lock_step`? The BSP name is already quite long and this is even longer. If you just use a single core why shouldn't you run it in lock-step mode?

Author: Kinsey Moore 2024-10-02T05:10:52.541Z

```
is redundant, though I'd probably want to strip it from the AArch64␣
↪BSPs as well. I've been considering a name change there from
```

The

```
to
```

zu3eg

```
 for the same reasons you created the RPU BSP.
apu
```

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

We already have a generic APU BSP: xilinx_zynqmp_lp64_a53.

For the RPU, what about:

- zynqmp_rpu_lock_step
- zynqmp_rpu_split_0
- zynqmp_rpu_split_1

Author: Chris Johns 2024-10-02T05:10:52.541Z

Should the RPU then be labeled `r5whatever`? I like `rpu` so maybe the `a53` should be removed or change to be `apu` so it aligns with the Xilinx documentation?

Author: Chris Johns 2024-10-02T05:10:52.541Z

Do you need to identify the RPU when split? Could that be a `bootgen` or runtime loading choice?

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

The Cortex-A53 needs special compiler flags to work around processor errata. Maybe the UltraScale+ gets an update with a new core in the future.

We can name the RPU BSPs also * zynqmp_r5_lock_step * zynqmp_r5_split_0 * zynqmp_r5_split_1

The split mode and lock-step mode have different memory layouts. So, you need the different BSP variants. Also the split mode BSP has some extra tweaks in the interrupt controller support.

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

Could we please agree on the BSP names before I update the patch set. I would pick up these names:

- zynqmp_r5_lock_step
- zynqmp_r5_split_0
- zynqmp_r5_split_1

Author: Chris Johns 2024-10-02T05:10:52.541Z

Could you please explain why there are qualifiers such as `_lock_step` and `_split_0` etc?

I am not in favor of `r5_*` for the same reason I do not think `a53` should be present. Those names are SoC implementation details and the documentation block diagrams from the manufacturer refers to RPU and APU.

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

The `_lock_step` is for the lock-step mode BSP variant, the `_split_0` is for the split mode core 0 variant, and the `_split_1` is for the split mode core 1 variant.

Good, then back to the `rpu` naming instead of `r5` just like it was initially.

Author: Chris Johns 2024-10-02T05:10:52.541Z

I understand the types, I do not understand why we need to define BSPs. Is the ABI different?

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

They have a different memory layout and interrupt controller support.

Author: Chris Johns 2024-10-02T05:10:52.541Z

Is this to provide a separate base address for each build of the BSP?

What is the interrupt controller differences?

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

The details are in the patch set. For example, the DDR memory area assigned to the RPU BSPs is split in split mode. The TCM sizes are different in different modes.

The two cores share a GIC distributor. So, you have to agree on who does the basic initialization. You also have to make sure that the clock driver uses different TTC units.

Author: Chris Johns 2024-10-02T05:10:52.541Z

In regards to "the details are in the patch", I did not see this detail. This conversation makes it easier for others to see what is happening and how things are designed. I do not assuming everyone sees what you or I do.

Can the RPU determine if it is in lock step mode or which core it is?

I suggest a single BSP name `zynqmp_rpu` with defaults for a single address space block and basic initialization that can run the tests. INI options can then change the address map and the initialization as required.

A BSP name will go only so far before it does not help. There are too many combinations to expand into BSP names to be practical, for example `zynqmp_rpu_split_0_apu` etc. You would also need `zynqmp_apu_rpu_0` and `zynqmp_apu_rpu_0_1` etc if you wish to run all the APU codes with both RPU cores.

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

The split and lock-step modes are system level configuration options. You should be able to pick up a BSPs for these configurations which just works as is for test runs. Forcing the user to define the right set of options is not that helpful. Adding runtime checks just leads to dead code in some configurations. The lock-step mode BSP was tested for 100% code and branch coverage.

Author: Chris Johns 2024-10-02T05:10:52.541Z

Would:

1. `zynqmp_rpu`
2. `zynqmp_rpu_lock_step`

work?

The coverage etc is a good point, thanks.

Who says the options you select are right? Why is the memory size you have selected correct for everyone?

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

I never said that the option selection is the right one for everyone. It is highly likely that you have to adjust the DDR memory usage for an application.

If you use a single BSP in split mode, how can you avoid a conflict in the DDR usage?

Author: Chris Johns 2024-10-02T05:10:52.541Z

A user will need to consider a memory map that works and that will be determined by their system design. An example (with make up bits and pieces) is:

```
[aarch64/zynqmp_apu]
BASE = 0x000a0000

[aarch64/zynqmp_rpu_0]
INHERIT = aarch64/zynqmp_rpu
BASE = 0x00010000
SIZE = 0x00040000
ZYQMP_RPU_INT_CONTROLLER_MODE = shared,primary

[aarch64/zynqmp_rpu_1]
INHERIT = aarch64/zynqmp_rpu
BASE = 0x00050000
SIZE = 0x00040000
ZYQMP_RPU_INT_CONTROLLER_MODE = shared,secondary
```

The user can build the suite of BSPs needed from the base ones we provide.

I have no idea if adjusting the base address of the APU like this works, it is just an example. It might be the RPU memory descend down from the top of the 2G area.

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

You can do whatever customization you want, but we still need basic BSP variants which have a working set of default values. For the RPU, these are the three variants mentioned above. You can pick them up and let the test suite run.

Author: Chris Johns 2024-10-02T05:10:52.541Z

We have so many options we do not map to specific BSPs. I am fine with the two BSPs names I provided. I would also like to hear from @opticron about the differences with split mode.

in regards to testing, we have no means to test two BSPs in hardware at once. How do you do that?

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

I didn't test the split mode variants in parallel. They were tested one after another. The core 1 variant needs a core 0 application which performs the GIC distributor initialization. You can use the Xilinx Qemu to run the tests.

I don't have time to rework the patch set to use only two variants.

Author: Chris Johns 2024-10-02T05:10:52.541Z

Thanks for testing details. Lets wait to hear from @opticron

Author: Kinsey Moore 2024-10-02T05:10:52.541Z

Reading from the above, I think the naming suggested was zynqmp_rpu_lockstep, zynqmp_rpu_split_0, and zynqmp_rpu_split_1 which is fine with me. It'd be nice to make the primary/secondary more explicit like in Chris's suggestion, but that's far beyond the scope of this MR.

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

Thanks for having a look at this. I updated the patches and renamed the BSPs to:

- zynqmp_rpu_lock_step
- zynqmp_rpu_split_0
- zynqmp_rpu_split_1

Author: Chris Johns 2024-10-02T05:10:52.541Z

Thanks for the update.

Just so I understand the change, a user wanting to have the APU and two RPUs would build the APU with a suitable memory map and then the `split_0` and `split_1` BSPs only updating the memory map options?

Author: Sebastian Huber 2024-10-02T05:10:52.541Z

Yes, user very likely has to change the default setting for the DDR usage. The other options for a particular variant should be fine in most cases.

Author: Chris Johns 2024-10-02T05:10:52.541Z

Thanks. I am OK with this.

Author: Sebastian Huber 2024-09-20T03:47:18.596Z

added 21 commits

- 6465ec20...ef141b73 - 11 earlier commits
- f2fefd04 - arm/xilinx-zynqmp-rpu: Add cache manager support
- 5cf6f5f8 - arm/xilinx-zynqmp-rpu: Fix file header and copyrights

- 6095626a - arm/xilinx-zynqmp-rpu: Remove superfluous option
- 21f195b1 - arm/xilinx-zynqmp-rpu: Remove superfluous defines
- 642146cf - arm/xilinx-zynqmp-rpu: Simplify startup
- 57b57c95 - arm/xilinx-zynqmp-rpu: Add split mode BSP variants
- bb71ba1c - arm/xilinx-zynqmp-rpu: Simplify MPU configuration
- 08ea410c - arm/xilinx-zynqmp-rpu: Add section for the OCM
- ea2a0364 - arm/xilinx-zynqmp-rpu: Implement bsp_reset()
- 9d8704de - arm/xilinx-zynqmp-rpu: Use UART 0 by default

Compare with previous version

Author: Sebastian Huber 2024-09-21T15:27:04.804Z

added 26 commits

- 9d8704de...6003ea9d - 3 commits from branch `rtems/rtos:main`
- 6003ea9d...a7570d19 - 13 earlier commits
- e5abbdb8 - arm/xilinx-zynqmp-rpu: Add cache manager support
- fa9c934a - arm/xilinx-zynqmp-rpu: Fix file header and copyrights
- cc28352c - arm/xilinx-zynqmp-rpu: Remove superfluous option
- df985e00 - arm/xilinx-zynqmp-rpu: Remove superfluous defines
- 6437c79b - arm/xilinx-zynqmp-rpu: Simplify startup
- 304d1c63 - arm/xilinx-zynqmp-rpu: Add split mode BSP variants
- f948d19d - arm/xilinx-zynqmp-rpu: Simplify MPU configuration
- 576ffff3 - arm/xilinx-zynqmp-rpu: Add section for the OCM
- 3deed707 - arm/xilinx-zynqmp-rpu: Implement bsp_reset()
- fa01d058 - arm/xilinx-zynqmp-rpu: Use UART 0 by default

Compare with previous version

Author: Kinsey Moore 2024-09-25T02:11:12.082Z

added 24 commits

- 7cda5795 - 1 commit from branch `rtems/rtos:main`
- 7cda5795...ed668807 - 13 earlier commits
- 678f5dc4 - arm/xilinx-zynqmp-rpu: Add cache manager support
- 5dec9a22 - arm/xilinx-zynqmp-rpu: Fix file header and copyrights
- f8c341cb - arm/xilinx-zynqmp-rpu: Remove superfluous option
- 318c1b84 - arm/xilinx-zynqmp-rpu: Remove superfluous defines

- f0899872 - arm/xilinx-zynqmp-rpu: Simplify startup
- 508ab491 - arm/xilinx-zynqmp-rpu: Add split mode BSP variants
- a94d4560 - arm/xilinx-zynqmp-rpu: Simplify MPU configuration
- beb423f9 - arm/xilinx-zynqmp-rpu: Add section for the OCM
- 2b16a071 - arm/xilinx-zynqmp-rpu: Implement bsp_reset()
- b0820ddc - arm/xilinx-zynqmp-rpu: Use UART 0 by default

Compare with previous version

Author: Sebastian Huber 2024-09-29T23:16:20.431Z

Is there anything left to do from my side?

Author: Amar Takhar 2024-09-29T23:39:16.759Z

added 31 commits

- b0820ddc...38bafce4 - 8 commits from branch `rtems/rtos:main`
- 38bafce4...6f86399f - 13 earlier commits
- 362c45e4 - arm/xilinx-zynqmp-rpu: Add cache manager support
- fd18e5ad - arm/xilinx-zynqmp-rpu: Fix file header and copyrights
- 88fa1765 - arm/xilinx-zynqmp-rpu: Remove superfluous option
- cc27274d - arm/xilinx-zynqmp-rpu: Remove superfluous defines
- b623e65e - arm/xilinx-zynqmp-rpu: Simplify startup
- ede9207c - arm/xilinx-zynqmp-rpu: Add split mode BSP variants
- b3bf8441 - arm/xilinx-zynqmp-rpu: Simplify MPU configuration
- e4e07676 - arm/xilinx-zynqmp-rpu: Add section for the OCM
- 0b75bb7b - arm/xilinx-zynqmp-rpu: Implement bsp_reset()
- d486d995 - arm/xilinx-zynqmp-rpu: Use UART 0 by default

Compare with previous version

Author: Amar Takhar 2024-09-29T23:39:36.465Z

enabled an automatic merge when all merge checks for d486d995c1a27f572b1b822fef93f3d3057d3038 pass

Author: Kinsey Moore 2024-10-01T00:48:11.691Z

aborted the automatic merge because target branch was updated

Author: Sebastian Huber 2024-10-02T03:38:52.890Z

added 31 commits

- d486d995...4ca49fc2 - 8 commits from branch `rtems/rtos:main`
- 4ca49fc2...4515a7b5 - 13 earlier commits
- c91b26ef - arm/xilinx-zynqmp-rpu: Add cache manager support
- a78d31de - arm/xilinx-zynqmp-rpu: Fix file header and copyrights
- 08f27b35 - arm/xilinx-zynqmp-rpu: Remove superfluous option
- 1b2ebe15 - arm/xilinx-zynqmp-rpu: Remove superfluous defines
- 5f1a9d33 - arm/xilinx-zynqmp-rpu: Simplify startup
- dddbdf4d - arm/xilinx-zynqmp-rpu: Add split mode BSP variants
- 75062c2d - arm/xilinx-zynqmp-rpu: Simplify MPU configuration
- 95649a0a - arm/xilinx-zynqmp-rpu: Add section for the OCM
- 9624b314 - arm/xilinx-zynqmp-rpu: Implement bsp_reset()
- 410436b8 - arm/xilinx-zynqmp-rpu: Use UART 0 by default

Compare with previous version

Author: Sebastian Huber 2024-10-02T03:40:13.971Z

resolved all threads

Author: Chris Johns 2024-10-02T05:10:52.587Z

resolved all threads

Author: Chris Johns 2024-10-02T05:11:21.703Z

approved this merge request

Author: Amar Takhar 2024-10-02T05:29:30.716Z

enabled an automatic merge when all merge checks for 410436b8002b15d450db673ac42f59f557df3d91 pass

Author: Amar Takhar 2024-10-02T05:29:40.449Z

approved this merge request

Author: Amar Takhar 2024-10-02T05:32:05.410Z

The threads are all cleared but it says that @opticron is requesting changes. I'm assuming it's this comment that has it:

- https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/230#note_112310

But since it didn't become a thread it wasn't able to be cleared I'm going to bypass it because I want to know what happens to the comment that 'requested changes' if @opticron can still see it after.

Author: Amar Takhar 2024-10-02T05:32:20.371Z

bypassed reviews on this merge request

Author: Amar Takhar 2024-10-02T12:43:34.968Z

Nice it adds a warning message under the status window and documents it was bypassed but it still shows as requesting changes.

@opticron is the option still available to resolve your requested changes on the comment if so can you click it to see what happens? Thanks.

Author: Kinsey Moore 2024-10-02T12:43:34.968Z

I don't have a button to resolve anything, but I think I can add a comment to it to make it a thread so I can resolve it.

Author: Kinsey Moore 2024-10-02T12:43:34.995Z

resolved all threads

Author: Kinsey Moore 2024-10-02T12:43:47.194Z

resolved all threads

Author: Kinsey Moore 2024-10-02T12:44:40.450Z

canceled the automatic merge

3.9.2.99 235 - Improve and simplify SMP start

Id	235
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-01T00:48:07.127Z
Assignee(s)	Sebastian Huber
Created	2024-09-23T00:18:05.656Z
Updated	2024-10-01T00:48:09.814Z
Milestone	6.1
Labels	arch:aarch64, arch:arm, rtems::score, smp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/235
Commit	4ca49fc2000eba7b11c07111b636b7d49ae9aafa

Summary

This patch set:

1. Improves and simplifies the SMP start.
2. Updates ARM
3. Updates AARCH64

Author: Sebastian Huber 2024-09-23T00:18:06.055Z

assigned to @sebhub

Author: Sebastian Huber 2024-09-23T00:19:07.790Z

changed title from **{-score: Use _Per_CPU_Get()-}** to **{+Improve and simplify SMP start+}**

Author: Sebastian Huber 2024-09-23T00:19:07.818Z

changed the description

Author: Sebastian Huber 2024-09-23T00:22:27.736Z

added 7 commits

- 5925c786 - score: Set boot CPU properties before others
- 134424fd - score: Add _SMP_Wait_for_ready_to_start_multitasking()
- c5b5c2c4 - bsps: Simplify _CPU_SMP_Finalize_initialization()
- c79db6c6 - bsps/aarch64: Simplify SMP support
- 1d2fa939 - bsp/raspberrypi: Simplify SMP support

- 05230ca5 - bsps/arm: Allow parallel start of processors
- 3dfbbf03 - score: Remove _Per_CPU_State_wait_for_non_initial_state()

Compare with previous version

Author: Sebastian Huber 2024-09-23T03:03:05.249Z

mentioned in issue #5064

Author: Sebastian Huber 2024-09-29T23:13:40.313Z

added 17 commits

- 3dfbbf03...38bafce4 - 9 commits from branch `rtems/rtos:main`
- 7bd47259 - score: Use _Per_CPU_Get()
- 296d7150 - score: Set boot CPU properties before others
- d8822514 - score: Add _SMP_Wait_for_ready_to_start_multitasking()
- b0a688e6 - bsps: Simplify _CPU_SMP_Finalize_initialization()
- bbc87a47 - bsps/aarch64: Simplify SMP support
- 276d2efb - bsp/raspberrypi: Simplify SMP support
- e2be5ac8 - bsps/arm: Allow parallel start of processors
- 4ca49fc2 - score: Remove _Per_CPU_State_wait_for_non_initial_state()

Compare with previous version

Author: Chris Johns 2024-09-29T23:23:25.952Z

changed title from **Improve and simplify SMP start** to **{+1. +}Improve and simplify SMP start**

Author: Chris Johns 2024-09-29T23:25:48.248Z

changed title from **{-1. -}Improve and simplify SMP start** to **Improve and simplify SMP start**

Author: Chris Johns 2024-09-29T23:25:48.271Z

changed the description

Author: Chris Johns 2024-09-29T23:53:09.213Z

Why only start cpu 1?

Author: Sebastian Huber 2024-09-29T23:53:09.213Z

The hardware has only two CPUs.

Author: Chris Johns 2024-10-01T00:42:31.948Z

Is this what happens or is it something that should be done?

Author: Sebastian Huber 2024-10-01T00:42:31.948Z

All the current BSPs assume that starting a CPU works. This is just an option.

Author: Amar Takhar 2024-09-30T00:00:12.261Z

enabled an automatic merge when all merge checks for 4ca49fc2000eba7b11c07111b636b7d49ae9aafa pass

Author: Kinsey Moore 2024-09-30T13:41:53.641Z

approved this merge request

Author: Amar Takhar 2024-09-30T21:30:44.469Z

approved this merge request

Author: Chris Johns 2024-10-01T00:42:31.969Z

resolved all threads

Author: Kinsey Moore 2024-10-01T00:47:58.889Z

canceled the automatic merge

3.9.2.100 211 - Add aarch64 cpukit paravirtualization support

Id	211
State	merged
Merged by	Amar Takhar
Merged at	2024-09-27T20:01:58.962Z
Assignee(s)	Joel Sherrill
Created	2024-09-10T19:39:33.599Z
Updated	2024-09-27T20:02:02.002Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/211
Commit	38bafce42de94a7408760ccfca059b0681d77d51

Summary

Aarch64 has had a conditional include paravirt.h but that file does not exist. This MR adds the missing file along with the other support items.

Author: Joel Sherrill 2024-09-10T19:39:33.764Z

assigned to @joel

Author: Chris Johns 2024-09-23T21:18:51.627Z

RTEMS is a single address space and so all code executes in “user space”. Is this a specific context of the AARCH64 device ie EL0, EL1 etc?

Author: Joel Sherrill 2024-09-23T21:18:51.627Z

This came from Deos support:

> User mode code runs in EL0. Kernel mode code runs in EL1. The boot, PAL (kernel mode driver) and PRLs (Platform resource libraries) are considered kernel mode code. We do have some requirements for boot to do some initialization of EL2/EL3 registers in the desk/help/deos-boot-software-requirements.htm, but I believe those will have to be revisited for running under a hypervisor as most of them prevent returning to EL2/EL3 and allow EL1 full access to secure registers (when possible) and the entire GIC.
>
> Hopefully that clarifies things for you and @opticron

Author: Chris Johns 2024-09-23T21:18:51.627Z

Should the sentence state:

- RTEMS executes at E0

?

Author: Joel Sherrill 2024-09-23T21:18:51.627Z

RTEMS is run in user mode in this environment so yes. It is at EL0.

I just copied their reply.

Author: Joel Sherrill 2024-09-23T21:18:23.815Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-09-23T21:18:51.627Z

Comment changed to note E0.

Author: Sebastian Huber 2024-09-23T21:19:05.124Z

ARM -> AArch64 throughout the file.

Author: Joel Sherrill 2024-09-23T21:18:24.645Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-09-23T21:19:05.124Z

Good catch. Fixed.

Author: Sebastian Huber 2024-09-23T21:19:53.626Z

`@brief` missing.

Author: Joel Sherrill 2024-09-23T21:19:53.626Z

I am at a FACE Consortium meeting this week. I will address these as soon as I can.

Author: Joel Sherrill 2024-09-23T21:19:53.626Z

Fixed although GitLab didn't flag the change with this thread.

Author: Joel Sherrill 2024-09-23T21:18:26.291Z

added 33 commits

- cc1aa20c...6003ea9d - 32 commits from branch `rtems/rtos:main`
- 4293dcf8 - Add aarch64 cpukit paravirtualization support

Compare with previous version

Author: Joel Sherrill 2024-09-23T21:19:53.674Z

resolved all threads

Author: Chris Johns 2024-09-23T21:23:16.773Z

approved this merge request

Author: Joel Sherrill 2024-09-27T16:41:25.241Z

added 9 commits

- 4293dcf8...653dbdcd - 8 commits from branch `rtems/rtos:main`
- e8ed37d9 - Add aarch64 cpukit paravirtualization support

Compare with previous version

Author: Kinsey Moore 2024-09-27T19:54:36.390Z

“E0” -> “EL0”

Author: Joel Sherrill 2024-09-27T19:54:22.841Z

changed this line in version 4 of the diff

Author: Joel Sherrill 2024-09-27T19:54:23.163Z

added 1 commit

- cd27474b - Add aarch64 cpukit paravirtualization support

Compare with previous version

Author: Joel Sherrill 2024-09-27T19:54:36.409Z

resolved all threads

Author: Joel Sherrill 2024-09-27T19:54:42.129Z

reset approvals from @chris by pushing to the branch

Author: Kinsey Moore 2024-09-27T19:55:30.158Z

approved this merge request

Author: Amar Takhar 2024-09-27T20:01:24.112Z

approved this merge request

Author: Amar Takhar 2024-09-27T20:01:41.411Z

added 9 commits

- cd27474b...653dbdcd - 8 commits from branch `rtems/rtos:main`
- 38bafce4 - Add aarch64 cpukit paravirtualization support

Compare with previous version

3.9.2.101 241 - testsuites/sptree01: Fix missing prototype warning

Id	241
State	merged
Merged by	Sebastian Huber
Merged at	2024-09-25T11:56:06.013Z
Assignee(s)	Kinsey Moore
Created	2024-09-25T02:06:17.751Z
Updated	2024-09-25T11:56:08.105Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/241
Commit	9eb23924e8e71104df5f8584309ffdda6b8b1682

Summary

Author: Kinsey Moore 2024-09-25T02:06:18.010Z

assigned to @opticron

Author: Chris Johns 2024-09-25T02:26:14.531Z

approved this merge request

Author: Sebastian Huber 2024-09-25T11:55:34.380Z

approved this merge request

Author: Sebastian Huber 2024-09-25T11:55:46.431Z

added 4 commits

- 9fc0d908...81930e26 - 3 commits from branch `rtems/rtos:main`
- 9eb23924 - testsuites/sptree01: Fix missing prototype warning

Compare with previous version

3.9.2.102 104 - Convert licenses to a single LICENSE.md file.

Id	104
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-26T00:00:49.384Z
Created	2024-06-30T20:53:35.349Z
Updated	2024-09-25T06:43:45.691Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/104
Commit	8fd3ed26e7f64af1ba6faff7125a2d0209c7213f

Summary

Merge all licenses into one large file with a TOC. This way we can link to one file and not have to worry about having many files everywhere.

The original licenses have been copied in without modification though it will render differently online.

Author: Sebastian Huber 2024-07-10T05:28:37.035Z

I would just name the directory “licenses”.

Author: Amar Takhar 2024-07-10T05:28:37.035Z

I thought about that but looking around every single project I saw called their license file LICENSE. I called it LICENSE_OTHER so it sorts with the original LICENSE file and is easily visible. ‘licenses’ – which I did try gets lost with the rest of the directories.

Author: Sebastian Huber 2024-07-10T05:28:37.035Z

Ok, never mind, this directory name just looked a bit odd to me.

With respect to the goal of this change, you would like to make it easier for RTEMS users to fulfill license requirements? Why don’t we provide a single top-level COPYING file like Newlib does:

https://sourceware.org/git/?p=newlib-cygwin.git;a=blob;f=COPYING.NEWLIB;h=176b3a4706cc99651d36b1116605747ad0a72a75;hb=HEAD

Author: Amar Takhar 2024-07-10T05:28:37.035Z

That's not a bad idea I'd call it `LICENSE` though as `COPYING` came later as part of the GNU/GPL project rules: https://www.gnu.org/licenses/gpl-howto.html

I added a `LICENSE.md` file as an example of what it would look like merged though I just remembered we can't call it *.md the LICENSE file needs to exist according to @gedare . We could have both a LICENSE that points to ``LICENSE.md``

- See https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/07106cc19883fbb45edd6f536663c26005f7e89f/LICENSE.md

For how it looks rendered. Not much can be done about that as we don't want to change the contents.

Author: Sebastian Huber 2024-07-10T05:28:37.035Z

I like this LICENSE.md approach.

Author: Amar Takhar 2024-07-02T08:08:54.075Z

added 1 commit

- 07106cc1 - Example LICENSE.md file.

Compare with previous version

Author: Kinsey Moore 2024-07-05T22:29:54.708Z

added 8 commits

- 07106cc1...89e795a4 - 6 commits from branch `rtems/rtos:main`
- d646a27a - Move LICENSE_* files to their own subdirectory.
- 512b5703 - Example LICENSE.md file.

Compare with previous version

Author: Gedare Bloom 2024-07-10T05:28:37.053Z

resolved all threads

Author: Gedare Bloom 2024-07-11T00:22:36.586Z

Do we need the following text of all the licenses, or can we just link to their new locations in the tree?

Author: Amar Takhar 2024-07-11T00:22:36.586Z

Actually the one file is in response to @sebhub comment. `LICENSE.md` is all the licenses in one file those are links to the file in the directory see:

- https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/512b5703832f43271dc66c89ebec4f8f7ee84162/LICENSE.md

It's the first commit. I like the idea of just having 1 `LICENSE.md` file as it's what we've got with the rest of our repositories going forward there is no need to have several the link will never change, either and the contents will reflect in the revision of the source.

Author: Gedare Bloom 2024-07-11T00:22:36.586Z

Why keep them also in `LICENSE_OTHER`?

Author: Amar Takhar 2024-07-11T00:22:44.055Z

I have changed this MR to be the single `LICENSE.md`

Author: Gedare Bloom 2024-07-11T00:22:08.458Z

Historically, this one was called "RTEMS License"

Author: Amar Takhar 2024-07-11T00:20:32.746Z

changed this line in version 4 of the diff

Author: Amar Takhar 2024-07-11T00:22:08.458Z

I made this change and also killed off the other commit now this is just `LICENSE.md`.

Author: Gedare Bloom 2024-07-11T00:25:03.128Z

Some of these license we may be able to remove. I would probably have to do more research on that to be sure though. For example, the LICENSE.NET and LICENSE.RPCXDR.

Author: Amar Takhar 2024-07-11T00:25:03.128Z

We can deal with that after I'm trying to convert everything in the root of all repos to MarkDown so it looks clean for the %6.1 release. We can deal with that after the branch.

Author: Amar Takhar 2024-07-11T00:20:32.895Z

added 1 commit

- 867d5d35 - Convert licenses to a single LICENSE.md file.

Compare with previous version

Author: Amar Takhar 2024-07-11T00:21:41.433Z

changed title from **{-Move LICENSE_* files to their own subdirectory-}.** to **{+Convert licenses to a single LICENSE.md file+}.**

Author: Amar Takhar 2024-07-11T00:21:41.457Z

changed the description

Author: Amar Takhar 2024-07-11T00:22:36.613Z

resolved all threads

Author: Amar Takhar 2024-07-11T00:24:18.529Z

added 1 commit

- 8d863ec5 - Convert licenses to a single LICENSE.md file.

Compare with previous version

Author: Amar Takhar 2024-07-11T00:25:03.151Z

resolved all threads

Author: Kinsey Moore 2024-07-25T23:24:30.458Z

approved this merge request

Author: Kinsey Moore 2024-07-25T23:24:37.672Z

added 33 commits

- 8d863ec5...07bd3871 - 32 commits from branch `rtems/rtos:main`
- 8fd3ed26 - Convert licenses to a single LICENSE.md file.

Compare with previous version

Author: Amar Takhar 2024-07-25T23:57:16.306Z

Oh shoot I deleted the wrong comment mine said 'pending' so I copied it but I seem to have deleted @opticron 's comment about the mismatched quotes. This is what I said:

Yes those I saw but given they are licenses I was focused just on the conversion if we want to edit them for formatting we can do that after or just leave it as-is since the TOC works.

Author: Joel Sherrill 2024-07-26T00:00:43.889Z

approved this merge request

Author: Amar Takhar 2024-09-25T06:43:45.496Z

mentioned in issue administration/gitlab#7

3.9.2.103 223 - cpukit/libdl/arm: Add support for Thumb to ARM transitions and accompanying test

Id	223
State	merged
Merged by	Amar Takhar
Merged at	2024-09-25T02:26:31.682Z
Assignee(s)	Kinsey Moore
Created	2024-09-17T19:50:17.697Z
Updated	2024-09-25T02:26:36.091Z
Milestone	6.1
Labels	arch:arm, cpukit::dl
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/223
Commit	81930e26383c760c2aace353c3a10be0d2b2a16f

Summary

This adds support for THM_PC22 and THM_JUMP24 relocations to ARM code along with a test to verify functionality.

Author: Kinsey Moore 2024-09-17T19:50:18.654Z

assigned to @opticron

Author: Kinsey Moore 2024-09-17T19:50:36.378Z

added 22 commits

- 20260af2...d304a817 - 21 commits from branch `rtems/rtos:main`
- b6796072 - cpukit/libdl/arm: Obey instruction encoding requirements for Thumb BLX

Compare with previous version

Author: Kinsey Moore 2024-09-18T02:13:24.073Z

added 1 commit

- 6e8d3b27 - cpukit/libdl/arm: Obey instruction encoding requirements for Thumb BLX

Compare with previous version

Author: Kinsey Moore 2024-09-18T02:13:35.269Z

added 22 commits

- 6e8d3b27...d304a817 - 21 commits from branch `rtems/rtos:main`
- d5f0ebcc - cpukit/libdl/arm: Obey instruction encoding requirements for Thumb BLX

Compare with previous version

Author: Joel Sherrill 2024-09-24T19:13:39.438Z

Is there a way to have a test case for something this specific?

Author: Chris Johns 2024-09-24T19:13:39.438Z

I do not think you can easily in C or C++. Maybe asm? I did a quick scan of the thumb libs built with gcc and there was no references to these reloc types. In a thumb stdc++ archive the only thumb reloc was `R_ARM_THM_CALL`.

Author: Kinsey Moore 2024-09-24T19:13:39.438Z

I have a test case that reproduces the problem for certain alignments of address space usage and luck on the Zynq QEMU BSP, but I'm fairly certain it doesn't guarantee a reproduction.

Author: Chris Johns 2024-09-24T19:13:39.438Z

Is the test going to be added?

Author: Kinsey Moore 2024-09-24T19:13:39.438Z

The same customer just showed me another relocation that's broken, also Thumb to ARM. I'm marking this as draft until I get that worked out as well and then THM_PC22 and THM_JUMP24 should be good. I'll add the test along with that updated patch.

Author: Kinsey Moore 2024-09-24T19:13:39.438Z

A test enabled only on ARM has been added that contains both test cases.

Author: Kinsey Moore 2024-09-18T19:52:14.448Z

added 2 commits

- 0f421539 - 1 commit from branch `rtems/rtos:main`
- 0d407cd2 - cpukit/libdl/arm: Obey instruction encoding requirements for Thumb BLX

Compare with previous version

Author: Kinsey Moore 2024-09-21T18:53:32.924Z

marked this merge request as **draft**

Author: Kinsey Moore 2024-09-23T21:11:10.647Z

added 2 commits

- c0e58ba2 - cpukit/libdl/arm: Obey instruction encoding requirements for Thumb BLX
- 90208fa0 - testsuites: Add dl13 test for Thumb to ARM transitions

Compare with previous version

Author: Kinsey Moore 2024-09-23T21:11:41.346Z

added 13 commits

- 90208fa0...6003ea9d - 11 commits from branch `rtems/rtos:main`
- 2b20e6a4 - cpukit/libdl/arm: Obey instruction encoding requirements for Thumb BLX
- 3be4880d - testsuites: Add dl13 test for Thumb to ARM transitions

Compare with previous version

Author: Kinsey Moore 2024-09-24T19:07:40.292Z

added 3 commits

- c0e58ba2 - cpukit/libdl/arm: Obey instruction encoding requirements for Thumb BLX
- e775bfe7 - cpukit/libdl/arm: Add support for trailing Thumb to ARM calls
- d766d44e - testsuites: Add dl13 test for Thumb to ARM transitions

Compare with previous version

Author: Kinsey Moore 2024-09-24T19:13:01.544Z

marked this merge request as **ready**

Author: Kinsey Moore 2024-09-24T19:13:39.457Z

resolved all threads

Author: Kinsey Moore 2024-09-24T19:15:21.889Z

changed title from **cpukit/libdl/arm: {-Obey instruction encoding requirements for Thumb BLX-}** to **cpukit/libdl/arm: {+Add support for Thumb to ARM transitions and accompanying test+}**

Author: Kinsey Moore 2024-09-24T19:15:21.915Z

changed the description

Author: Kinsey Moore 2024-09-24T19:16:16.879Z

added 2 commits

- 8f20a0f1 - cpukit/libdl/arm: Add support for trailing Thumb to ARM calls
- 05047ad0 - testsuites: Add dl13 test for Thumb to ARM transitions

Compare with previous version

Author: Kinsey Moore 2024-09-24T22:04:02.580Z

added 14 commits

- 05047ad0...6003ea9d - 11 commits from branch `rtems/rtos:main`
- 62342608 - cpukit/libdl/arm: Obey instruction encoding requirements for Thumb BLX
- a1ac3245 - cpukit/libdl/arm: Add support for trailing Thumb to ARM calls
- 8d7389fe - testsuites: Add dl13 test for Thumb to ARM transitions

Compare with previous version

Author: Chris Johns 2024-09-25T00:58:10.986Z

Left aligned white space?

Author: Kinsey Moore 2024-09-25T00:57:46.402Z

changed this line in version 12 of the diff

Author: Kinsey Moore 2024-09-25T00:58:10.986Z

Sorry, missed a tab. Fixed now.

Author: Kinsey Moore 2024-09-25T00:57:46.720Z

added 4 commits

- 7cda5795 - 1 commit from branch `rtems/rtos:main`
- 701e8b2d - cpukit/libdl/arm: Obey instruction encoding requirements for Thumb BLX
- 8f8d0c80 - cpukit/libdl/arm: Add support for trailing Thumb to ARM calls
- fa0a3fed - testsuites: Add dl13 test for Thumb to ARM transitions

Compare with previous version

Author: Kinsey Moore 2024-09-25T00:58:11.078Z

resolved all threads

Author: Chris Johns 2024-09-25T02:02:55.113Z

Did you build the BBB? It is an ARM only build, no thumb? I use it to check any ARM/thumb related changes.

Author: Kinsey Moore 2024-09-25T02:02:55.113Z

I hadn't and I'll double-check. The changes are highly specific to loaded Thumb code and I wouldn't expect that to get generated on an ARM-only build.

Author: Chris Johns 2024-09-25T02:02:55.113Z

Yes but the test is built for all ARM BSPs so lets check.

Author: Kinsey Moore 2024-09-25T02:02:55.113Z

I have checked and there are no compilation issues with the BBB BSP.

Author: Kinsey Moore 2024-09-25T02:00:19.083Z

added 1 commit

- 81930e26 - testsuites: Add dl13 test for Thumb to ARM transitions

Compare with previous version

Author: Kinsey Moore 2024-09-25T02:02:55.142Z

resolved all threads

Author: Chris Johns 2024-09-25T02:25:20.501Z

approved this merge request

Author: Amar Takhar 2024-09-25T02:26:18.996Z

approved this merge request

3.9.2.104 233 - aarch64: Add _AArch64_Get_current_processor_for_system_start()

Id	233
State	merged
Merged by	Amar Takhar
Merged at	2024-09-20T22:29:37.539Z
Assignee(s)	Sebastian Huber
Created	2024-09-20T04:19:58.913Z
Updated	2024-09-20T22:29:40.628Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/233
Commit	6003ea9d94574554dde2173402aa4f3df87a33f0

Summary

This allows BSPs to customize how the current processor index is determined during system start.

Update #5064.

Author: Sebastian Huber 2024-09-20T04:19:59.011Z

assigned to @sebhub

Author: Sebastian Huber 2024-09-20T04:22:00.470Z

changed title from **{-smpfatal08: Fix build for aarch64-}** to **{+aarch64: Add _AArch64_Get_current_processor_for_system_start()+}**

Author: Sebastian Huber 2024-09-20T04:22:00.500Z

changed the description

Author: Sebastian Huber 2024-09-20T04:22:48.249Z

mentioned in merge request !113

Author: xiaojun zheng 2024-09-20T04:46:37.467Z

This addresses the issue at startup. What about SGI? It needs target MPDIR, add more BSP-specific functions?

Author: Sebastian Huber 2024-09-20T04:49:54.521Z

The SGI is another issue not related to this MR. Could we please focus on a step wise approach. Does this API work for your BSP?

Author: xiaojun zheng 2024-09-20T05:02:10.116Z

From my perspective, these issues are all related to MPIDR map, so I think they should be considered together. Apply this patch, I need to provide the function _AArch64_Get_current_processor_for_system_start for my BSP, so I can not test now.

Author: Sebastian Huber 2024-09-20T05:12:42.150Z

Yes, please try to implement the _AArch64_Get_current_processor_for_system_start() for your BSP and then you can open another draft MR and we discuss the next step.

Your _AArch64_Get_current_processor_for_system_start() is just the new code block for start.S in your original MR.

Author: xiaojun zheng 2024-09-20T05:21:35.014Z

In my original MR, it is implemented in C, and now it needs to be converted to assembly. I'm trying.

Author: Sebastian Huber 2024-09-20T05:27:06.097Z

No, I mean your new code block in start.S. This could be simply:

```
FUNCTION_ENTRY(_AArch64_Get_current_processor_for_system_start)

ldr x0, =aarch64_cpu_boot_params
ldr x0, [x0, #BOOT_PARAM_CPUN_OFFSET]
ret

FUNCTION_END(_AArch64_Get_current_processor_for_system_start)
```

Author: xiaojun zheng 2024-09-20T05:31:43.350Z

here is just get the cpun from struct aarch64_cpu_boot_params, but cpun should be searched from the map table first.

Author: Sebastian Huber 2024-09-20T05:35:59.544Z

Sorry, I don't understand your problem. The original patch is this:

```
@@ -219,9 +219,8 @@ _el2_start:
_el1_start:

#ifdef RTEMS_SMP
-  /* Read MPIDR and get current processor index */
-  mrs x7, mpidr_el1
-  and x7, x7, #0xff
+  ldr x3, =aarch64_cpu_boot_params
+  ldr x7, [x3, #BOOT_PARAM_CPUN_OFFSET]
#endif

#ifdef RTEMS_SMP
```

Now you have to move it to the _AArch64_Get_current_processor_for_system_start() function, that is all.

Author: xiaojun zheng 2024-09-20T05:45:12.508Z

Oh, I see. aarch64_cpu_boot_params should still be used. I'm stuck on deleting the variable aarch64_cpu_boot_params.

Author: Sebastian Huber 2024-09-20T05:47:50.088Z

There is no need to delete it. With the new _AArch64_Get_current_processor_for_system_start() function, its use is

hidden from the generic start code. However, as I said before, you may have synchronization issues if multiple cores are started in parallel.

Author: xiaojun zheng 2024-09-20T06:19:16.007Z

It works on my BSP.

Author: Chris Johns 2024-09-20T21:52:32.442Z

approved this merge request

Author: Amar Takhar 2024-09-20T22:29:30.611Z

approved this merge request

3.9.2.105 195 - Add support for more than 2G of DDR memory to ZynqMP BSPs

Id	195
State	merged
Merged by	Kinsey Moore
Merged at	2024-08-27T14:22:37.015Z
Assignee(s)	Chris Johns
Reviewer(s)	Kinsey Moore
Created	2024-08-27T05:27:59.687Z
Updated	2024-09-19T13:23:31.654Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/195
Commit	94443d497b771e9fbb02b0a0ac5f36d033f97dc6

Add support to configure the second region of DDR memory if the BSP configured RAM size is greater than 2G.

Add the second region's memory to the heap.

Author: Chris Johns 2024-08-27T05:27:59.870Z

requested review from @opticron

Author: Chris Johns 2024-08-27T05:27:59.889Z

assigned to @chris

Author: Kinsey Moore 2024-08-27T13:00:57.131Z

approved this merge request

Author: Christian Mauderer 2024-08-27T13:21:50.228Z

approved this merge request

Author: Sebastian Huber 2024-09-19T13:23:33.462Z

This change breaks the build of two BSPs, for example:

```
Waf: Entering directory `/tmp/sh/b-rtems/aarch64/xilinx_zynqmp_ilp32_qemu'
[   1/4727] Compiling bsps/shared/dev/serial/console-termios-init.c
...
[1728/4810] Linking /tmp/sh/b-rtems/aarch64/xilinx_zynqmp_ilp32_qemu/testsuites/fstests/jffs2_fsrename.exe
/opt/rtems/6/lib/gcc/aarch64-rtems6/13.3.0/../../../../aarch64-rtems6/bin/ld: ./librtemsbsp.a(bspstartmmu.c.5.o):(.rodata.bsp_r1_region+0x0): undefined reference to `bsp_r1_ram_base'
/opt/rtems/6/lib/gcc/aarch64-rtems6/13.3.0/../../../../aarch64-rtems6/bin/ld: ./librtemsbsp.a(bspstartmmu.c.5.o):(.rodata.bsp_r1_region+0x4): undefined reference to `bsp_r1_ram_end'
/opt/rtems/6/lib/gcc/aarch64-rtems6/13.3.0/../../../../aarch64-rtems6/bin/ld: ./librtemsbsp.a(bspstartmmu.c.5.o):(.bsp_start_data+0x130): undefined reference to `bsp_r1_ram_base'
/opt/rtems/6/lib/gcc/aarch64-rtems6/13.3.0/../../../../aarch64-rtems6/bin/ld: ./librtemsbsp.a(bspstartmmu.c.5.o):(.bsp_start_data+0x134): undefined reference to `bsp_r1_ram_end'
```

Author: Chris Johns 2024-09-19T13:23:33.462Z

Looks like the 32bit BSP will need a different `linkcmd` file. I suggest it be based on the version before this one unless you know a way to handle both?

Author: Sebastian Huber 2024-09-19T13:23:33.462Z

I didn't look into the details.

Author: Chris Johns 2024-09-19T13:23:33.462Z

Hmm maybe it is opposite, the BSPs share the MMU config but different `linkcmd` files which could make the unresolved symbols. If it is a conditional define might work?

Sorry I would need @opticron to comment because I have never built the 32bit BSP and I will never use it. @joel explained the reasons for it but I cannot remember.

Author: Kinsey Moore 2024-09-19T13:23:33.462Z

The reason for the ILP32 BSP is minimized code and memory footprint for applications that don't reach beyond the 4GB barrier. This situation is common, but most (if not all) people go with the LP64 BSPs anyway. Clearly it isn't regularly built and has also suffered historically from a lack of proper newlib support which we rectified via patch in RSB until the code got integrated from arm-optimized-routines last year thanks to Sebastian.

Author: Kinsey Moore 2024-09-19T13:23:33.462Z

I have opened !231 to resolve this issue.

Author: Kinsey Moore 2024-09-19T13:23:33.485Z

resolved all threads

3.9.2.106 47 - dev/serial: Refactor the pl011 driver to be extensible

Id	47
State	merged
Merged by	Gedare Bloom
Merged at	2024-09-18T19:31:16.864Z
Reviewer(s)	Kinsey Moore, Gedare Bloom
Created	2024-05-24T13:38:32.955Z
Updated	2024-09-19T05:24:08.715Z
Milestone	6.1
Labels	arch:aarch64, arch:arm, device::serial
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/47
Commit	0f421539598717a91cd7eee2b1cbf7ed32cb22f9

Refactor the pl011 driver to be extensible. https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/43

Author: Ning Yang 2024-05-24T13:40:55.654Z

added 1 commit

- 753afaa9 - dev/serial: Refactor the pl011 driver to be extensible

Compare with previous version

Author: Ning Yang 2024-05-24T13:43:39.038Z

added 1 commit

- 2c0f170d - dev/serial: Refactor the pl011 driver to be extensible

Compare with previous version

Author: Ning Yang 2024-05-24T13:44:22.102Z

mentioned in merge request !43

Author: Utkarsh Verma 2024-05-26T02:34:28.871Z

I'll summarise how you could go about this patch.

- `arm-pl011.h`:
- Add the IRQ struct fields from our `pl011.h` file.
- Add the clock struct field.
- `arm-pl011.c`: Port functions from our new driver to this file. Things should pretty much be the same except for the register access which now utilises structs instead of macros.

Additionally, you'll notice how I've placed `const` everywhere I could. It's a good practice for optimisation, and more importantly, it enforces constraints on values that should not be modified.

With these changes, you'll be done with the base ARM PL011 driver. As Gedare and others pointed out, it is just a base spec, and other manufacturers build devices on top of it. This results in the derivatives having a different register map at the end. I think Versal and RPi both have these differences. What we'll do in these cases is as follows.

- Create a new driver under the BSP directory (`bsps/aarch64/rasperrypi/{dev/pl011.c,include/pl011.h}`)
- `pl011.h`: Define the device-specific registers in a new struct extending from `arm-pl011-regs.h`. (See below how)
- `pl011.c`: Create a new driver that wraps over `arm-pl011` with the registers from `pl011.h`.

Since C does not have inheritance, we mimic it using structs here. Any device following the ARM PL011 spec will have the layout set by (https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/bsps/include/dev/serial/arm-pl011-regs.h?ref_type=heads). The new registers should follow them.

Hence, in `pl011.h`, we create a new struct for the regs that our driver uses.

```
#include <arm-pl011-regs.h>

typedef struct {
pl011 base;

/* Any new registers that you have specific to RPi. */
} raspberrypi_pl011;

typedef struct {
rtems_termios_device_context base;
```

(continues on next page)

(continued from previous page)

```
volatile raspberrypi_pl011 *const regs;
const rtems_vector_number irq;
const uint32_t initial_baud;
} raspberrypi_pl011_context;
```

Author: Utkarsh Verma 2024-05-29T12:08:52.690Z

Before creating a new `raspberrypi_pl011` driver, please compare the register maps from the Raspberry Pi datasheet and PL011 reference. The `arm-pl011` might just be enough for what we want as of now. AFAIR, the new driver doesn't use any register specific to the RPi.

Author: Ning Yang 2024-05-26T05:59:31.534Z

marked this merge request as **draft**

Author: Ning Yang 2024-05-27T07:21:33.611Z

added 1 commit

- dba46527 - dev/serial: Refactor the pl011 driver to be extensible

Compare with previous version

Author: Ning Yang 2024-05-28T08:08:58.328Z

added 1 commit

- a732b8ab - bsps/xilinx-versal: Refactor the versal uart to adapt it to the pl011 driver

Compare with previous version

Author: Kinsey Moore 2024-05-28T17:19:39.330Z

added 3 commits

- b3a4f539 - 1 commit from branch `rtems/rtos:main`
- 31e22ea8 - dev/serial: Refactor the pl011 driver to be extensible
- 79370a48 - bsps/xilinx-versal: Refactor the versal uart to adapt it to the pl011 driver

Compare with previous version

Author: Ning Yang 2024-05-29T12:08:52.708Z

resolved all threads

Author: Ning Yang 2024-05-31T04:06:26.577Z

mentioned in issue #5026

Author: Kinsey Moore 2024-05-31T19:06:45.160Z

added 3 commits

- 48f6b500 - 1 commit from branch `rtems/rtos:main`
- c44c2d4c - dev/serial: Refactor the pl011 driver to be extensible
- 8142eaba - aarch64/raspberrypi: Create raspberrypi_uart structure

Compare with previous version

Author: Ning Yang 2024-06-01T03:36:30.606Z

marked this merge request as **ready**

Author: Ning Yang 2024-06-01T03:52:31.459Z

changed the description

Author: Sebastian Huber 2024-06-05T13:00:44.980Z

These two variables are not modified by hardware, so they should not have a volatile qualifier. You have to use proper locks or atomic operations.

Author: Ning Yang 2024-06-05T12:59:37.913Z

changed this line in version 9 of the diff

Author: Ning Yang 2024-06-05T13:00:44.980Z

fixed. Thanks!

Author: Ning Yang 2024-06-05T12:59:38.455Z

added 2 commits

- ac5cc462 - dev/serial: Refactor the pl011 driver to be extensible
- b5018b71 - aarch64/raspberrypi: Create raspberrypi_uart structure

Compare with previous version

Author: Ning Yang 2024-06-05T13:00:45.018Z

resolved all threads

Author: Gedare Bloom 2024-06-10T06:39:24.799Z

SPDX missing. use file templates https://docs.rtems.org/branches/master/eng/coding-file-hdr.html

Author: Ning Yang 2024-07-06T02:53:47.133Z

changed this line in version 28 of the diff

Author: Gedare Bloom 2024-06-10T06:39:36.623Z

this can be: `arm_pl011_context pl011_ctx;` or similar. That will allow casting between `rasperrypi_pl011_context*` and `arm_pl011_context*` and `rtems_termios_device_context*`.

Author: Ning Yang 2024-06-10T06:38:29.666Z

changed this line in version 10 of the diff

Author: Gedare Bloom 2024-06-10T06:39:54.458Z

why using `const`?

Author: Ning Yang 2024-06-10T06:39:54.458Z

https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/47#note_106343

```
It's a good practice for optimisation, and more importantly, it␣
↪enforces constraints on values that should not be modified.
```

I think this is good.

Author: Sebastian Huber 2024-06-10T06:39:54.458Z

This will only work well with static initialization. We don't use this pattern in other parts of the system.

Author: Ning Yang 2024-06-10T06:38:30.412Z

changed this line in version 10 of the diff

Author: Gedare Bloom 2024-06-18T05:46:00.705Z

I think it should be possible to replace most of this file with calls to the `arm_pl011_xxx` functions now.

Author: Ning Yang 2024-06-10T06:38:31.000Z

changed this line in version 10 of the diff

Author: Gedare Bloom 2024-06-10T03:25:40.668Z

This might also probably be able to share the interrupt-based implementation. It can be a future refactoring improvement, but should probably be opened as an Issue.

Author: Ning Yang 2024-06-10T03:25:40.668Z

Author: Ning Yang 2024-06-17T06:24:33.637Z

changed this line in version 15 of the diff

Author: Gedare Bloom 2024-06-18T05:46:19.073Z

restructure this to use the same layout as the other `xxx_pl011_context` structs, with a `arm_pl011_context pl011_ctx;` (or similarly named) as the first element. You can just ignore unused fields. It looks like there might be some variables in the `arm_pl011_context` for the interrupt-based driver that have slightly different variable names (like `tx_queued` and `tx_queued_chars` and maybe `first_send` is the same as `needs_sw_triggered_tx_irq`). Make them consistent.

Author: Gedare Bloom 2024-06-18T05:46:19.073Z

Some of these variables appear to be redundant now to `pl011_ctx.{needs_sw_triggered_tx_irq,tx_queued_chars}`

Author: Ning Yang 2024-06-18T05:46:19.073Z

These variables are used by the UART interrupt mode. I think it's better to modify them in refactored UART interrupt mode MR.

Author: Gedare Bloom 2024-06-18T05:46:19.073Z

I would like you to try to make them consistent now.

Author: Ning Yang 2024-06-17T06:24:34.809Z

changed this line in version 15 of the diff

Author: Gedare Bloom 2024-06-10T06:40:36.169Z

={ –> = {

Author: Ning Yang 2024-06-10T06:38:33.018Z

changed this line in version 10 of the diff

Author: Gedare Bloom 2024-06-10T06:40:54.534Z

SPDX

Author: Ning Yang 2024-07-06T02:53:47.660Z

changed this line in version 28 of the diff

Author: Gedare Bloom 2024-06-10T06:41:12.004Z

same as above, use `arm_pl011_context` here

Author: Ning Yang 2024-06-10T06:38:33.914Z

changed this line in version 10 of the diff

Author: Gedare Bloom 2024-06-11T13:49:13.109Z

just a little note, you will replace all of this with:

```
... = {
.pl011_ctx = {
.base =
...
.initial_baud = 115200
}
.clock = ...
};
```

Author: Ning Yang 2024-06-11T13:49:13.109Z

Do I need to create a pl011 structure for `arm/xen` as well, instead of using `arm_pl011_context` directly?

Author: Ning Yang 2024-06-11T13:49:13.109Z

I created new pl011 structures only for `aarch64/xilinx\ |md_0_8206|\ -versal\ |md_0_8206|\ ``, ``aarch64/raspberrypi` and `arm/raspberrypi`. Because I think only these BSPs use the BSP-specific pl011 functions.

Author: Gedare Bloom 2024-06-11T13:49:13.109Z

I see. It may not be necessary, although making them all uniform might simplify code reuse.

Author: Gedare Bloom 2024-06-10T06:41:43.784Z

line length over 80

Author: Ning Yang 2024-06-10T06:38:35.344Z

changed this line in version 10 of the diff

Author: Gedare Bloom 2024-06-10T03:28:09.087Z

is this a bug in the current implementation?

Author: Ning Yang 2024-06-10T03:28:09.087Z

yes. I checked the pl011 datasheet and it is a bug.

Author: Sebastian Huber 2024-06-10T03:28:09.087Z

Good, then this should be fixed in a separate commit.

Author: Ning Yang 2024-06-10T03:28:09.087Z

Understood.

Author: Ning Yang 2024-06-10T03:28:09.087Z

!64

Author: Gedare Bloom 2024-06-10T06:42:03.932Z

same as above.

Author: Ning Yang 2024-06-10T06:38:36.834Z

changed this line in version 10 of the diff

Author: Gedare Bloom 2024-06-15T11:34:03.322Z

seems like most of the PL011 UARTs have this `clock` context. maybe add it to the base `arm_pl011_context`?

Author: Ning Yang 2024-06-15T11:34:03.322Z

yes. This is the base `arm_pl011_context`. `clock` was already here.

Author: Ning Yang 2024-06-10T06:38:37.420Z

changed this line in version 10 of the diff

Author: Gedare Bloom 2024-06-10T06:42:18.877Z

this is the wrong way to break long lines.

```
static inline void clear_irq(
pl011_base* regs_base,
const uint32_t irq_mask
)
{
...
```

Author: Ning Yang 2024-06-10T06:38:38.013Z

changed this line in version 10 of the diff

Author: Gedare Bloom 2024-06-18T05:46:39.813Z

Please compare this code with the `aarch64/xilinx-versal/dev/serial/versal-uart.c` I think some improvements can be made (in both). I will review this file again after consideration is given to making them be more consistent. They cannot be the same (due to some Versal oddities).

You might consider splitting the interrupt-driven PL011 submission to a separate MR, and focus on merging the refactoring of the polling one first.

Author: Ning Yang 2024-06-17T06:24:37.800Z

changed this line in version 15 of the diff

Author: Gedare Bloom 2024-06-10T06:43:09.766Z

wrong indent width

Author: Ning Yang 2024-06-10T06:38:39.155Z

changed this line in version 10 of the diff

Author: Gedare Bloom 2024-06-06T20:23:20.454Z

requested changes

Author: Gedare Bloom 2024-06-06T20:29:00.054Z

requested review from @gedare

Author: Ning Yang 2024-06-10T03:25:16.274Z

mentioned in issue #5033

Author: Ning Yang 2024-06-10T06:38:39.420Z

added 1 commit

- 8739dfcf - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-06-10T12:09:58.321Z

added 1 commit

- 2df06b62 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Gedare Bloom 2024-06-15T11:34:58.978Z

why changing the default behavior?

Author: Ning Yang 2024-06-15T11:34:58.978Z

I have only refactored the polling mode of versal uart, the interrupt mode may have problems. I think it is better to use polling mode by default before refactoring the interrupt mode.

Author: Ning Yang 2024-06-17T06:24:38.494Z

changed this line in version 15 of the diff

Author: Kinsey Moore 2024-06-12T22:25:31.023Z

added 38 commits

- 2df06b62...20939b21 - 37 commits from branch `rtems/rtos:main`
- f11fea40 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Kinsey Moore 2024-06-13T12:42:05.895Z

added 2 commits

- 1d997f33 - 1 commit from branch `rtems/rtos:main`
- b710aee1 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-06-14T11:16:43.856Z

Author: Kinsey Moore 2024-06-14T21:30:10.246Z

added 12 commits

- b710aee1...20a663cc - 11 commits from branch `rtems/rtos:main`
- 0d5d143d - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Utkarsh Verma 2024-07-06T02:58:28.959Z

Shouldn't this fit better in `arm-pl011-regs.h` under the `arm_pl011_regs` struct?

@gedare @opticron

Author: Ning Yang 2024-07-06T02:58:28.959Z

The fields at the end are different from the PL011 registers of the Raspberry Pi.

The pl011 registers of the Raspberry Pi 4b are as follows: !`image <https://gitlab.rtems.org/-/project/uploads/0473c4c3dad9d21641ed1a8e7fd6f876/image.png>`_

Author: Gedare Bloom 2024-07-06T02:58:28.959Z

I agree with how @yangn0 has approached this. The PL011 registers are different in a few of the specific UART implementations. So the `arm_pl011_uart` is the right way how to "specialize" the PL011 for the usual PL011 register map.

Author: Utkarsh Verma 2024-07-06T02:58:28.959Z

Oh, now I understand the problem we face and the solution makes sense. However, now that we are treating `pl011` as its own entity, i.e. utilising its register map and declaring functions from it. Shouldn't we move all that functionality to its own file?

Maybe something like this: * `pl011.h`: Contains `pl011_context` base PL011 functions that all the derivatives use or wrap around. * `pl011-regs.h`: Used by `arm-pl011.h` and other device-specific drivers. We do not have an `arm-pl011-regs.h` anymore.

Author: Ning Yang 2024-07-06T02:58:28.959Z

https://discord.com/channels/820452222382112799/820452222848335924/1252984295211929630

!43

Author: Utkarsh Verma 2024-06-18T05:50:02.573Z

This is a roundabout way for `(void*)&raspberrypi_4_context->base`.

Author: Ning Yang 2024-06-18T05:50:02.573Z

If I use `void*` I will get an error.

error: invalid type argument of '->' (have 'raspberrypi_pl011_context')

Author: Utkarsh Verma 2024-06-18T05:50:02.573Z

Makes sense. I didn't know that now you embed the `pl011_context` inside the raspberrypi context.

You can mark this resolved.

Author: Ning Yang 2024-06-25T12:23:49.805Z

changed this line in version 23 of the diff

Author: Utkarsh Verma 2024-06-18T05:50:42.065Z

Same roundabout way.

Author: Utkarsh Verma 2024-06-18T05:50:42.065Z

This can be marked as resolved.

Author: Ning Yang 2024-06-25T12:23:50.346Z

changed this line in version 23 of the diff

Author: Utkarsh Verma 2024-06-18T05:51:28.219Z

Shouldn't we have the `raspberrypi_pl011` have its own functions that wrap over `arm_pl011` once?

In terms of structure, believe we should only have `raspberrypi-pl011.h` include in this file and we should call `raspberrypi_pl011_xx()` instead of directly calling `arm_pl011_xx()`.

@opticron @gedare

Author: Gedare Bloom 2024-06-18T05:51:28.219Z

I'm ok with it either way, whatever is more convenient. If this can work by directly calling the (shared) `arm_pl011_xxx` functions, that seems better than redefining some redundant functions that just wrap them.

Author: Utkarsh Verma 2024-06-18T05:51:28.219Z

Understood. This can be marked as resolved.

Author: Ning Yang 2024-07-06T02:53:52.389Z

changed this line in version 28 of the diff

Author: Utkarsh Verma 2024-06-18T05:53:51.376Z

We have `arm-pl011-regs.h` separate from `arm-pl011.h` because we know other devices extend the register map. In this case, I think we can keep this simply in `versal_pl011.h`.

Author: Ning Yang 2024-06-17T06:24:40.700Z

changed this line in version 15 of the diff

Author: Utkarsh Verma 2024-06-18T06:26:26.084Z

All functions should have `arm_pl011_` prefix.

Author: Ning Yang 2024-06-17T06:24:41.132Z

changed this line in version 15 of the diff

Author: Ning Yang 2024-06-17T06:24:41.292Z

added 1 commit

- bb50934d - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-07-06T03:01:44.861Z

Hi @gedare,

I carefully compared the versal uart driver and the pl011 driver. I think the new pl011 driver is fully compatible with the versal uart.

I have tested it and the versal uart can work.So I deleted the versal uart driver and used the pl011 driver directly.

What needs to be discussed about the two drivers is:

In versal-uart.c line164:

```
static void versal_uart_write_support(
rtems_termios_device_context *base,
const char *buf,
size_t len
)
{

...

/*
* The PL011 IP in the Versal needs preloading the TX FIFO with
```

(continues on next page)

(continued from previous page)

```
* exactly 17 characters for the first TX interrupt to be
* generated.
*/
if (ctx->first_send) {
ctx->first_send = false;
for (int i = 0; i < 17; ++i) {
regs->uartdr = VERSAL_UARTDR_DATA('\r');
}
}
while (versal_uart_flags_clear(regs, VERSAL_UARTFR_TXFF) &&
len_remaining > 0) {
regs->uartdr = VERSAL_UARTDR_DATA(*p++);
--len_remaining;
}
ctx->tx_queued = len - len_remaining;
ctx->transmitting = true;
}
...
}
```

The pl011 driver also encounters the problem of triggering the first TX interrupt. I think the handling method in the pl011 driver is better. It does not require writing extra \r characters.

In addition, I modified pl011 driver with reference to versal uart driver.

Thanks for your help!

Author: Gedare Bloom 2024-07-06T03:01:44.861Z

@chris I would like you to take a look at the Versal changes, and eventually may need you to test them in the hardware. @yangn0 I believe that the qemu model for the Versal cheats and uses the PL011 so it may work on the simulator, but might break on the hardware phy.

Author: Ning Yang 2024-07-06T03:01:44.861Z

I splited the versal uart part from MR.

Author: Kinsey Moore 2024-06-18T01:49:27.719Z

added 53 commits

- bb50934d...7f2b904d - 52 commits from branch `rtems/rtos:main`
- 92601581 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Utkarsh Verma 2024-06-18T06:26:01.835Z

Why remove this?

Author: Ning Yang 2024-06-18T06:26:01.835Z

I checked the rpi4 datasheet and the pl011 datasheet, they both have this field, I should keep it.

Author: Ning Yang 2024-06-18T06:25:51.989Z

changed this line in version 17 of the diff

Author: Ning Yang 2024-06-18T06:25:52.154Z

added 1 commit

- 790526a9 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Gedare Bloom 2024-06-18T16:00:34.204Z

requested review from @chris

Author: Kinsey Moore 2024-06-18T23:03:43.317Z

added 2 commits

- 0bdeef72 - 1 commit from branch `rtems/rtos:main`
- bd9e3228 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Utkarsh Verma 2024-07-06T03:26:48.629Z

This should be placed higher up in the spec folder as it directly corresponds to the ARM PL011 driver. That you'll avoid repeating this for other devices.

You can place it either in `spec/build/bsps/dev/serial/` or directly under `spec/build/bsps/` but change the name to `optarmpl011fifo.yml`.

Author: Ning Yang 2024-07-06T03:26:48.629Z

The fifo size is different for different BSPs. Is it better to set the fifo size for each BSP separately?

Author: Ning Yang 2024-07-06T03:26:07.522Z

changed this file in version 29 of the diff

Author: Utkarsh Verma 2024-06-20T03:03:41.564Z

You can directly use the `optconsoleirq.yml` in `spec/build/bsps/`.

Author: Ning Yang 2024-06-20T03:28:54.662Z

changed this file in version 19 of the diff

Author: Utkarsh Verma 2024-06-20T03:05:05.261Z

Should be removed in favour of the file mentioned above.

Author: Ning Yang 2024-06-20T03:28:54.962Z

changed this file in version 19 of the diff

Author: Utkarsh Verma 2024-07-06T03:26:53.619Z

Should be removed in favour of the file mentioned above.

Author: Ning Yang 2024-07-06T03:26:53.619Z

https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/47#note_107706

Author: Ning Yang 2024-07-06T03:26:08.132Z

changed this file in version 29 of the diff

Author: Ning Yang 2024-06-20T03:28:55.633Z

added 1 commit

- 44c0c511 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-06-20T03:29:24.537Z

added 1 commit

- 4c5111df - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Kinsey Moore 2024-06-21T18:58:11.330Z

added 20 commits

- 4c5111df...2089f993 - 19 commits from branch `rtems/rtos:main`
- f9616c06 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Kinsey Moore 2024-06-25T12:24:30.277Z

Why wouldn't you use "&pl011_context.pl011_ctx.base" here? The cast being performed here is technically correct for the current implementation, but if the struct ever changes then bad things can happen since the cast will become invalid. This question applies to the other uses of the raspberry pi wrapper context as well.

Author: Ning Yang 2024-06-25T12:23:52.217Z

changed this line in version 23 of the diff

Author: Kinsey Moore 2024-07-06T02:57:38.874Z

If there is only one member of this struct, why is it being wrapped at all? It doesn't seem to be necessary.

Author: Ning Yang 2024-07-06T02:57:38.874Z

Some PL011 has device-specific registers, which may require some device-specific context fields.

In order to be more unified, I created device-specific context structure to all BSPs with pl011.

The context of Versal UART driver has some unique fields. But I think the current PL011 driver can completely replace the Versal UART driver. I tested it on Versal Qemu, and it needs to be tested on the hardware. (https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/47#note_107457)

If the test passes, I think device-specific context is unnecessary. Because all device-specific contexts have only one member.

Author: Kinsey Moore 2024-07-06T02:57:38.874Z

Does this mean the current patch is incomplete? The issue I'm bringing up is that the `raspberrypi_pl011_context` structure only exists to provide an accessor for the

`arm_pl011_context`. That part of this patch is essentially a no-op as the outer context is never used or passed to any other function.

BSPs that use the base implementation don't need the wrapper struct at all and can just use the base struct directly.

Author: Ning Yang 2024-07-06T02:53:54.175Z

changed this line in version 28 of the diff

Author: Ning Yang 2024-07-06T02:57:38.874Z

Done. All BSPs except `xilinx-versal` now use the base struct directly.

I also deleted the `raspberrypi-pl011.h` file because it was not used.

Author: Kinsey Moore 2024-06-21T19:09:56.044Z

requested changes

Author: Amar Takhar 2024-06-21T19:49:52.129Z

requested review from @amar

Author: Amar Takhar 2024-06-21T19:59:09.766Z

requested review from @opticron

Author: Amar Takhar 2024-06-21T19:59:54.734Z

Just testing to see if the feature flag takes. I will re-open again

Author: Ning Yang 2024-06-25T12:23:52.594Z

added 1 commit

- a41a44cd - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Kinsey Moore 2024-06-25T13:32:41.120Z

added 29 commits

- a41a44cd...19d8888a - 28 commits from branch `rtems/rtos:main`
- 56d7cfd0 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-07-03T14:17:15.838Z

added 1 commit

- c5d8e052 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Kinsey Moore 2024-07-05T16:52:54.875Z

added 38 commits

- c5d8e052...58748a3a - 37 commits from branch `rtems/rtos:main`
- 77eb91f6 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Kinsey Moore 2024-07-05T21:19:35.835Z

added 2 commits

- 89e795a4 - 1 commit from branch `rtems/rtos:main`
- 412c8966 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-07-06T02:53:54.417Z

added 1 commit

- 2f9e06d2 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-07-06T03:26:08.367Z

added 1 commit

- b3d272a3 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-07-06T03:26:53.643Z

resolved all threads

Author: Kinsey Moore 2024-07-07T02:22:31.894Z

This function is only used in this file. Is there a reason it is not static? This question applies to other functions only used in arm-pl011.c as well.

Author: Ning Yang 2024-07-07T02:18:32.113Z

changed this line in version 30 of the diff

Author: Ning Yang 2024-07-07T02:40:06.907Z

I think the BSP-specific pl011 driver may use these functions, but not yet. I have changed them back to static.

Author: Kinsey Moore 2024-07-06T21:39:48.815Z

requested changes

Author: Ning Yang 2024-07-07T02:18:32.360Z

added 1 commit

- 9cab5723 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-07-07T02:22:31.957Z

resolved all threads

Author: Amar Takhar 2024-07-11T00:15:48.331Z

removed review request for @amar

Author: Kinsey Moore 2024-07-16T22:40:00.108Z

added 50 commits

- 9cab5723...26b95e14 - 49 commits from branch `rtems/rtos:main`
- 9fcc4f00 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Gedare Bloom 2024-08-15T14:54:08.633Z

This type should be prefaced with the scope, like `arm_pl011_fifo_trigger_level`. That said, it appears to be unused and can be removed? the `ONE_EIGHTH` and `ONE_HALF` are used, you can just directly `#define` those to `(0)` and `(2)`.?

Author: Ning Yang 2024-07-19T18:23:08.800Z

changed this line in version 33 of the diff

Author: Ning Yang 2024-08-15T14:54:08.633Z

Is this a better way?

```
#ifdef BSP_CONSOLE_USE_INTERRUPTS

#define FIFO_LEVEL_ONE_EIGHTH   0
#define FIFO_LEVEL_ONE_FOURTH   1
#define FIFO_LEVEL_ONE_HALF     2
#define FIFO_LEVEL_THREE_FOURTH 3
#define FIFO_LELEL_SEVEN_HALF   4

#define TXFIFO_IRQ_TRIGGER_LEVEL FIFO_LEVEL_ONE_EIGHTH
#define RXFIFO_IRQ_TRIGGER_LEVEL FIFO_LEVEL_ONE_HALF

#endif
```

Author: Ning Yang 2024-08-15T14:54:08.633Z

@gedare

Author: Gedare Bloom 2024-08-15T14:54:08.633Z

yes

Author: Gedare Bloom 2024-07-19T18:25:33.765Z

line length

Author: Ning Yang 2024-07-19T18:23:09.521Z

changed this line in version 33 of the diff

Author: Gedare Bloom 2024-07-19T18:25:45.480Z

declare all the variables at the start of the block.

Author: Ning Yang 2024-07-19T18:23:10.019Z

changed this line in version 33 of the diff

Author: Gedare Bloom 2024-07-19T18:25:50.579Z

line length. Better to do like `err = arm_...; if (err != 0)`

Author: Ning Yang 2024-07-19T18:23:10.756Z

changed this line in version 33 of the diff

Author: Gedare Bloom 2024-07-19T18:25:59.083Z

this helper function is pretty long. consider refactoring to add more helpers

Author: Ning Yang 2024-07-19T18:23:11.246Z

changed this line in version 33 of the diff

Author: Gedare Bloom 2024-08-18T18:39:47.511Z

why only `const` with interrupts?

Author: Ning Yang 2024-08-18T18:39:47.511Z

`#ifndef` is used here.

because the next line `context->tty = tty;` needs to modify tty and `const` cannot be used.

Author: Ning Yang 2024-08-18T18:39:47.511Z

@gedare

Author: Gedare Bloom 2024-08-18T18:39:47.511Z

remove the `const`.

Author: Ning Yang 2024-08-18T18:38:39.074Z

changed this line in version 38 of the diff

Author: Gedare Bloom 2024-07-19T18:26:08.956Z

declare variables at start. these variables can be decld above in an `#ifdef`, or you might refactor this entire block of code within this `#ifdef` to a helper function

Author: Ning Yang 2024-07-19T18:23:12.524Z

changed this line in version 33 of the diff

Author: Gedare Bloom 2024-07-19T18:26:21.068Z

this block could also be `write_support_interrupt()`

Author: Gedare Bloom 2024-07-17T21:09:58.997Z

It's getting closer.

Author: Gedare Bloom 2024-07-17T21:09:59.056Z

requested changes

Author: Kinsey Moore 2024-07-19T12:51:22.534Z

added 6 commits

- 9fcc4f00...5c5b4b83 - 5 commits from branch `rtems/rtos:main`
- 8dd21298 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-07-19T18:23:12.923Z

added 2 commits

- a824ed6f - 1 commit from branch `rtems/rtos:main`
- 58220477 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-07-25T12:43:11.654Z

changed the description

Author: Kinsey Moore 2024-07-26T00:36:38.216Z

added 11 commits

- 58220477...8fd3ed26 - 10 commits from branch `rtems/rtos:main`
- 2061726a - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Kinsey Moore 2024-07-29T05:16:04.669Z

If I recall correctly, the reason to wrap the pl011 registers with a unique Versal struct was because there were additional registers beyond the base register set on some implementations, but I don't see those here. Did they get accidentally left out? If not, this does not need to be wrapped.

Author: Ning Yang 2024-07-29T05:16:04.669Z

https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/43#note_106149

Gedare said it would be cleaner.

Author: Kinsey Moore 2024-07-29T05:16:04.669Z

It's cleaner if you need to add more registers when implementations vary, but that's not happening here. That's why I'm asking if there are missing registers that were intended to be used.

Author: Ning Yang 2024-07-29T05:17:33.714Z

changed this line in version 36 of the diff

Author: Ning Yang 2024-07-29T05:15:50.876Z

added 1 commit

- 549e2e06 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-07-29T05:17:33.933Z

added 1 commit

- adf3b551 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Kinsey Moore 2024-07-31T15:18:44.671Z

added 11 commits

- adf3b551...30ae3ef9 - 10 commits from branch `rtems/rtos:main`
- 665a59b9 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Gedare Bloom 2024-08-21T08:31:58.856Z

I think these functions / this file should have doxygen comments.

Author: Gedare Bloom 2024-08-23T17:39:11.341Z

I think this object is only used in the `arm-pl011.c` file. Avoid declaring a global symbol here, and instead declare it in that file (with `static`). It is good practice to reduce the number of global symbols.

Author: Ning Yang 2024-08-23T17:39:11.341Z

The variable `arm_pl011_fns` needs to be used in the `console.c` file of BSP. such as: rtems/bsps/aarch64/a53/console/console.c line56

Author: Gedare Bloom 2024-08-18T18:40:00.273Z

I don't think `volatile` is needed for any of these uses of `pl011_base`.

Author: Ning Yang 2024-08-18T18:38:40.142Z

changed this line in version 38 of the diff

Author: Gedare Bloom 2024-08-18T18:40:13.145Z

This function should just be: `return ((arm_pl011_context *)base)->regs`

Author: Ning Yang 2024-08-18T18:38:40.449Z

changed this line in version 38 of the diff

Author: Gedare Bloom 2024-08-18T18:40:17.887Z

remove `const` and let the compiler figure it out on its own.

Author: Ning Yang 2024-08-18T18:38:40.734Z

changed this line in version 38 of the diff

Author: Gedare Bloom 2024-08-18T18:40:25.456Z

Do not declare variables inside blocks like this. Prefer to declare at the start of the block, or usually the start of the function.

Author: Ning Yang 2024-08-18T18:38:41.014Z

changed this line in version 38 of the diff

Author: Gedare Bloom 2024-08-18T18:40:33.045Z

can merge this: `uint32_t lcrh = PL011_UARTLCR_H_FEN;`

Author: Ning Yang 2024-08-18T18:38:41.293Z

changed this line in version 38 of the diff

Author: Gedare Bloom 2024-08-18T18:40:38.617Z

shouldn't all these be `|=` not `=`? Otherwise you are destroying the above `lcrh` How do you test this?

Author: Ning Yang 2024-08-18T18:40:38.617Z

bsps/aarch64/xilinx-versal/dev/serial/versal-uart.c line312 It also uses =.

I think `PL011_UARTLCR_H_WLEN_SET` will retain the original value of `lcrh`.

Author: Ning Yang 2024-08-18T18:38:41.659Z

changed this line in version 38 of the diff

Author: Gedare Bloom 2024-08-18T18:41:33.250Z

I would eliminate the local variable and write this like the above lines:

```
if ((term->c_cflag & CREAD) != 0)
cr |= PL011_UARTCR_UARTEN | PL011_UARTCR_TXE;
```

Author: Gedare Bloom 2024-08-18T18:41:37.546Z

don't merge lines

Author: Ning Yang 2024-08-18T18:38:42.316Z

changed this line in version 38 of the diff

Author: Gedare Bloom 2024-08-18T18:41:42.632Z

here you need `volatile`.

Author: Ning Yang 2024-08-18T18:38:42.941Z

changed this line in version 38 of the diff

Author: Gedare Bloom 2024-08-18T18:42:04.462Z

this is casting a `char` to an `int`, it will get sign extension if it can be extended ASCII or UTF-8. confirm this is not possible, or fix it.

Author: Ning Yang 2024-08-18T18:38:43.279Z

changed this line in version 38 of the diff

Author: Gedare Bloom 2024-08-18T18:42:37.900Z

this does need `volatile`.

Author: Ning Yang 2024-08-18T18:38:43.575Z

changed this line in version 38 of the diff

Author: Gedare Bloom 2024-08-18T18:43:02.415Z

variable name, `buffer_len` or similar is better.

Author: Ning Yang 2024-08-18T18:38:43.878Z

changed this line in version 38 of the diff

Author: Gedare Bloom 2024-08-18T18:43:09.756Z

these do need `volatile`

Author: Ning Yang 2024-08-18T18:38:44.166Z

changed this line in version 38 of the diff

Author: Gedare Bloom 2024-08-15T15:32:08.271Z

requested changes

Author: Ning Yang 2024-08-18T18:38:44.345Z

added 76 commits

- 665a59b9...606584d0 - 75 commits from branch `rtems/rtos:main`
- e2d220af - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-08-20T15:41:50.296Z

added 1 commit

- 91244671 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-08-20T15:57:39.604Z

Hi @gedare,

I reduced the use of `volatile` as much as possible. And finally found that it is necessary for the following functions to use `volatile`:

`arm_pl011_write_char` : If there is no `volatile`, there will be problems with the output of printf.

`arm_pl011_is_rxfifo_empty`

`arm_pl011_is_txfifo_full`

```
/*
* Wait for any data in the TXFIFO to be sent then wait while the
* transmiter is active.
*/
while (
(((volatile arm_pl011_uart *) regs)->base.uartfr &
PL011_UARTFR_TXFE) == 0 ||
(((volatile arm_pl011_uart *) regs)->base.uartfr &
PL011_UARTFR_BUSY) != 0
) {
/* Wait */
}
```

Author: Ning Yang 2024-08-21T08:31:56.671Z

added 1 commit

- ce4b4da1 - dev/serial: Add doxygen comments for arm-pl011

Compare with previous version

Author: Joel Sherrill 2024-08-23T17:38:36.345Z

added 21 commits

- ce4b4da1...c2b3a517 - 19 commits from branch `rtems/rtos:main`
- e3b5df09 - dev/serial: Refactor the pl011 driver
- 38e453c5 - dev/serial: Add doxygen comments for arm-pl011

Compare with previous version

Author: Joel Sherrill 2024-08-23T17:39:11.373Z

resolved all threads

Author: Joel Sherrill 2024-08-23T17:39:27.875Z

approved this merge request

Author: Kinsey Moore 2024-08-28T14:49:19.314Z

There are a lot of places where you're casting to volatile on accesses instead of making variables volatile. The variables themselves should be volatile when possible to reduce the chance that someone forgets to cast the pointer before using it to access struct-mapped fields.

Author: Ning Yang 2024-08-27T15:52:48.447Z

changed this line in version 42 of the diff

Author: Ning Yang 2024-08-28T14:49:19.314Z

If I add `volatile` in this line, the parameters of functions `arm_pl011_enable_irq` and `arm_pl011_clear_irq` must also be added volatile(Otherwise the compiler will issue a warning), which is unnecessary.

Only in these position `volatile` is necessary: https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/47#note_111352

Add `volatile` to them all?

Author: Kinsey Moore 2024-08-28T14:49:19.314Z

@gedare I would argue that anything that directly represents memory-mapped registers and makes it trivial to access them should always be marked as volatile to avoid cases where volatile needs to get applied and it's forgotten. You seem to suggest otherwise in https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/47#note_111073

Author: Sebastian Huber 2024-08-28T14:49:19.314Z

Everything which points to device memory need to be volatile, so the `arm_pl011_get_regs()` should return a volatile pointer and all users should have this as well.

Author: Ning Yang 2024-08-27T15:52:48.609Z

resolved all threads

Author: Ning Yang 2024-08-27T15:52:48.637Z

added 1 commit

- 4144cf81 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-08-27T15:53:04.776Z

reset approvals from @joel by pushing to the branch

Author: Ning Yang 2024-08-27T15:54:49.926Z

added 1 commit

- 35f73521 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-08-27T16:08:41.067Z

added 2 commits

- 91244671 - dev/serial: Refactor the pl011 driver
- ce4b4da1 - dev/serial: Add doxygen comments for arm-pl011

Compare with previous version

Author: Ning Yang 2024-08-28T14:49:19.348Z

resolved all threads

Author: Ning Yang 2024-08-28T14:49:25.235Z

added 1 commit

- 60063358 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Kinsey Moore 2024-08-28T15:22:06.735Z

There are many instances in new code like this where there is a single statement in an if block and the braces are omitted. These all need braces added to them.

Author: Ning Yang 2024-08-28T15:22:06.735Z

Done

Author: Ning Yang 2024-08-28T15:21:36.361Z

added 1 commit

- 543c4f4f - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-08-28T15:21:36.518Z

resolved all threads

Author: Ning Yang 2024-08-28T15:22:06.777Z

resolved all threads

Author: Kinsey Moore 2024-08-28T18:18:32.192Z

You got the vast majority of them, but it looks like you missed this one.

Author: Kinsey Moore 2024-08-28T18:18:36.857Z

This should use braces and a comment instead of ';' to indicate an intentional empty loop.

Author: Ning Yang 2024-08-28T18:17:51.987Z

changed this line in version 47 of the diff

Author: Kinsey Moore 2024-08-28T17:47:10.538Z

requested changes

Author: Ning Yang 2024-08-28T18:17:52.224Z

added 1 commit

- 3ab92038 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-08-28T18:18:36.889Z

resolved all threads

Author: Kinsey Moore 2024-09-05T18:25:59.990Z

approved this merge request

Author: Kinsey Moore 2024-09-05T18:26:03.497Z

added 46 commits

- 3ab92038...f61086a4 - 45 commits from branch `rtems/rtos:main`
- 704b7ed8 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Ning Yang 2024-09-11T11:51:50.801Z

requested review from @gedare

Author: Gedare Bloom 2024-09-14T20:57:36.867Z

removed review request for @chris

Author: Gedare Bloom 2024-09-14T21:03:13.843Z

added 22 commits

- 704b7ed8...333a1aee - 21 commits from branch `rtems/rtos:main`
- d9e05999 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Gedare Bloom 2024-09-18T19:30:13.221Z

approved this merge request

Author: Gedare Bloom 2024-09-18T19:30:42.618Z

added 10 commits

- d9e05999...d304a817 - 9 commits from branch `rtems/rtos:main`
- 0f421539 - dev/serial: Refactor the pl011 driver

Compare with previous version

Author: Sebastian Huber 2024-09-19T05:24:09.271Z

Several BSP don't build anymore:

```
bsps/shared/dev/serial/arm-pl011.c:113:15: error: 'ARM_PL011_FIFO_DEPTH
↪' undeclared (first use in this function)
113 |   char buffer[ARM_PL011_FIFO_DEPTH];
|               ^~~~~~~~~~~~~~~~~~~~
```

Author: Ning Yang 2024-09-19T05:24:09.271Z

The following BSPs use the arm-pl011 driver, and they can all be built successfully.

```
[aarch64/raspberrypi4b]

[aarch64/a53_lp64_qemu]

[aarch64/a72_lp64_qemu]

[aarch64/xilinx_versal_qemu]

[arm/raspberrypi]

[arm/realview_pbx_a9_qemu]

[arm/xen_virtual]
```

Author: Ning Yang 2024-09-19T05:24:09.271Z

!228

Author: Ning Yang 2024-09-19T05:24:09.305Z

resolved all threads

3.9.2.107 199 - dev/serial/zynq: Improve baud calculation and simplify code

Id	199
State	merged
Merged by	Amar Takhar
Merged at	2024-09-17T18:18:57.409Z
Assignee(s)	Sebastian Huber
Created	2024-08-29T02:14:19.213Z
Updated	2024-09-17T18:19:00.541Z
Milestone	6.1
Labels	bsp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/199
Commit	d304a817db120a28fc82efda288bd5da3ab3574a

Summary

This patch removes unnecessary actions from the dev/serial/zynq driver. It also improves the baud calculation.

Author: Sebastian Huber 2024-08-29T02:14:19.309Z

assigned to @sebhub

Author: Amar Takhar 2024-08-29T02:34:16.404Z

Is there an MR or issue that can be linked for the change to `tms570-sci.c`? Easier to keep track then thanks.

Author: Sebastian Huber 2024-08-29T02:34:16.404Z

I picked up this patch from January as is. It is not from me.

Author: Amar Takhar 2024-08-29T02:34:16.404Z

No worries I was hoping you knew if there was a ticket/issue of course there wouldn't be an MR from January. Thanks.

Author: Amar Takhar 2024-08-29T02:34:16.424Z

resolved all threads

Author: Sebastian Huber 2024-08-31T06:30:52.907Z

added 9 commits

- aeee7db3 - bsps/shared/zynq-uart-polled: fix bug in zynq_uart_initialize()
- c4495c53 - dev/serial: Use _IO_Relax()
- 2fe33669 - dev/serial: Do not output 'r' during reset
- 6b329097 - dev/serial: Simplify zynq_uart_reset_tx_flush()
- 2ab0fbd3 - doxygen: Add console drivers group
- b4a6f7f6 - dev/serial: Rework Zynq UART Doxygen groups
- 5818c6a4 - dev/serial: Rework Zynq UART baud calculation
- 6a7321bf - dev/serial: Optimize Zynq UART control reg writes
- 7be3a222 - dev/serial: Move zynq_uart_input_clock()

Compare with previous version

Author: Sebastian Huber 2024-08-31T06:33:21.192Z

changed title from **{-bsps/shared/zynq-uart-polled: fix bug in zynq_uart_initialize()-}** to **{+dev/serial/zynq: Improve baud calculation and simplify code+}**

Author: Sebastian Huber 2024-08-31T06:33:21.218Z

changed the description

Author: Chris Johns 2024-09-17T03:28:20.781Z

The commit comment is correct. It should be noted the flush sending the data worked around an issue or bug in the Versal UART related to how our termios works. With interrupts active our code assumes an TX interrupt can be triggered by a single termios character write to a TX holding or shift register. The Versal UART with a FIFO mod to the ARM cell design required half the programmed FIFO to be filled to generate the first TX interrupt after which things worked normally. I reviewed the Linux driver and our driver and could not see any functional differences other than Linux sends a 10+ character string as its first boot message. I am fine with the send of the `\r` being removed from the TX flush but the commit comment and the change do not line up.

We should wait for all TX data to be sent before we touch the UART hardware and this means the TX shift register being empty. A deep FIFO may have data from the bootloader a user may be requited to see. Is there a TX flush before the UART hardware is touched?

Author: Sebastian Huber 2024-09-17T03:28:20.781Z

The `zynq_uart_initialize()` waits for the TX FIFO to be empty and TX to be inactive before it changes the settings. This patch removes code which was done after the settings were applied.

The patch is seven months old picked up from the mailing list. I would prefer to not change it just to get a better commit message.

Author: Chris Johns 2024-09-17T03:28:20.781Z

Is there a link to the mail? I cannot see it.

Author: Sebastian Huber 2024-09-17T03:28:20.781Z

https://lists.rtems.org/pipermail/devel/2024-January/077208.html

Author: Sebastian Huber 2024-09-17T03:28:20.781Z

Is there anything left to do with respect to this thread?

Author: Kinsey Moore 2024-09-17T01:53:48.660Z

It should be made clear that this is explicitly bit 0. I would suggest changing this to a boolean parameter and renaming it accordingly. The original code checked a specific bit where the new code uses this as a scaling factor for a bit shift which can be misleading.

Author: Sebastian Huber 2024-09-17T01:53:48.660Z

In the description we have: `@param mode_clks is the value of the CLKS bit of the Zynq UART mode register.`.

Using a bool just leads to more branches. I can add an `_Assert((mode_clks & ~ZYNQ_UART_MODE_CLKS) == 0)` to zynq_uart_calculate_baud().

Author: Sebastian Huber 2024-09-17T01:53:48.660Z

Also the callers of zynq_uart_calculate_baud() have to make sure that they write back the CLKS bit as is. I think with the assert, the code should be fine.

Author: Sebastian Huber 2024-09-17T01:53:48.660Z

@opticron Is the new _Assert() acceptable for you?

Author: Kinsey Moore 2024-09-17T01:53:48.660Z

A bool implicitly casts to 0 or 1, but the assert is acceptable.

Author: Sebastian Huber 2024-09-13T06:08:18.106Z

added 27 commits

- 7be3a222...ce1fb41a - 18 commits from branch `rtems/rtos:main`
- 1cb123f9 - bsps/shared/zynq-uart-polled: fix bug in zynq_uart_initialize()
- fdf9670b - dev/serial: Use _IO_Relax()
- 41fd8a4d - dev/serial: Do not output 'r' during reset
- e306972b - dev/serial: Simplify zynq_uart_reset_tx_flush()
- 7b9cb9a9 - doxygen: Add console drivers group
- e1d860cd - dev/serial: Rework Zynq UART Doxygen groups
- 509c8bb4 - dev/serial: Rework Zynq UART baud calculation
- e322ea19 - dev/serial: Optimize Zynq UART control reg writes
- ab02d63a - dev/serial: Move zynq_uart_input_clock()

Compare with previous version

Author: Sebastian Huber 2024-09-17T01:54:12.507Z

added 14 commits

- ab02d63a...333a1aee - 5 commits from branch `rtems/rtos:main`

- 7be49773 - bsps/shared/zynq-uart-polled: fix bug in zynq_uart_initialize()
- a078b091 - dev/serial: Use _IO_Relax()
- 67576071 - dev/serial: Do not output 'r' during reset
- 5d8d55a1 - dev/serial: Simplify zynq_uart_reset_tx_flush()
- cf47b09c - doxygen: Add console drivers group
- 6efbf0c7 - dev/serial: Rework Zynq UART Doxygen groups
- ff9b19ad - dev/serial: Rework Zynq UART baud calculation
- 3fe69b03 - dev/serial: Optimize Zynq UART control reg writes
- d304a817 - dev/serial: Move zynq_uart_input_clock()

Compare with previous version

Author: Kinsey Moore 2024-09-17T13:33:25.610Z

The previous implementation only checked bdiv=4 to bdiv=254. The new implementation checks up to bdiv=255. Was that an intentional change? The commit that makes this change is very similar in logic, but it is completely reorganized so I've had to spend quite a bit of time unwinding the modifications to verify what parts of the logic have changed.

Author: Sebastian Huber 2024-09-17T13:33:25.610Z

According to the TRM: `BDIV is a programmable field in the Baud Rate Divider register and can be programmed with a value between 4 and 255.`

Author: Sebastian Huber 2024-09-17T13:33:25.610Z

The key difference to the previous implementation is that the code is easier to test and that the function tries to yield a sample set around 16 per RX-bit.

Author: Chris Johns 2024-09-17T13:33:25.610Z

For clarification, does selecting a clock that gives around 16 samples per bit improves the noise immunity compared to a clock that is closer but has less samples per bit?

Author: Sebastian Huber 2024-09-17T13:33:25.610Z

The previous code just selected the best error. In the new code we have this:

```
1 /*
2 * The procedure to detect a start bit uses three samples in the middle␣
  ↪of
3 * an RX-bit.  If the sample set is too small, there may be a sample in
```

(continues on next page)

(continued from previous page)

```
* another bit in case the baud setting is not accurate.  Most noise is
↪in
* the form of small peaks, if the sample rate is too high, then noise
↪may
* get detected as a bit.
*
* Prefer an sample set of around 16 per RX-bit.
*/
if (error < best_error || (bdiv_plus_one <= 20 && error <= best_error))
↪{
best_error = error;
best_cd = cd;
best_bdiv_plus_one = bdiv_plus_one;
}
```

In my tests I got this on the ZCU104:

```
desired baud: 9600, actual baud: 9600, error 0, max error: 288, cd: 651,
↪ bdiv: 15
desired baud: 19200, actual baud: 19201, error 1, max error: 576, cd:
↪372, bdiv: 13
desired baud: 38400, actual baud: 38402, error 2, max error: 1152, cd:
↪186, bdiv: 13
desired baud: 57600, actual baud: 57603, error 3, max error: 1728, cd:
↪124, bdiv: 13
desired baud: 115200, actual baud: 115207, error 7, max error: 3456,
↪cd: 62, bdiv: 13
```

Author: Chris Johns 2024-09-17T13:33:25.610Z

Thanks. I will leave the thread for @opticron to resolve.

Author: Kinsey Moore 2024-09-17T13:33:25.629Z

resolved all threads

Author: Kinsey Moore 2024-09-17T13:33:32.971Z

approved this merge request

Author: Amar Takhar 2024-09-17T18:18:50.269Z

approved this merge request

3.9.2.108 212 - poll.h and sys/poll.h were in both RTEMS and Newlib

Id	212
State	merged
Merged by	Sebastian Huber
Merged at	2024-09-12T04:57:56.397Z
Assignee(s)	Joel Sherrill
Created	2024-09-11T16:44:13.760Z
Updated	2024-09-12T17:08:48.707Z
Milestone	6.1
Labels	api::posix
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/212
Commit	3aa1f1faeef9345929a3e3f550750601797cf32b

Summary

poll.h and sys/poll.h were in both RTEMS and Newlib

Remove the copies in RTEMS. Most POSIX headers are in Newlib.

CLoses #5126

Author: Joel Sherrill 2024-09-11T16:44:13.933Z

assigned to @joel

Author: Chris Johns 2024-09-11T21:37:41.849Z

approved this merge request

Author: Sebastian Huber 2024-09-12T04:57:39.241Z

approved this merge request

Author: Sebastian Huber 2024-09-12T04:57:46.499Z

added 4 commits

- fd311240...a9bff015 - 3 commits from branch `rtems/rtos:main`
- 3aa1f1fa - poll.h and sys/poll.h were in both RTEMS and Newlib

Compare with previous version

Author: Joel Sherrill 2024-09-12T17:08:48.440Z

mentioned in issue #5126

3.9.2.109 207 - bsps/i386/include/bsp/irq.h is pc386 specific

Id	207
State	merged
Merged by	Kinsey Moore
Merged at	2024-09-12T12:55:20.501Z
Assignee(s)	Joel Sherrill
Created	2024-09-09T22:28:14.729Z
Updated	2024-09-12T12:55:23.634Z
Milestone	6.1
Labels	bsp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/207
Commit	9d6f1710391a0bc0ef77b9dcc651d9fe9022fb41

Summary

bsps/i386/include/bsp/irq.h is pc386 specific

The IRQ list in this file are specific to PC hardware and should be part of the BSP. Further, there are paravirtualized environments which do not follow the PC hardware IRQ list. Moving this avoids collisions.

Author: Joel Sherrill 2024-09-09T22:28:14.889Z

assigned to @joel

Author: Sebastian Huber 2024-09-10T02:07:33.561Z

approved this merge request

Author: Amar Takhar 2024-09-10T02:44:32.227Z

approved this merge request

Author: Chris Johns 2024-09-11T22:00:33.101Z

Could the commit message please have a prefix on the first line, ie `bsp/i386: ...` ?

Author: Sebastian Huber 2024-09-12T04:58:17.923Z

added 8 commits

- 0b8ad646...3aa1f1fa - 7 commits from branch `rtems/rtos:main`
- 9d6f1710 - bsps/i386/include/bsp/irq.h is pc386 specific

Compare with previous version

Author: Kinsey Moore 2024-09-12T12:55:12.435Z

approved this merge request

3.9.2.110 187 - confdefs: Fix extensions.h

Id	187
State	merged
Merged by	Sebastian Huber
Merged at	2024-09-12T03:39:20.634Z
Assignee(s)	Sebastian Huber
Created	2024-08-14T03:10:25.286Z
Updated	2024-09-12T03:39:23.130Z
Milestone	6.1
Labels	cpukit, cpukit::misc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/187
Commit	a9bff015f68f571c2ee776d939c17f39602aff98

Summary

confdefs: Fix extensions.h

Resurrect proper file comment. Order copyrights according to template. Remove white space at the end of line. Do error checks early. Define objects under optional extern “C”.

Author: Sebastian Huber 2024-08-14T03:10:25.380Z

assigned to @sebhub

Author: Sebastian Huber 2024-08-14T04:44:13.740Z

added 3 commits

- a63aa377 - confdefs: Fix extensions.h
- c801324b - stackchk: Fix Doxygen file comment
- 5a7cc131 - stackchk: Avoid implementation header in API

Compare with previous version

Author: Sebastian Huber 2024-08-14T04:51:21.037Z

added 3 commits

- 6122314b - confdefs: Fix extensions.h
- 4f8ce213 - stackchk: Fix Doxygen file comment
- 31beeaeb - stackchk: Avoid implementation header in API

Compare with previous version

Author: Sebastian Huber 2024-08-14T23:42:39.826Z

mentioned in merge request !86

Author: Sebastian Huber 2024-08-16T02:25:22.564Z

mentioned in merge request !190

Author: Joel Sherrill 2024-08-16T15:21:13.630Z

This is a sentence not a Table of Contents style entry.

Author: Joel Sherrill 2024-08-16T15:20:56.120Z

You still need the @brief

Author: Joel Sherrill 2024-09-12T02:31:47.127Z

This is not a proper brief. It should be a Table of Contents entry.

Author: Sebastian Huber 2024-09-12T02:31:47.127Z

The `@brief` comments should be proper sentences and not just head lines. In particular for `@file` blocks, see also the Doxygen guidelines:

https://docs.rtems.org/branches/master/eng/coding-doxygen.html#files

I spent a considerable amount of time to add these `@file` comments to quite a lot of files and it would be really nice if my work doesn't get reverted.

Author: Mohamed Hassan 2024-09-12T02:31:47.127Z

@sebhub I made the required changes following the Doxygen guidelines. Should I issue a separate merge request or you could pull these updates to your branch?

Author: Sebastian Huber 2024-09-12T02:31:47.127Z

Since this MR is older, I would prefer to merge it first and then you can rebase your MR.

Author: Mohamed Hassan 2024-09-12T02:31:47.127Z

Ok, whenever it's got merged. I will submit these changes.

Author: Amar Takhar 2024-09-12T02:26:12.378Z

approved this merge request

Author: Amar Takhar 2024-09-12T02:26:20.565Z

added 59 commits

- 31beeaeb...d670dafa - 56 commits from branch `rtems/rtos:main`
- 5b1c17f8 - confdefs: Fix extensions.h
- 4abed2b4 - stackchk: Fix Doxygen file comment
- a9bff015 - stackchk: Avoid implementation header in API

Compare with previous version

Author: Joel Sherrill 2024-09-12T02:31:47.147Z

resolved all threads

Author: Joel Sherrill 2024-09-12T02:31:53.104Z

approved this merge request

3.9.2.111 209 - score/cpu/arm/cpu.c: Fine tune paravirtualization for interrupt set/get level

Id	209
State	merged
Merged by	Amar Takhar
Merged at	2024-09-10T02:45:29.059Z
Assignee(s)	Joel Sherrill
Created	2024-09-09T23:57:19.855Z
Updated	2024-09-10T02:45:30.840Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/209
Commit	fe6b7bc3cbba204444d12b8d9d192035b2a26051

Summary

Ensure _ISR_Set_level() and _ISR_Get_level() can be overridden when paravirtualized.

Author: Joel Sherrill 2024-09-09T23:57:20.036Z

assigned to @joel

Author: Sebastian Huber 2024-09-10T02:02:35.561Z

approved this merge request

Author: Amar Takhar 2024-09-10T02:45:18.833Z

added 2 commits

- f075fa55 - 1 commit from branch `rtems/rtos:main`
- fe6b7bc3 - score/cpu/arm/cpu.c: Fine tune paravirtualization for interrupt set/get level

Compare with previous version

Author: Amar Takhar 2024-09-10T02:45:24.643Z

approved this merge request

3.9.2.112 208 - spmsgq_err[12]: Add message sizes to configuration

Id	208
State	merged
Merged by	Amar Takhar
Merged at	2024-09-10T02:44:53.698Z
Assignee(s)	Joel Sherrill
Created	2024-09-09T23:52:20.828Z
Updated	2024-09-10T02:44:56.036Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/208
Commit	f075fa55cd89efe32547c8558f23d616b3d9ad4d

Summary

spmsgq_err[12]: Add message sizes to configuration

The test had hard-coded numbers for maximum messages and message sizes. As a result, it did not configure the memory required for message storage.

Author: Joel Sherrill 2024-09-09T23:52:20.983Z

assigned to @joel

Author: Sebastian Huber 2024-09-10T02:05:36.097Z

If MAX_MESSAGES == 2, then this changes the test case.

Author: Sebastian Huber 2024-09-10T02:05:36.097Z

Ok, probably doesn't matter for the error conditions checked.

Author: Sebastian Huber 2024-09-10T02:05:36.129Z

resolved all threads

Author: Sebastian Huber 2024-09-10T02:06:04.691Z

approved this merge request

Author: Amar Takhar 2024-09-10T02:44:49.223Z

approved this merge request

3.9.2.113 204 - stm32h7: Resolve warnings and add SPI support

Id	204
State	merged
Merged by	Amar Takhar
Merged at	2024-09-06T01:15:37.993Z
Assignee(s)	Kinsey Moore
Created	2024-09-04T18:18:19.487Z
Updated	2024-09-09T18:45:47.967Z
Milestone	6.1
Labels	arch:arm, device::spi
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/204
Commit	6dee3075426b65d830e8e9957f8a1b644825934a

This patch set resolves several warnings (mostly specific to stm32h7 or ARMv7m) and adds SPI support with an example configuration for SPI2 on the stm32h750b-dk development board on the STMOD+ header.

Author: Kinsey Moore 2024-09-04T18:18:20.158Z

assigned to @opticron

Author: Sebastian Huber 2024-09-05T14:20:52.720Z

I am a bit surprised that this fixes the warning. We have RTEMS_DECONST() to get rid of it.

Author: Kinsey Moore 2024-09-05T14:20:52.720Z

I'll adjust these changes to use RTEMS_DECONST().

Author: Sebastian Huber 2024-09-05T14:38:30.221Z

Should this be also under `#ifdef SPI2`?

I only briefly reviewed the rest. I found nothing obvious.

Author: Kinsey Moore 2024-09-05T14:38:30.221Z

I'll gate it behind STM32H7_SPI2_ENABLE. SPI2 is a CPU variant definition and is guaranteed to exist on this board.

Author: Kinsey Moore 2024-09-05T14:38:25.571Z

changed this line in version 3 of the diff

Author: Kinsey Moore 2024-09-05T14:20:17.845Z

added 4 commits

- afde31f6 - bsps/stm32h7: Resolve HAL const warning
- 67ff9631 - bsps/arm/irq: Avoid array comparison
- 45187206 - cpukit/stackchk: Explicitly cast from void* to uintptr_t
- 8e53488c - bsps/stm32h7: Add SPI support

Compare with previous version

Author: Kinsey Moore 2024-09-05T14:38:25.937Z

added 1 commit

- d64ddbed - bsps/stm32h7: Add SPI support

Compare with previous version

Author: Kinsey Moore 2024-09-05T14:38:30.243Z

resolved all threads

Author: Sebastian Huber 2024-09-06T00:53:00.379Z

approved this merge request

Author: Amar Takhar 2024-09-06T01:15:26.416Z

added 6 commits

- acd2a24d - 1 commit from branch `rtems/rtos:main`
- 31d2a2ac - bsps/stm32h7: Resolve warning due to missing prototype
- 5b13baf9 - bsps/stm32h7: Resolve HAL const warning
- 243f8899 - bsps/arm/irq: Avoid array comparison
- bcf0cee5 - cpukit/stackchk: Explicitly cast from void* to uintptr_t
- 6dee3075 - bsps/stm32h7: Add SPI support

Compare with previous version

Author: Amar Takhar 2024-09-06T01:15:33.962Z

approved this merge request

Author: Cedric Berger 2024-09-09T18:45:47.928Z

Hello Kinsey, thanks for doing that. I'm in the train reading your patch, `stm32h7_spi_transfer()` specifically, and I've one comment: SPI can be full-duplex, And I think you don't handle the case where both a TX and RX buffer are provided. In that function, if `(msg->rx_buf != NULL && msg->tx_buf != NULL)`, then you should call `HAL_SPI_TransmitReceive()`, and not `HAL_SPI_Transmit()` followed by `HAL_SPI_Receive()`

Author: Kinsey Moore 2024-09-09T18:45:47.928Z

Good catch! I have some more work to do related to the DMA engines, so I'll include this in my next patch set.

Author: Kinsey Moore 2024-09-09T18:45:47.948Z

resolved all threads

3.9.2.114 188 - cpukit/posix/aio*: Implemented lio_listio()

Id	188
State	merged
Merged by	Amar Takhar
Merged at	2024-09-02T20:02:48.188Z
Created	2024-08-14T12:56:48.174Z
Updated	2024-09-05T19:54:17.918Z
Milestone	6.1
Labels	cpukit, posix
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/188
Commit	1b6684ee2bc2320327b56d5ed090d6f7a6e82d61

Summary

Implemented lio_listio() and added a test (psxaio05) to verify the new code is working. To avoid duplicating too much code, the content of aio_read() and aio_write() has been extracted in two helper methods so that it can be used in lio_listio().

Updates rtems/programs/gsoc#29+

Author: Alessandro Nardin 2024-08-14T13:06:34.286Z

added 1 commit

- d5a0173f - corrected formatting errors is lio_listio()

Compare with previous version

Author: Joel Sherrill 2024-08-16T15:24:45.838Z

changed title from **Draft: cpukit/posi{-z-}/aio*: Implemented lio_listio()** to **Draft: cpukit/posi{+x+}/aio*: Implemented lio_listio()**

Author: Alessandro Nardin 2024-08-17T20:05:17.026Z

added 2 commits

- 6bdcdc40 - formatting
- a16a84e9 - added limit RTEMS_AIO_MAX

Compare with previous version

Author: Alessandro Nardin 2024-08-18T15:31:36.926Z

added 10 commits

- 606584d0 - 1 commit from branch `rtems/rtos:main`
- dd69043d - fist commit lio listio

- 73d5fe4b - modified list io
- 7f185407 - structure of lioi_listio() complete
- f170eca1 - other changes to lio_listio()
- 7cdc1ae8 - added test draft
- d0b4489e - additions to lio_listio
- 649f0d66 - corrected formatting errors is lio_listio()
- ed021c1b - formatting
- a785f5a0 - added limit RTEMS_AIO_MAX

Compare with previous version

Author: Alessandro Nardin 2024-08-20T14:06:48.351Z

added 1 commit

- ca8e32bf - small corrections and test modification

Compare with previous version

Author: Alessandro Nardin 2024-08-20T15:48:49.323Z

added 1 commit

- bef42e50 - working, if switch error

Compare with previous version

Author: Alessandro Nardin 2024-08-22T13:38:12.550Z

added 1 commit

- 068a3f51 - changed notification method to deliver event when mode=WAIT

Compare with previous version

Author: Alessandro Nardin 2024-08-28T20:35:18.806Z

added 55 commits

- 068a3f51...cb0a5305 - 42 commits from branch `rtems/rtos:main`
- cb0a5305...19a5cb19 - 3 earlier commits
- 0476466d - other changes to lio_listio()
- 6da88d91 - added test draft
- 365fab96 - additions to lio_listio
- 12e94636 - corrected formatting errors is lio_listio()

- cf7f299f - formatting
- f3be7bc9 - added limit RTEMS_AIO_MAX
- 7f3248f8 - small corrections and test modification
- ef8f1d95 - working, if switch error
- 24be0e1e - changed notification method to deliver event when mode=WAIT
- b83a5b1d - test not working

Compare with previous version

Author: Alessandro Nardin 2024-08-31T15:43:05.311Z

added 1 commit

- 76c0abd5 - test now working

Compare with previous version

Author: Joel Sherrill 2024-09-01T12:28:07.737Z

Include of config.h should always be first.

Author: Alessandro Nardin 2024-09-01T12:28:07.737Z

corrected

Author: Joel Sherrill 2024-09-01T22:16:53.942Z

Make sure braces are consistently used

Author: Joel Sherrill 2024-09-02T08:54:57.638Z

Could the be bad

Author: Alessandro Nardin 2024-09-02T08:54:57.638Z

I'm not sure if this is what you meant, but here, mode can only be LIO_WAIT or LIO_NOWAIT. I've added a check at the beginning of the function that returns an error if mode is not one of those values.

Author: Joel Sherrill 2024-09-02T08:54:57.638Z

OK. Make sure you have test cases for bad values and then mark this resolved.

Author: Joel Sherrill 2024-09-01T12:28:32.545Z

Space before brace

Author: Alessandro Nardin 2024-09-01T12:27:23.093Z

changed this line in version 10 of the diff

Author: Alessandro Nardin 2024-09-01T12:28:32.545Z

corrected

Author: Joel Sherrill 2024-09-01T12:28:50.318Z

Again

Author: Alessandro Nardin 2024-09-01T12:27:23.490Z

changed this line in version 10 of the diff

Author: Alessandro Nardin 2024-09-01T12:28:50.318Z

corrected

Author: Joel Sherrill 2024-09-01T22:14:25.935Z

Again on the can of be a bad value

Author: Joel Sherrill 2024-09-01T22:16:44.749Z

Break each test case info a subroutine. It helps readability

Author: Alessandro Nardin 2024-09-01T12:27:24.280Z

changed this line in version 10 of the diff

Author: Alessandro Nardin 2024-09-01T12:27:24.506Z

added 16 commits

- ad51286e - 1 commit from branch `rtems/rtos:main`
- ad51286e...52408368 - 5 earlier commits

- cd62a01a - additions to lio_listio
- ce058885 - corrected formatting errors is lio_listio()
- 42c63601 - formatting
- a028d193 - added limit RTEMS_AIO_MAX
- 794f0d2f - small corrections and test modification
- 7bfb0357 - working, if switch error
- 9333e75b - changed notification method to deliver event when mode=WAIT
- e1dde3a0 - test not working
- 7f77e6c6 - test now working
- 64f8921f - divided test in subroutines and corrected formatting errors

Compare with previous version

Author: Joel Sherrill 2024-09-02T08:55:23.047Z

We are not reliable about this in the tests but all these can be static.

We should be reliable making things static in cpukit/. At least I hope so.

Author: Alessandro Nardin 2024-09-02T08:55:23.047Z

I made all the functions in all the tests static.

Author: Alessandro Nardin 2024-09-02T08:55:39.170Z

changed this line in version 11 of the diff

Author: Alessandro Nardin 2024-09-02T08:55:23.070Z

resolved all threads

Author: Alessandro Nardin 2024-09-02T08:55:39.382Z

added 6 commits

- b22f6b19 - made functions in posixaio05 static
- 83ff5105 - made functions in posixaio04 static
- 6111a697 - made functions static in posixaio03
- d3c3de75 - made functions static in psxaio02
- 8295b7e3 - made functions in psxaio01 static
- 3dea9aa8 - modification test 5

Compare with previous version

Author: Alessandro Nardin 2024-09-02T09:34:44.512Z

added 2 commits

- 60240343 - added doxygen comment for lio_listio and corrected some formatting in aio.h
- 1820ffd8 - freed aiocb in the end of test 4

Compare with previous version

Author: Alessandro Nardin 2024-09-02T09:54:43.728Z

added 1 commit

- d48050cf - cpukit/posix/aio*: Added support for lio_listio()

Compare with previous version

Author: Alessandro Nardin 2024-09-02T10:00:26.546Z

added 1 commit

- 52db4b13 - cpukit/posix/aio*: Added support for lio_listio()

Compare with previous version

Author: Alessandro Nardin 2024-09-02T10:03:21.812Z

I resolved all the threads and squashed all in one commit. I realized i forgot to update the doxygen comments in aio.h so i did that.

Author: Alessandro Nardin 2024-09-02T10:03:32.818Z

marked this merge request as **ready**

Author: Alessandro Nardin 2024-09-02T10:06:25.813Z

added 1 commit

- e3ae456e - cpukit/posix/aio*: Added support for lio_listio()

Compare with previous version

Author: Alessandro Nardin 2024-09-02T10:07:53.552Z

added 1 commit

- 64321e74 - cpukit/posix/aio*: Added support for lio_listio()

Compare with previous version

Author: Alessandro Nardin 2024-09-02T10:10:03.422Z

added 1 commit

- 19e05b6a - cpukit/posix/aio*: Added support for lio_listio()

Compare with previous version

Author: Joel Sherrill 2024-09-02T17:22:10.154Z

Please fix the commit message for length and cross-linking an issue per GitLab format not a URL. See https://docs.gitlab.com/ee/user/project/issues/related_issues.html for help with the cross linking.

Author: Alessandro Nardin 2024-09-02T17:21:42.258Z

added 1 commit

- 1b6684ee - cpukit/posix/aio*: Added support for lio_listio()

Compare with previous version

Author: Alessandro Nardin 2024-09-02T17:21:57.717Z

changed the description

Author: Alessandro Nardin 2024-09-02T17:22:10.174Z

resolved all threads

Author: Joel Sherrill 2024-09-02T19:41:05.166Z

approved this merge request

Author: Amar Takhar 2024-09-02T20:02:42.485Z

approved this merge request

Author: Alessandro Nardin 2024-09-03T09:45:06.876Z

mentioned in merge request rtems/docs/rtems-docs!44

Author: Alessandro Nardin 2024-09-03T09:46:44.231Z

mentioned in commit AlessandroNardin/rtems-docs@f00bf92f8d3693eb39e7dff81b09ac0f38e4a1bc

Author: Alessandro Nardin 2024-09-04T09:46:20.185Z

mentioned in commit AlessandroNardin/rtems-docs@971e7f0c7b10939725d17fd516e79e727df87596

Author: Sebastian Huber 2024-09-05T00:07:40.745Z

@joel @amar We don't have a CI system to check for obvious errors. Before you approve and merge changes, please build the MR branch yourself in the default configuration with all tests and the configuration related to the changes. If you would have done this, you would have found this build error:

```
Waf: Entering directory `/home/EB/sebastian_h/src/rtems/build/arm/xilinx_zynq_a9_qemu'
[3208/4549] Linking build/arm/xilinx_zynq_a9_qemu/testsuites/psxtests/psxenosys.exe
/opt/rtems/6/lib/gcc/arm-rtems6/13.3.0/../../../../arm-rtems6/bin/ld: ./librtemscpu.a(lio_listio.c.65.o): in function `lio_listio':
/home/EB/sebastian_h/src/rtems/build/arm/xilinx_zynq_a9_qemu/../../../cpukit/posix/src/lio_listio.c:105:(.text.lio_listio+0x66): undefined reference to `rtems_aio_check_sigevent'
/opt/rtems/6/lib/gcc/arm-rtems6/13.3.0/../../../../arm-rtems6/bin/ld: /home/EB/sebastian_h/src/rtems/build/arm/xilinx_zynq_a9_qemu/../../../cpukit/posix/src/lio_listio.c:148:(.text.lio_listio+0x8e): undefined reference to `init_write_req'
/opt/rtems/6/lib/gcc/arm-rtems6/13.3.0/../../../../arm-rtems6/bin/ld: /home/EB/sebastian_h/src/rtems/build/arm/xilinx_zynq_a9_qemu/../../../cpukit/posix/src/lio_listio.c:158:(.text.lio_listio+0x9c): undefined reference to `rtems_aio_enqueue'
/opt/rtems/6/lib/gcc/arm-rtems6/13.3.0/../../../../arm-rtems6/bin/ld: /home/EB/sebastian_h/src/rtems/build/arm/xilinx_zynq_a9_qemu/../../../cpukit/posix/src/lio_listio.c:125:(.text.lio_listio+0xd0): undefined reference to `init_read_req'
/opt/rtems/6/lib/gcc/arm-rtems6/13.3.0/../../../../arm-rtems6/bin/ld: /home/EB/sebastian_h/src/rtems/build/arm/xilinx_zynq_a9_qemu/../../../cpukit/posix/src/lio_listio.c:171:(.text.lio_listio+0x10c): undefined reference to `rtems_aio_completed_list_op'
/opt/rtems/6/lib/gcc/arm-rtems6/13.3.0/../../../../arm-rtems6/bin/ld: /home/EB/sebastian_h/src/rtems/build/arm/xilinx_zynq_a9_qemu/../../../cpukit/posix/src/lio_listio.c:84:(.text.lio_listio+0x1d8): undefined reference to `aio_request_queue'
collect2: error: ld returned 1 exit status

Waf: Leaving directory `/home/EB/sebastian_h/src/rtems/build/arm/xilinx_zynq_a9_qemu'
```

(continues on next page)

(continued from previous page)

```
Build failed
-> task in 'testsuites/psxtests/psxenosys.exe' failed with exit status 1 (run with -v to display more information)
```

Running the tests and check for regressions would be also quite nice.

Author: Amar Takhar 2024-09-05T10:36:42.358Z

@AlessandroNardin Can you please open an issue for this and figure out what went wrong? Thank you.

Author: Alessandro Nardin 2024-09-05T10:37:02.036Z

I'll look into it. I built the project using sparc/erc32 before submitting the changes, and everything was working correctly. I'll try with a different architecture to see if I can reproduce the error.

Also, I didn't notice it before, but I should also remove the call to lio_listio() form the psxenosys test, since it has been implemented. I'll also open an issue for that.

Author: Amar Takhar 2024-09-05T19:54:17.804Z

mentioned in issue #5125

3.9.2.115 128 - cpukit/posix/aio*: added support for O_DSYNC

Id	128
State	merged
Merged by	Amar Takhar
Merged at	2024-08-02T20:03:22.789Z
Created	2024-07-25T15:55:00.457Z
Updated	2024-09-04T09:46:20.170Z
Milestone	6.1
Labels	api::posix, cpukit, posix
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/128
Commit	adce3801380af04c5a70dec734bd41085f0b22ca

Summary

cpukit/posix/aio*: added support for O_DSYNC

The aio_fsync function now supports the value O_DSYNC for op. Tests are added to improve coverage and test new features.

Closes #5040.

Author: Alessandro Nardin 2024-07-25T18:27:34.502Z

added 2 commits

- 1fe3d396 - 1 commit from branch `rtems/rtos:main`
- 50b750a4 - cpukit/posix/aio*: added support for O_DSYNC

Compare with previous version

Author: Kinsey Moore 2024-07-26T09:36:16.928Z

Braces.

Author: Alessandro Nardin 2024-07-26T09:36:16.928Z

added

Author: Alessandro Nardin 2024-07-30T09:29:20.224Z

changed this line in version 8 of the diff

Author: Kinsey Moore 2024-07-26T00:06:24.313Z

requested changes

Author: Alessandro Nardin 2024-07-26T09:36:10.019Z

added 1 commit

- 1d62553c - cpukit/posix/aio*: added support for O_DSYNC

Compare with previous version

Author: Alessandro Nardin 2024-07-26T09:36:16.949Z

resolved all threads

Author: Kinsey Moore 2024-07-26T13:50:32.945Z

added 5 commits

- 1d62553c...8fd3ed26 - 4 commits from branch `rtems/rtos:main`
- 8526bc65 - cpukit/posix/aio*: added support for O_DSYNC

Compare with previous version

Author: Alessandro Nardin 2024-07-27T07:41:00.190Z

added 8 commits

- 8526bc65...0bd9737e - 7 commits from branch `rtems/rtos:main`
- 627dccb6 - cpukit/posix/aio*: added support for O_DSYNC

Compare with previous version

Author: Alessandro Nardin 2024-07-27T07:42:25.058Z

added 1 commit

- c107c008 - cpukit/posix/aio*: added support for O_DSYNC

Compare with previous version

Author: Alessandro Nardin 2024-07-27T07:45:23.893Z

marked this merge request as **ready**

Author: Alessandro Nardin 2024-07-28T13:30:48.502Z

added 2 commits

- 807070a6 - 1 commit from branch `rtems/rtos:main`
- 02dcbd0c - cpukit/posix/aio*: added support for O_DSYNC

Compare with previous version

Author: Joel Sherrill 2024-08-02T14:29:18.816Z

These two **LIO_** constants do not appear to be in the POSIX standard. aio.h is specified at https://pubs.opengroup.org/onlinepubs/9699919799/basedefs/aio.h.html. Where did you find these?

There are O_RSYNC and O_DSYNC that are to be used with aio_fsync().

Perhaps you need these internally in which case they should have been defined in aio_misc.h in a way that doesn't have potential to conflict with aio.h constants.

Author: Alessandro Nardin 2024-07-30T09:29:21.111Z

changed this line in version 8 of the diff

Author: Alessandro Nardin 2024-08-02T14:29:18.816Z

LIO_SYNC was already defined when I started working on the code. I noticed it wasn't defined in the POSIX specifications, but since it was there, I figured I could add another constant.

I've changed this and defined internal constants in aio_misc.h for each operation.

Author: Joel Sherrill 2024-07-30T09:41:47.731Z

As I suspected. In this case you need private opcodes defined in aio_misc.h and be sure they do not conflict.

Author: Alessandro Nardin 2024-07-30T09:29:21.560Z

added 1 commit

- 85e7ba9b - cpukit/posix/aio*: added support for O_DSYNC

Compare with previous version

Author: Alessandro Nardin 2024-07-30T09:31:49.197Z

added 1 commit

- 5cd80210 - cpukit/posix/aio*: added support for O_DSYNC

Compare with previous version

Author: Joel Sherrill 2024-08-02T14:29:18.836Z

resolved all threads

Author: Kinsey Moore 2024-08-02T14:34:06.152Z

added 4 commits

- 5cd80210...a0eecb52 - 3 commits from branch `rtems/rtos:main`
- b6e223ba - cpukit/posix/aio*: added support for O_DSYNC

Compare with previous version

Author: Kinsey Moore 2024-08-02T14:52:47.694Z

approved this merge request

Author: Joel Sherrill 2024-08-02T20:01:44.519Z

approved this merge request

Author: Amar Takhar 2024-08-02T20:03:03.199Z

added 2 commits

- dc123bb8 - 1 commit from branch `rtems/rtos:main`

- adce3801 - cpukit/posix/aio*: added support for O_DSYNC

Compare with previous version

Author: Alessandro Nardin 2024-08-25T19:34:17.453Z

mentioned in merge request rtems/docs/rtems-docs!44

Author: Alessandro Nardin 2024-09-03T09:46:44.172Z

mentioned in commit AlessandroNardin/rtems-docs@f00bf92f8d3693eb39e7dff81b09ac0f38e4a1bc

Author: Alessandro Nardin 2024-09-04T09:46:20.143Z

mentioned in commit AlessandroNardin/rtems-docs@971e7f0c7b10939725d17fd516e79e727df87596

3.9.2.116 118 - cpukit/posix/aio*: Create notification at request completion

Id	118
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-24T14:22:18.342Z
Created	2024-07-16T09:16:09.552Z
Updated	2024-09-04T09:46:20.118Z
Milestone	6.1
Labels	api::posix, cpukit, posix
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/118
Commit	3b96aadddef2c972dd4a1fbc7741ab4f5aedf7b4

Summary

Addition of notification upon AIO request completion, using the `aio_sigevent` field in the `aiocb` struct.

Closes #5068

Author: Joel Sherrill 2024-07-18T15:59:06.936Z

Shorten the brief. Think section heading in Table of Contents.

Turn the details into a first paragraph.

Add @param for the argument.

Author: Alessandro Nardin 2024-07-18T15:59:06.936Z

I have rewritten it. Now it should be better.

Author: Joel Sherrill 2024-07-19T14:42:48.777Z

Remove extra blank line.

Author: Alessandro Nardin 2024-07-17T13:09:48.580Z

changed this line in version 2 of the diff

Author: Alessandro Nardin 2024-07-19T14:42:48.777Z

removed

Author: Joel Sherrill 2024-07-19T14:43:06.015Z

Is this for your debugging or needed permanently?

Author: Alessandro Nardin 2024-07-17T13:09:48.902Z

changed this line in version 2 of the diff

Author: Alessandro Nardin 2024-07-19T14:43:06.015Z

It was for debugging, I removed it.

Author: Joel Sherrill 2024-07-21T13:58:48.825Z

Space needed. “){” should be “) {“.

I see this multiple places. Search and destroy.

Author: Alessandro Nardin 2024-07-17T13:09:49.225Z

changed this line in version 2 of the diff

Author: Alessandro Nardin 2024-07-21T13:58:48.825Z

Now it should be correct

Author: Joel Sherrill 2024-07-21T13:58:48.825Z

Someone commented on the indentation of the cpp directives. They look off here also around line 366.

Also 368 should be formatted onto multiple lines. But if this is not something that could occur, it may be better to turn it into an rtems debug assert.

Author: Alessandro Nardin 2024-07-21T13:58:48.825Z

The directives indentation should be right now. I turned the if in an assert.

Author: Joel Sherrill 2024-07-21T13:58:48.825Z

Info should be in another comment but use _Assert() which is tied to the RTEMS Debug build configuration. rtems/score/assert.h should be the header.

Author: Joel Sherrill 2024-07-21T13:58:48.825Z

I'm sorry that I didn't think this this earlier. You can use "(void) result;" to indicate you are explicitly not checking the result.

Author: Alessandro Nardin 2024-07-21T13:58:48.825Z

I've added it just below the variable declaration, is this okay or should i put it inside some `#ifdef [SOMETHING]` directive?

Author: Joel Sherrill 2024-07-19T17:14:35.479Z

There isn't really anyway to handle an error here. Should this be caught at the API level so an error can be returned to the caller?

If so, then the checks which were in here can become debug asserts.

Author: Alessandro Nardin 2024-07-17T13:09:49.548Z

changed this line in version 2 of the diff

Author: Alessandro Nardin 2024-07-19T17:14:35.479Z

Yes, it was one of my main doubts. I added a function to check if the sigevent struct is valid. My plan is to call this function in aio_read, aio_write, and aio_sync, and return an error if the struct is invalid. I was uncertain if this was the right approach because it is not mentioned in the POSIX specification.

Author: Alessandro Nardin 2024-07-19T17:14:35.479Z

Since there are no specification about that, what error code should return on a wrong sigevent struct ?

Author: Joel Sherrill 2024-07-19T17:14:35.479Z

EINVAL I guess. It is a catchall for bad parameter. And it looks like the indentation on 441-442 is off.

Author: Joel Sherrill 2024-07-19T17:14:35.479Z

And any assert() should be the RTEMS internal _Assert().

Author: Alessandro Nardin 2024-07-19T17:14:35.479Z

Now every assert should be _Assert()

Author: Joel Sherrill 2024-07-19T15:14:03.512Z

You need to wrap the sigev_notification function in a wrapper thread body which has the proper signature. Pass in the notify function as the argument, cast it, call it, and return NULL. It may also make sense to explicitly call pthread_exit() at the bottom of the wrapper function.

Author: Alessandro Nardin 2024-07-17T13:09:50.225Z

changed this line in version 2 of the diff

Author: Alessandro Nardin 2024-07-19T15:14:03.512Z

Now it should be right if I understood correctly what you meant. I passed the sigevent structure as a parameter to the wrapper function since it contains the pointer to the function and its parameters.

I was curious to understand why this is necessary. Is it to improve code readability, or are there other reasons?

Author: Joel Sherrill 2024-07-19T15:14:03.512Z

The sigev_notify_function does not have the signature required for a pthread body.

On line 454, you do not need the & to get the address of a function. The name of a function (or array) is itself an address.

Author: Joel Sherrill 2024-07-19T12:23:47.360Z

Parentheses are not needed.

Can fit on one line.

Author: Alessandro Nardin 2024-07-17T13:09:50.542Z

changed this line in version 2 of the diff

Author: Alessandro Nardin 2024-07-19T12:23:47.360Z

fixed

Author: Joel Sherrill 2024-07-19T12:23:47.360Z

I answered a question above in this thread. Resolve this thread when you read that.

Author: Joel Sherrill 2024-07-19T15:14:14.123Z

Looks like there needs to be a blank line above this.

Author: Alessandro Nardin 2024-07-17T13:09:50.860Z

changed this line in version 2 of the diff

Author: Alessandro Nardin 2024-07-19T15:14:14.123Z

added

Author: Joel Sherrill 2024-07-18T16:05:24.607Z

You can put your name and copyright on any file of your own creation or that you have modified more than a few lines.

Author: Alessandro Nardin 2024-07-17T14:19:55.877Z

changed this line in version 3 of the diff

Author: Alessandro Nardin 2024-07-18T16:05:24.607Z

added

Author: Joel Sherrill 2024-07-19T17:08:39.208Z

Remove a blank line here.

Author: Alessandro Nardin 2024-07-17T14:19:56.392Z

changed this line in version 3 of the diff

Author: Alessandro Nardin 2024-07-19T17:08:39.208Z

removed

Author: Joel Sherrill 2024-07-19T17:08:39.208Z

free_aiocb does not need a space after the free function name or a cast of the parameter.

Author: Alessandro Nardin 2024-07-19T17:08:39.208Z

I don't know if it is what you meant, but removing the cast generates a warning.

Author: Joel Sherrill 2024-07-19T17:08:39.208Z

OK. aio_buf is oddly "volatile void *" in the POSIX standard and our aio.h. The cast is needed to remove the volatile part because free() expects just a "void *"

There is still the issue of a space after the method name.

Author: Joel Sherrill 2024-07-19T14:47:59.279Z

Is this completely new? Modified? Does your copyright and 2024 need to be added?

Author: Alessandro Nardin 2024-07-17T14:19:56.708Z

changed this line in version 3 of the diff

Author: Alessandro Nardin 2024-07-19T14:47:59.279Z

is it okay now ?

Author: Joel Sherrill 2024-07-19T15:14:30.295Z

Is this line too long?

Author: Alessandro Nardin 2024-07-17T14:19:57.065Z

changed this line in version 3 of the diff

Author: Alessandro Nardin 2024-07-19T15:14:30.295Z

fixed

Author: Joel Sherrill 2024-07-19T15:14:30.295Z

Watch for double blank lines. I see lines 79-80.

Author: Joel Sherrill 2024-07-18T16:07:12.747Z

Again check need for your copyright

Author: Alessandro Nardin 2024-07-17T14:19:58.126Z

changed this line in version 3 of the diff

Author: Kinsey Moore 2024-07-18T14:49:15.477Z

directives in RTEMS are typically placed at the beginning of the line either with no indentation at all or their own indentation unrelated to the code. This applies elsewhere.

Author: Alessandro Nardin 2024-07-17T13:09:52.054Z

changed this line in version 2 of the diff

Author: Alessandro Nardin 2024-07-18T14:49:15.477Z

corrected

Author: Kinsey Moore 2024-07-18T14:49:18.041Z

I'd recommend an #else clause here with "(void)sig;" to avoid unused argument warnings.

Author: Alessandro Nardin 2024-07-17T13:09:52.416Z

changed this line in version 2 of the diff

Author: Alessandro Nardin 2024-07-18T14:49:18.041Z

added

Author: Kinsey Moore 2024-07-16T22:39:36.229Z

requested changes

Author: Alessandro Nardin 2024-07-17T13:09:52.581Z

added 1 commit

- 06e4c2da - corrections

Compare with previous version

Author: Alessandro Nardin 2024-07-17T14:19:58.346Z

added 1 commit

- 38f0c492 - test correction

Compare with previous version

Author: Kinsey Moore 2024-07-18T14:48:16.222Z

added 8 commits

- 38f0c492...5c5b4b83 - 5 commits from branch `rtems/rtos:main`
- 6f663236 - first version of notification helper
- 6ff50d19 - corrections
- e80ce96f - test correction

Compare with previous version

Author: Kinsey Moore 2024-07-19T17:08:51.916Z

Please squash together these 3 patches and improve the commit message on the resulting patch.

Author: Alessandro Nardin 2024-07-19T17:08:51.916Z

Done, I was finishing some corrections.

Author: Joel Sherrill 2024-07-19T18:56:45.777Z

@opticron Please check that this is OK.

Author: Alessandro Nardin 2024-07-19T13:57:52.895Z

added 2 commits

- a824ed6f - 1 commit from branch `rtems/rtos:main`
- 7ee3a745 - posix/aio*: Added notification on request completion

Compare with previous version

Author: Alessandro Nardin 2024-07-19T14:03:59.788Z

added 1 commit

- 663b071b - posix/aio*: Added notification on request completion

Compare with previous version

Author: Joel Sherrill 2024-07-19T16:49:47.113Z

I should have been clearer on assert. Do not use the C Library assert. Use the rtems debug assert _Assert(). This is only enabled when RTEMS is built with debug mode enabled.

It is prototyped in <rtems/score/assert.h>

Author: Alessandro Nardin 2024-07-19T16:49:47.113Z

That's my fault, i changed the assert in _Assert but forgot to change the header.

Author: Alessandro Nardin 2024-07-19T15:59:55.092Z

added 1 commit

- da931a7a - posix/aio*: Added notification on request completion

Compare with previous version

Author: Alessandro Nardin 2024-07-19T16:36:34.983Z

added 1 commit

- bc1840f9 - posix/aio*: Added notification on request completion

Compare with previous version

Author: Joel Sherrill 2024-07-19T17:08:56.910Z

Change cast to (void *).

Author: Joel Sherrill 2024-07-19T17:10:19.496Z

Formatting plus a blank lins above is needed.

Author: Joel Sherrill 2024-07-19T17:10:49.984Z

I think this should be attr != NULL. Otherwise you are passing in NULL.

And use the "(void) result;" idiom instead of the if. . . do nothing

Author: Joel Sherrill 2024-07-19T17:11:27.279Z

Use (void *) as per https://pubs.opengroup.org/onlinepubs/009695399/functions/free.html

Author: Joel Sherrill 2024-07-20T08:52:04.625Z

I still see " (" in the test on function calls.

Author: Alessandro Nardin 2024-07-20T08:52:04.625Z

I double checked and found some in psxaio01 and psxaio04.

Author: Joel Sherrill 2024-07-20T08:52:21.235Z

Remove blank line.

Author: Alessandro Nardin 2024-07-19T18:18:10.823Z

changed this line in version 9 of the diff

Author: Joel Sherrill 2024-07-20T19:47:05.899Z

Unbalanced spaces inside parentheses. Remove space after (

Author: Alessandro Nardin 2024-07-20T19:47:05.899Z

Shouldn't I add a space before the ")" instead? It would be more coherent with how I formatted the other function calls.

Author: Alessandro Nardin 2024-07-19T18:18:11.366Z

changed this line in version 9 of the diff

Author: Joel Sherrill 2024-07-19T18:57:49.117Z

Just spell out function. You really are not saving much.

Author: Alessandro Nardin 2024-07-19T18:18:11.761Z

changed this line in version 9 of the diff

Author: Alessandro Nardin 2024-07-19T18:18:12.036Z

added 1 commit

- 2f7b0c58 - posix/aio*: Added notification on request completion

Compare with previous version

Author: Alessandro Nardin 2024-07-20T08:51:55.232Z

added 3 commits

- 2f7b0c58...7333afe0 - 2 commits from branch `rtems/rtos:main`
- 5676db55 - posix/aio*: Added notification on request completion

Compare with previous version

Author: Alessandro Nardin 2024-07-20T19:46:35.094Z

added 1 commit

- 97ca2524 - posix/aio*: Added notification on request completion

Compare with previous version

Author: Alessandro Nardin 2024-07-21T13:56:02.526Z

added 1 commit

- 6b94736a - posix/aio*: Added notification on request completion

Compare with previous version

Author: Alessandro Nardin 2024-07-21T13:58:48.852Z

resolved all threads

Author: Alessandro Nardin 2024-07-23T19:28:21.195Z

marked this merge request as **ready**

Author: Kinsey Moore 2024-07-24T08:55:42.307Z

The spacing around the parameter isn't correct.

Author: Alessandro Nardin 2024-07-24T08:53:55.038Z

changed this line in version 13 of the diff

Author: Kinsey Moore 2024-07-24T08:53:58.921Z

Formatting here as well.

Author: Alessandro Nardin 2024-07-24T08:53:55.584Z

changed this line in version 13 of the diff

Author: Kinsey Moore 2024-07-24T08:54:00.296Z

A double space.

Author: Alessandro Nardin 2024-07-24T08:53:55.882Z

changed this line in version 13 of the diff

Author: Kinsey Moore 2024-07-24T08:54:00.983Z

Formatting.

Author: Alessandro Nardin 2024-07-24T08:53:56.185Z

changed this line in version 13 of the diff

Author: Kinsey Moore 2024-07-24T08:54:01.783Z

Double space.

Author: Alessandro Nardin 2024-07-24T08:53:56.612Z

changed this line in version 13 of the diff

Author: Kinsey Moore 2024-07-24T08:54:03.919Z

Formatting.

Author: Alessandro Nardin 2024-07-24T09:05:38.131Z

changed this line in version 15 of the diff

Author: Kinsey Moore 2024-07-24T13:35:14.025Z

Double space. I'm not sure if I got all the instances of formatting issues, so please go back and double check the remainder of the patch.

Author: Alessandro Nardin 2024-07-24T08:53:57.132Z

changed this line in version 13 of the diff

Author: Alessandro Nardin 2024-07-24T13:35:14.025Z

Checked all the files, i corrected the errors you pointed out and found some more. Hopefully now I caught everything.

Author: Kinsey Moore 2024-07-24T08:55:31.462Z

Usage of a space within empty parentheses is inconsistent in this patch.

Author: Alessandro Nardin 2024-07-24T08:53:57.749Z

changed this line in version 13 of the diff

Author: Kinsey Moore 2024-07-23T20:02:25.791Z

requested changes

Author: Kinsey Moore 2024-07-23T20:02:48.094Z

approved this merge request

Author: Kinsey Moore 2024-07-23T23:43:05.489Z

unapproved this merge request

Author: Alessandro Nardin 2024-07-24T08:53:57.991Z

added 2 commits

- e58ff898 - 1 commit from branch `rtems/rtos:main`
- 19e57382 - posix/aio*: Added notification on request completion

Compare with previous version

Author: Alessandro Nardin 2024-07-24T08:55:21.478Z

added 1 commit

- 4d2fe2e0 - posix/aio*: Added notification on request completion

Compare with previous version

Author: Alessandro Nardin 2024-07-24T09:05:38.473Z

added 1 commit

- 3b96aadd - posix/aio*: Added notification on request completion

Compare with previous version

Author: Kinsey Moore 2024-07-24T13:35:14.054Z

resolved all threads

Author: Kinsey Moore 2024-07-24T13:35:52.046Z

approved this merge request

Author: Joel Sherrill 2024-07-24T14:19:46.877Z

approved this merge request

Author: Kinsey Moore 2024-07-25T13:12:56.687Z

Was this meant to be a || instead of a &&? This was flagged by a coverity scan as dead code.

Author: Alessandro Nardin 2024-07-25T13:58:28.521Z

yeah, my mistake. I'll open another MR today to add some other changes I have in my fork. I fixed this error there.

Author: Alessandro Nardin 2024-08-25T19:34:16.965Z

mentioned in merge request rtems/docs/rtems-docs!44

Author: Alessandro Nardin 2024-09-03T09:46:43.979Z

mentioned in commit AlessandroNardin/rtems-docs@f00bf92f8d3693eb39e7dff81b09ac0f38e4a1bc

Author: Alessandro Nardin 2024-09-04T09:46:19.960Z

mentioned in commit AlessandroNardin/rtems-docs@971e7f0c7b10939725d17fd516e79e727df87596

3.9.2.117 180 - bsps/stm32h7: Workaround STM32 H7 errata by enforcing aligned access only

Id	180
State	merged
Merged by	Amar Takhar
Merged at	2024-08-11T22:44:11.125Z
Created	2024-08-09T13:41:36.451Z
Updated	2024-08-31T16:26:13.405Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/180
Commit	d81bf04501cb83de4586f431ae91123e4965d86a

Summary

bsps/stm32h7: Workaround STM32 H7 errata by enforcing aligned access only

The patch changes compiler ABI flags option and adds -mno-unaligned-access there. Usage of this option is also officially recommended way by the errata document how to work around the issue. For more details about the errata please see referenced issue number.

Closes #5110.

Closes #5110

Author: Kinsey Moore 2024-08-09T19:44:44.098Z

The errata this is trying to work around only applies to the FMC peripheral. This should not be applied to all code.

Author: Karel Gardas 2024-08-09T20:14:40.951Z

GitLab schism. Should we discuss this here or in the issue itself? I prefer issue, so let's go there if you do not object.

Author: Kinsey Moore 2024-08-09T14:25:44.836Z

added 3 commits

- 7060f285...5eaf6595 - 2 commits from branch `rtems/rtos:main`
- 561d4055 - bsps/stm32h7: Workaround STM32 H7 errata by enforcing aligned access only

Compare with previous version

Author: Karel Gardas 2024-08-09T19:44:44.122Z

resolved all threads

Author: Kinsey Moore 2024-08-11T18:57:17.632Z

approved this merge request

Author: Kinsey Moore 2024-08-11T18:57:22.309Z

added 9 commits

- 561d4055...74402646 - 8 commits from branch `rtems/rtos:main`
- 208c6d78 - bsps/stm32h7: Workaround STM32 H7 errata by enforcing aligned access only

Compare with previous version

Author: Amar Takhar 2024-08-11T22:43:42.538Z

added 2 commits

- 9c57576a - 1 commit from branch `rtems/rtos:main`
- d81bf045 - bsps/stm32h7: Workaround STM32 H7 errata by enforcing aligned access only

Compare with previous version

Author: Amar Takhar 2024-08-11T22:44:07.399Z

approved this merge request

Author: Karel Gardas 2024-08-31T16:26:13.361Z

mentioned in merge request !201

3.9.2.118 197 - cpukit/stackchk: Remove additional offset of SANITY_PATTERN_SIZE_WORDS

Id	197
State	merged
Merged by	Amar Takhar
Merged at	2024-08-29T01:22:11.450Z
Assignee(s)	Kinsey Moore
Created	2024-08-27T19:55:21.636Z
Updated	2024-08-29T01:22:13.339Z
Milestone	6.1
Labels	cpukit::misc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/197
Commit	ad51286e2b00f0e2bdd080397f4287646f512ef1

Summary

cpukit/stackchk: Remove additional offset of SANITY_PATTERN_SIZE_WORDS

This offset is already accounted for by Stack_check_Usable_stack_start() called from Stack_check_Visit_stack() and adding it a second time can cause interaction beyond the bounds of the stack.

Author: Kinsey Moore 2024-08-27T19:55:21.878Z

assigned to @opticron

Author: Kinsey Moore 2024-08-28T13:42:40.531Z

added 21 commits

- a7836a16...cb0a5305 - 20 commits from branch `rtems/rtos:main`
- ad51286e - cpukit/stackchk: Remove additional offset of SANITY_PATTERN_SIZE_WORDS

Compare with previous version

Author: Sebastian Huber 2024-08-29T00:11:51.909Z

approved this merge request

Author: Sebastian Huber 2024-08-29T00:13:42.142Z

The change is correct, but there is no out of bounds access of the stack. The stack is definitely larger than SANITY_PATTERN_SIZE_WORDS. You get an inaccurate usage value if the stack usage is close to the maximum.

Author: Amar Takhar 2024-08-29T01:22:07.475Z

approved this merge request

3.9.2.119 111 - libtests/dl*: Make build reproducible

Id	111
State	merged
Merged by	Amar Takhar
Merged at	2024-07-18T00:12:24.662Z
Assignee(s)	Sebastian Huber
Created	2024-07-09T08:57:23.852Z
Updated	2024-08-28T19:44:15.156Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/111
Commit	5c5b4b832b1399f72512317ce18b97fb19067ec4

Summary

libtests/dl*: Make build reproducible

Do not use a temporary file to create the symbol map.

Close #4941.

This change depends on https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/17 and https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/36.

Author: Sebastian Huber 2024-07-09T08:57:23.973Z

assigned to @sebhub

Author: Sebastian Huber 2024-07-09T08:59:07.518Z

marked this merge request as **draft**

Author: Sebastian Huber 2024-07-09T08:59:07.541Z

changed the description

Author: Sebastian Huber 2024-07-11T05:37:25.725Z

marked this merge request as **ready**

Author: Sebastian Huber 2024-07-11T05:37:25.746Z

changed the description

Author: Sebastian Huber 2024-07-11T05:37:35.360Z

added 9 commits

- 58d03deb...26b95e14 - 8 commits from branch `rtems/rtos:main`
- ddb8a85c - libtests/dl*: Make build reproducible

Compare with previous version

Author: Gedare Bloom 2024-07-17T20:31:24.936Z

approved this merge request

Author: Amar Takhar 2024-07-18T00:12:06.099Z

added 5 commits

- ddb8a85c...cc034e7d - 4 commits from branch `rtems/rtos:main`
- 5c5b4b83 - libtests/dl*: Make build reproducible

Compare with previous version

Author: Amar Takhar 2024-07-18T00:12:21.538Z

approved this merge request

Author: Kinsey Moore 2024-08-28T19:44:15.119Z

It looks like this broke the ZynqMP RPU BSP with assembler errors such as:

```
/tmp/ccssa9iP.s: Assembler messages:
/tmp/ccssa9iP.s:2027: Error: can't resolve .data.rtems_rtl_tls_offsets -
↪ rtems__rtl_base_globals
```

Author: Kinsey Moore 2024-08-28T19:44:15.119Z

Issue #5123 has been created to track this.

Author: Kinsey Moore 2024-08-28T19:42:10.411Z

mentioned in issue #5123

Author: Kinsey Moore 2024-08-28T19:42:32.852Z

resolved all threads

Author: Kinsey Moore 2024-08-28T19:44:15.138Z

resolved all threads

3.9.2.120 198 - arm: Improve default exception handling

Id	198
State	merged
Merged by	Kinsey Moore
Merged at	2024-08-28T13:11:21.183Z
Assignee(s)	Sebastian Huber
Created	2024-08-28T02:24:08.396Z
Updated	2024-08-28T13:11:23.854Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/198
Commit	cb0a5305039f32197674f9faa176774bdb391a0c

Summary

This patch set improves the arm default exception handling. A test program is work in progress.

Author: Sebastian Huber 2024-08-28T02:24:08.551Z

assigned to @sebhub

Author: Chris Johns 2024-08-28T06:58:44.910Z

Can you please explain how it is improved?

Author: Sebastian Huber 2024-08-28T06:58:44.910Z

I would go though the individual commits. These are small changes which showed up while testing the default exception handlers.

Author: Chris Johns 2024-08-28T06:58:44.910Z

I have gone through them and I do not understand why you say this is an improvement? There is movement and changes in code and an overview would be helpful when reviewing. Thanks

Author: Sebastian Huber 2024-08-28T06:58:44.910Z

Nobody tested this code systematically in the past. So this MR is really just a mix of things which in general improve the default exception handling on arm.

Author: Chris Johns 2024-08-28T06:58:44.910Z

How did you test it?

Author: Sebastian Huber 2024-08-28T06:58:44.910Z

I prepared values for all saved registers, then triggered an exception and checked what was stored in the exception frame. The test doesn't compile for all BSPs. I would be a bit of work to integrate this test.

Author: Chris Johns 2024-08-28T06:58:44.910Z

Thanks this provides a nice history and summary.

It is up to you to make the test available somewhere. I understand and appreciate these types are tests are hard to make something we can accept and maintain.

Author: Sebastian Huber 2024-08-28T06:58:44.910Z

For example, to test the FIQ exception you have to be able to trigger an FIQ. This is BSP specific and some targets may not support FIQs.

Author: Chris Johns 2024-08-28T06:58:44.910Z

You could attach it to this MR? :smile:

Author: Sebastian Huber 2024-08-28T06:58:44.910Z

0001-validation-Test-ARM-default-exception-handling.patch

Author: Chris Johns 2024-08-28T06:13:40.993Z

Can you please explain how this change works? The `udf` means the instruction is never defined.

Author: Sebastian Huber 2024-08-28T06:13:40.993Z

This vector table is used by the hypervisor mode. If it is used, then this is a fatal error.

Author: Chris Johns 2024-08-28T06:13:40.993Z

This is a good change.

Author: Chris Johns 2024-08-28T06:12:07.567Z

Which BSPs are effect? Have all BSPs been reviewed?

Author: Sebastian Huber 2024-08-28T06:12:07.567Z

The change affects all BSPs using the shared start file. Only the LPC2400 based BSPs use this signature as far as I know.

Author: Chris Johns 2024-08-28T06:12:07.567Z

Thanks.

Author: Chris Johns 2024-08-28T06:13:13.216Z

Why can the this be lowered?

Author: Sebastian Huber 2024-08-28T06:13:13.216Z

Because register r8-r12 is not used before it is saved later.

Author: Chris Johns 2024-08-28T06:13:13.216Z

Thanks

Author: Chris Johns 2024-08-28T06:20:29.388Z

resolved all threads

Author: Chris Johns 2024-08-28T06:20:42.740Z

approved this merge request

Author: Sebastian Huber 2024-08-28T06:33:44.319Z

resolved all threads

Author: Chris Johns 2024-08-28T06:58:44.932Z

resolved all threads

Author: Kinsey Moore 2024-08-28T13:11:16.612Z

approved this merge request

3.9.2.121 172 - aio_fsync.c: Use calloc() to ensure memory is initialized

Id	172
State	merged
Merged by	Sebastian Huber
Merged at	2024-08-27T23:55:58.151Z
Assignee(s)	Joel Sherrill
Created	2024-08-07T18:14:18.350Z
Updated	2024-08-27T23:56:00.620Z
Milestone	6.1
Labels	api::posix
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/172
Commit	3cb090e341abf612733a5b36344defe06b06a520

Summary

aio_fsync.c: Use calloc() to ensure memory is initialized

Coverity CID 1512532

Closes #5102.

Author: Joel Sherrill 2024-08-07T18:14:18.579Z

assigned to @joel

Author: Amar Takhar 2024-08-07T18:32:03.693Z

approved this merge request

Author: Sebastian Huber 2024-08-27T16:52:49.660Z

Maybe use `calloc( 1, sizeof( *req ) )` since is more robust against type changes of `req`.

Author: Joel Sherrill 2024-08-26T15:52:20.048Z

changed this line in version 3 of the diff

Author: Joel Sherrill 2024-08-23T17:28:29.503Z

added 38 commits

- 120de78f...c2b3a517 - 37 commits from branch `rtems/rtos:main`
- 82949add - aio_fsync.c: Use calloc() to ensure memory is initialized

Compare with previous version

Author: Joel Sherrill 2024-08-26T15:52:20.281Z

added 3 commits

- 82949add...07728e09 - 2 commits from branch `rtems/rtos:main`
- 64ba2142 - aio_fsync.c: Use calloc() to ensure memory is initialized

Compare with previous version

Author: Joel Sherrill 2024-08-26T15:52:31.934Z

reset approvals from @amar by pushing to the branch

Author: Joel Sherrill 2024-08-27T16:52:49.685Z

resolved all threads

Author: Amar Takhar 2024-08-27T16:59:08.897Z

approved this merge request

Author: Sebastian Huber 2024-08-27T23:55:12.982Z

approved this merge request

Author: Sebastian Huber 2024-08-27T23:55:39.956Z

added 8 commits

- 64ba2142...3b053f69 - 7 commits from branch `rtems/rtos:main`
- 3cb090e3 - aio_fsync.c: Use calloc() to ensure memory is initialized

Compare with previous version

3.9.2.122 169 - x86_64/amd64: Add SMP support

Id	169
State	merged
Merged by	Amar Takhar
Merged at	2024-08-27T21:20:37.824Z
Created	2024-08-06T21:06:48.181Z
Updated	2024-08-27T21:20:40.478Z
Milestone	6.1
Labels	arch:x86_64, smp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/169
Commit	77850f9f04b42ca19ac78d240b4f0b087479a35b

Summary

Implements SMP support for the amd64 BSP

Author: Matheus Pecoraro 2024-08-06T21:07:22.435Z

This MR should be dependent on !168 which in turn is dependent on [!119](https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/119 “Add ACPICA support to the amd64 BSP”)

Author: Matheus Pecoraro 2024-08-06T21:08:37.340Z

Author: Kinsey Moore 2024-08-06T22:11:46.731Z

added 9 commits

- 75d36108...02a89356 - 6 commits from branch `rtems/rtos:main`
- 30ba7cbc - amd64: Allow early ACPICA table subsystem init
- ff11c208 - amd64: Move APIC implementation out of clock.c
- 4ee48489 - x86_64/amd64: Add SMP support

Compare with previous version

Author: Joel Sherrill 2024-08-07T18:30:36.097Z

Can you turn this into a meaningful comment? Does this need functionality?

Author: Matheus Pecoraro 2024-08-07T18:27:25.429Z

changed this line in version 3 of the diff

Author: Joel Sherrill 2024-08-23T17:35:59.915Z

Just for bookkeeping, will there or is there a ticket for this feature?

Author: Matheus Pecoraro 2024-08-07T18:27:25.781Z

changed this line in version 3 of the diff

Author: Matheus Pecoraro 2024-08-23T17:35:59.915Z

I wasn't sure if this was needed initially so I added the TODO to remind myself to check it again and ended up forgetting to remove it.

Author: Joel Sherrill 2024-08-07T18:32:09.027Z

Add SPDX.

Author: Matheus Pecoraro 2024-08-07T18:27:26.444Z

changed this line in version 3 of the diff

Author: Joel Sherrill 2024-08-24T16:46:46.457Z

Is this resolved? Should it be a C++ comment or C comment?

Author: Matheus Pecoraro 2024-08-24T16:46:46.457Z

To be honest I'm not sure what this comment even refers to. I would say it's not needed, should I remove it?

Author: Joel Sherrill 2024-08-24T16:46:46.457Z

No. Someone was worried about saving the interrupt mask part of a register. Best to leave it until someone more confident than you or I sees it.

Perhaps add an issue and cite it in the comment there. Resolve this comment with "resolve by issue" and be sure the comment references that issue.

Author: Matheus Pecoraro 2024-08-24T16:46:46.720Z

created #5122 to continue this discussion

Author: Matheus Pecoraro 2024-08-24T16:51:56.483Z

changed this line in version 5 of the diff

Author: Matheus Pecoraro 2024-08-24T16:53:09.494Z

Created the issue and added it to the comment.

Author: Joel Sherrill 2024-08-07T18:32:03.830Z

Split SPDX into its own 1 line comment followed by a blank line.

Author: Matheus Pecoraro 2024-08-07T18:27:27.126Z

changed this line in version 3 of the diff

Author: Joel Sherrill 2024-08-07T18:31:59.222Z

This should be an @file Doxygen block after the SPDX.

Author: Matheus Pecoraro 2024-08-07T18:27:27.462Z

changed this line in version 3 of the diff

Author: Joel Sherrill 2024-08-07T18:30:07.038Z

I don't think you should use C Library assert(). _Assert() is RTEMS debug only assert and should be used here.

Author: Matheus Pecoraro 2024-08-07T18:27:27.950Z

changed this line in version 3 of the diff

Author: Joel Sherrill 2024-08-23T17:38:01.771Z

Mostly cleanup from me. Make sure SPDX, copyrights, and license is in every file. Make sure copyrights are formatted consistently per Coding Style.

Author: Matheus Pecoraro 2024-08-23T17:38:01.771Z

Did the cleanup in 1070919a8efc8259eacd39b35cc7ce7af1a14b7d

Author: Matheus Pecoraro 2024-08-07T18:27:28.192Z

added 7 commits

- 4ee48489...f2998639 - 3 commits from branch `rtems/rtos:main`
- 00d6946d - amd64: Allow early ACPICA table subsystem init
- 3d0c5ac5 - amd64: Move APIC implementation out of clock.c
- 059617a6 - x86_64/amd64: Add SMP support
- 1070919a - x86_64: x86_64 port doxygen and license cleanup

Compare with previous version

Author: Matheus Pecoraro 2024-08-11T14:37:47.720Z

added 16 commits

- 1070919a...74402646 - 14 commits from branch `rtems/rtos:main`
- 65c456bc - x86_64/amd64: Add SMP support
- 5a14f327 - x86_64: x86_64 port doxygen and license cleanup

Compare with previous version

Author: Matheus Pecoraro 2024-08-14T09:03:01.107Z

mentioned in merge request rtems/tools/rtems-tools!25

Author: Matheus Pecoraro 2024-08-20T15:56:54.725Z

mentioned in merge request !192

Author: Matheus Pecoraro 2024-08-24T16:52:21.701Z

- [] @joel said on !192:

  Please pull Amaan's name onto the copyright line so these match. This may be necessary elsewhere also.

Author: Matheus Pecoraro 2024-08-24T16:51:57.210Z

changed this line in version 5 of the diff

Author: Matheus Pecoraro 2024-08-24T16:52:21.701Z

Fixed.

Author: Matheus Pecoraro 2024-08-24T16:46:35.252Z

- [] @joel said on !192:

  Is there any issue which could be cited in comments here to add interrupt affinity to this BSP? Please resolve this “with issue” and cite the issue in a comment in the code.

Author: Matheus Pecoraro 2024-08-24T16:46:35.507Z

created #5121 to continue this discussion

Author: Matheus Pecoraro 2024-08-24T16:53:32.450Z

Created the issue and added it to a comment.

Author: Matheus Pecoraro 2024-08-24T16:52:31.304Z

- [] @joel said on !192:

  This { should be at the end of the previous line.

Author: Matheus Pecoraro 2024-08-24T16:51:59.213Z

changed this line in version 5 of the diff

Author: Matheus Pecoraro 2024-08-24T16:52:31.304Z

Fixed.

Author: Matheus Pecoraro 2024-08-24T16:46:35.613Z

mentioned in issue #5121

Author: Matheus Pecoraro 2024-08-24T16:46:46.803Z

mentioned in issue #5122

Author: Matheus Pecoraro 2024-08-24T16:51:59.392Z

added 28 commits

- 5a14f327...07728e09 - 25 commits from branch `rtems/rtos:main`
- 46149431 - x86_64/amd64: Add SMP support

- cfd8e44e - x86_64: x86_64 port doxygen and license cleanup
- 7dcd0752 - x86_64/amd64: Add issues to TODO comments

Compare with previous version

Author: Matheus Pecoraro 2024-08-24T16:52:31.331Z

resolved all threads

Author: Joel Sherrill 2024-08-27T21:17:03.127Z

added 5 commits

- 7dcd0752...43a581c7 - 2 commits from branch `rtems/rtos:main`
- e93bbe65 - x86_64/amd64: Add SMP support
- 018e7ad4 - x86_64: x86_64 port doxygen and license cleanup
- 77850f9f - x86_64/amd64: Add issues to TODO comments

Compare with previous version

Author: Joel Sherrill 2024-08-27T21:17:15.624Z

approved this merge request

Author: Amar Takhar 2024-08-27T21:20:33.792Z

approved this merge request

3.9.2.123 196 - spec/zynqmp: Install ECC header definitions

Id	196
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-27T21:16:12.960Z
Assignee(s)	Kinsey Moore
Created	2024-08-27T19:13:00.544Z
Updated	2024-08-27T21:16:14.916Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/196
Commit	43a581c7129f1e9b5db4b954ff0578b4993900a9

Summary

spec/zynqmp: Install ECC header definitions

This needs to be installed for applications to make use of ECC functionality.

> **Author:** Kinsey Moore 2024-08-27T19:13:00.703Z
>
> assigned to @opticron
>
> **Author:** Amar Takhar 2024-08-27T19:26:43.401Z
>
> approved this merge request
>
> **Author:** Joel Sherrill 2024-08-27T21:16:08.491Z
>
> approved this merge request

3.9.2.124 148 - Rename COPYING to LICENSE.md

Id	148
State	merged
Merged by	Amar Takhar
Merged at	2024-08-23T20:58:36.129Z
Assignee(s)	Amar Takhar
Created	2024-07-29T21:39:01.924Z
Updated	2024-08-23T20:58:39.190Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/148
Commit	07728e0913d694751abc429acb3598d91aff0cb9

Summary

Rename COPYING to LICENSE.md

This follows the current convention we're using.

Even for source that is imported we should be renaming files following our convention to keep consistency.

> **Author:** Amar Takhar 2024-07-29T21:39:02.067Z
>
> assigned to @amar
>
> **Author:** Kinsey Moore 2024-07-30T03:28:39.498Z
>
> added 2 commits

- 4c2e5ad9 - 1 commit from branch `rtems/rtos:main`
- c21dc7db - Rename COPYING to LICENSE.md

Compare with previous version

Author: Kinsey Moore 2024-08-02T14:55:22.956Z

added 3 commits

- c21dc7db...a0eecb52 - 2 commits from branch `rtems/rtos:main`
- e90f62e3 - Rename COPYING to LICENSE.md

Compare with previous version

Author: Joel Sherrill 2024-08-02T21:06:02.337Z

approved this merge request

Author: Kinsey Moore 2024-08-15T17:30:24.041Z

I have no problem with the POSIX COPYING being renamed, but I disagree with renaming the COPYING files in the imported libraries. As far as I'm aware, all the other code we've imported has retained filenames with necessary deviations in directory location and as little modification to the contents as possible. Someone else can feel free to correct/override me.

Author: Amar Takhar 2024-08-15T17:30:24.041Z

I thought about that but none of those are pure imports – I checked. If we were importing 100% of the library I wouldn't touch it but we aren't. So if we're already doing a selective import I don't see why we shouldn't follow our own conventions for documentation. We're renaming our own ``COPYING`` files to ``LICENSE.md`` so I don't see why not. It's not like these are updated often and it would be nice to say all our licenses are in `LICENSE.md`. I don't have strong feelings about it though.

Author: Amar Takhar 2024-08-15T17:30:24.041Z

Any updates to my response here? Thanks

Author: Gedare Bloom 2024-08-15T17:30:24.041Z

Please remove the `xz` and `uuid` changes for now.

Author: Amar Takhar 2024-08-15T17:30:24.041Z

We talked about this on Discord and `uuid` has been modified locally now are you planning an update soon?

Author: Amar Takhar 2024-08-15T17:30:24.041Z

They've been removed.

Author: Amar Takhar 2024-08-15T17:29:58.440Z

added 75 commits

- e90f62e3...606584d0 - 74 commits from branch `rtems/rtos:main`
- 6b00cac6 - Rename COPYING to LICENSE.md

Compare with previous version

Author: Amar Takhar 2024-08-15T17:30:18.185Z

reset approvals from @joel by pushing to the branch

Author: Amar Takhar 2024-08-15T17:30:24.064Z

resolved all threads

Author: Kinsey Moore 2024-08-15T18:41:35.579Z

approved this merge request

Author: Joel Sherrill 2024-08-23T20:42:23.355Z

approved this merge request

Author: Amar Takhar 2024-08-23T20:58:28.623Z

added 21 commits

- 6b00cac6...b5767d2c - 20 commits from branch `rtems/rtos:main`
- 07728e09 - Rename COPYING to LICENSE.md

Compare with previous version

3.9.2.125 189 - bsps/stm32h7: Honor the intent of the MPU alignment option

Id	189
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-23T17:22:27.342Z
Assignee(s)	Kinsey Moore
Created	2024-08-15T16:26:38.830Z
Updated	2024-08-23T17:22:30.368Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/189
Commit	c2b3a517f620111be2c634bea61821cced866d5e

Summary

bsps/stm32h7: Honor the intent of the MPU alignment option

Currently, if a BSP is built without MPU alignment enforcement, the MPU is still enabled and can produce a non-functional binary since code can be mixed with data within a memory region and memory regions are marked as read-only or no-execute based on section addresses and sizes leading to overlapping regions being defined which causes the later-defined region to take precedence. This change disables the MPU when alignment is not enforced, allowing the binary to function.

Author: Kinsey Moore 2024-08-15T16:26:38.990Z

assigned to @opticron

Author: Kinsey Moore 2024-08-15T16:27:29.440Z

added 3 commits

- 612084ae...606584d0 - 2 commits from branch `rtems/rtos:main`
- 760d1298 - bsps/stm32h7: Honor the intent of the MPU alignment option

Compare with previous version

Author: Sebastian Huber 2024-08-23T06:04:18.088Z

You don't need the `&& STM32H7_ENABLE_MPU_ALIGNMENT == 1`. A simple `#ifdef STM32H7_ENABLE_MPU_ALIGNMENT` is enough for BSP options defined by `-define-condition: null` actions.

Author: Kinsey Moore 2024-08-21T17:07:56.367Z

changed this line in version 3 of the diff

Author: Kinsey Moore 2024-08-21T17:07:56.609Z

added 1 commit

- 9fd487b5 - bsps/stm32h7: Honor the intent of the MPU alignment option

Compare with previous version

Author: Sebastian Huber 2024-08-23T06:04:18.109Z

resolved all threads

Author: Sebastian Huber 2024-08-23T06:04:24.496Z

approved this merge request

Author: Kinsey Moore 2024-08-23T11:49:51.798Z

added 2 commits

- 991b3b16 - 1 commit from branch `rtems/rtos:main`
- 0233f357 - bsps/stm32h7: Honor the intent of the MPU alignment option

Compare with previous version

Author: Joel Sherrill 2024-08-23T17:20:33.669Z

approved this merge request

Author: Joel Sherrill 2024-08-23T17:20:44.075Z

added 18 commits

- 0233f357...3332e547 - 17 commits from branch `rtems/rtos:main`
- c2b3a517 - bsps/stm32h7: Honor the intent of the MPU alignment option

Compare with previous version

3.9.2.126 121 - Simplify termination procedure

Id	121
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-23T14:55:23.733Z
Assignee(s)	Sebastian Huber
Created	2024-07-17T17:07:44.581Z
Updated	2024-08-23T14:55:31.986Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/121
Commit	3332e54772fb477e81dbe87921fb3a1cca7e3b14

Summary

This patch set unifies the BSP fatal extension so that all BSP use the default implementation.

The bsp_reset() function is marked as no return and has now fatal source/code parameters.

In _Terminate(), everything after invoking the fatal extensions is essentially dead code. Simplify this code block and provide a reasonable safe fall-back for badly configured applications. Just execute an idle loop with maskable interrupts disabled.

Remove the now unused _CPU_Fatal_halt() handler.

Author: Sebastian Huber 2024-07-17T17:07:44.747Z

assigned to @sebhub

Author: Gedare Bloom 2024-07-18T11:42:25.880Z

Is this ready to review?

Author: Sebastian Huber 2024-07-18T11:42:25.880Z

Yes, however, I have to rebuild the BSPs after the resent changes with an updated tool set.

Author: Sebastian Huber 2024-07-18T08:29:22.515Z

marked this merge request as **draft**

Author: Sebastian Huber 2024-07-18T08:29:22.540Z

changed title from **{-bsp/altera-cyclone-v: Use default fatal extension-}** to **{+Draft: Simplify termination procedure+}**

Author: Sebastian Huber 2024-07-18T08:29:22.563Z

changed the description

Author: Sebastian Huber 2024-07-18T08:32:50.271Z

changed the description

Author: Sebastian Huber 2024-07-18T09:43:37.509Z

added 21 commits

- 10ed4a9c...5c5b4b83 - 5 commits from branch `rtems/rtos:main`
- 5c5b4b83...2c898dce - 6 earlier commits
- d3ecf82b - bsp/virtex5: Use default fatal extension
- e0134508 - bsps/sparc: Use default fatal extension
- fee77aa0 - bsp/niagara: Use default fatal extension
- 3f23053f - bsp/mrm332: Remove unused file
- 32f6c054 - bsp/mcf5225x: Remove unused file
- 71727419 - bsps: Simplify build
- 45f3ed0f - nios2: Use higher level error handling
- d1ff149e - score: Mark _CPU_Thread_Idle_body() as no-return
- 4be5cead - score: Simplify _Terminate()
- ebeef7d8 - score: Remove unused _CPU_Fatal_halt()

Compare with previous version

Author: Sebastian Huber 2024-07-18T11:40:46.715Z

marked this merge request as **ready**

Author: Sebastian Huber 2024-07-18T11:42:25.899Z

resolved all threads

Author: Sebastian Huber 2024-07-20T08:12:17.446Z

added 19 commits

- ebeef7d8...7333afe0 - 3 commits from branch `rtems/rtos:main`
- 7333afe0...4f322083 - 6 earlier commits

- 0cb77afa - bsp/virtex5: Use default fatal extension
- 6611ad17 - bsps/sparc: Use default fatal extension
- 7a563c29 - bsp/niagara: Use default fatal extension
- f5251514 - bsp/mrm332: Remove unused file
- 05cf991c - bsp/mcf5225x: Remove unused file
- 9e912218 - bsps: Simplify build
- 5359662c - nios2: Use higher level error handling
- 45135c3a - score: Mark _CPU_Thread_Idle_body() as no-return
- bee39921 - score: Simplify _Terminate()
- 724b686c - score: Remove unused _CPU_Fatal_halt()

Compare with previous version

Author: Kinsey Moore 2024-07-26T00:49:09.050Z

added 24 commits

- 724b686c...8fd3ed26 - 8 commits from branch `rtems/rtos:main`
- 8fd3ed26...f3e3c943 - 6 earlier commits
- 009200e1 - bsp/virtex5: Use default fatal extension
- 8c736cbe - bsps/sparc: Use default fatal extension
- e79e1e88 - bsp/niagara: Use default fatal extension
- 90243870 - bsp/mrm332: Remove unused file
- fcef225d - bsp/mcf5225x: Remove unused file
- 155d8fa8 - bsps: Simplify build
- 0a262033 - nios2: Use higher level error handling
- 93de880e - score: Mark _CPU_Thread_Idle_body() as no-return
- adb247b9 - score: Simplify _Terminate()
- b545ef38 - score: Remove unused _CPU_Fatal_halt()

Compare with previous version

Author: Kinsey Moore 2024-07-26T01:19:30.697Z

Thanks for the massive cleanup effort and sorry it took me so long to get to/through it.

Author: Kinsey Moore 2024-07-26T01:19:37.408Z

approved this merge request

Author: Sebastian Huber 2024-07-26T11:08:51.776Z

marked this merge request as **draft**

Author: Sebastian Huber 2024-07-26T11:09:21.623Z

Thanks for the review. I will change the procedure to do the interrupt disable earlier.

Author: Sebastian Huber 2024-08-08T03:38:31.662Z

added 88 commits

- b545ef38...3211cba9 - 71 commits from branch `rtems/rtos:main`
- 3211cba9...8d294f2c - 7 earlier commits
- e570a8a3 - bsps/sparc: Use default fatal extension
- 55608ccb - bsp/niagara: Use default fatal extension
- c0817adb - bsp/mrm332: Remove unused file
- 9851a8b6 - bsp/mcf5225x: Remove unused file
- a5336741 - bsps: Simplify build
- 39debbc8 - nios2: Use higher level error handling
- 8173b468 - score: Mark _CPU_Thread_Idle_body() as no-return
- 5b215a30 - score: Simplify _Terminate()
- f463e5ad - score: Remove unused _CPU_Fatal_halt()
- def78bc5 - score: Disable ISR for fatal extensions

Compare with previous version

Author: Sebastian Huber 2024-08-08T03:38:46.309Z

reset approvals from @opticron by pushing to the branch

Author: Sebastian Huber 2024-08-08T03:39:20.899Z

marked this merge request as **ready**

Author: Sebastian Huber 2024-08-08T03:39:20.920Z

changed the description

Author: Sebastian Huber 2024-08-08T03:43:51.296Z

added 3 commits

- 04bbf59a - score: Simplify _Terminate()
- c438f07d - score: Remove unused _CPU_Fatal_halt()
- 96ebe481 - score: Disable ISR for fatal extensions

Compare with previous version

Author: Amar Takhar 2024-08-08T03:59:48.137Z

approved this merge request

Author: Sebastian Huber 2024-08-08T09:27:33.637Z

mentioned in merge request !176

Author: Sebastian Huber 2024-08-09T04:33:05.739Z

added 19 commits

- 96ebe481...5eaf6595 - 2 commits from branch `rtems/rtos:main`
- 5eaf6595...b54f85f0 - 7 earlier commits
- 973a5f22 - bsps/sparc: Use default fatal extension
- 29957a47 - bsp/niagara: Use default fatal extension
- c0f4edbd - bsp/mrm332: Remove unused file
- ab1a8aad - bsp/mcf5225x: Remove unused file
- c4a36de6 - bsps: Simplify build
- bf62b066 - nios2: Use higher level error handling
- beb41a19 - score: Mark _CPU_Thread_Idle_body() as no-return
- 24deedce - score: Simplify _Terminate()
- e7a891df - score: Remove unused _CPU_Fatal_halt()
- c02fb9ef - score: Disable ISR for fatal extensions

Compare with previous version

Author: Sebastian Huber 2024-08-12T06:00:29.985Z

added 27 commits

- c02fb9ef...d81bf045 - 10 commits from branch `rtems/rtos:main`

- d81bf045...768fd8a7 - 7 earlier commits
- d68c3a6b - bsps/sparc: Use default fatal extension
- 51549dc8 - bsp/niagara: Use default fatal extension
- b00bcaac - bsp/mrm332: Remove unused file
- 56f4ab7e - bsp/mcf5225x: Remove unused file
- 333a2d4d - bsps: Simplify build
- ee09cd3d - nios2: Use higher level error handling
- 0472f825 - score: Mark _CPU_Thread_Idle_body() as no-return
- ca06cf02 - score: Simplify _Terminate()
- dc78eb97 - score: Remove unused _CPU_Fatal_halt()
- 1f674fec - score: Disable ISR for fatal extensions

Compare with previous version

Author: Gedare Bloom 2024-08-14T20:52:42.625Z

approved this merge request

Author: Chris Johns 2024-08-14T23:37:36.942Z

Does this MR change the function signature for `bsp_reset` ?

Author: Sebastian Huber 2024-08-14T23:37:36.942Z

The bsp_reset() function is marked as no return and has now fatal source/code parameters:

```
1 void bsp_reset( rtems_fatal_source source, rtems_fatal_code code );
```

This was necessary to unify the fatal extension of all BSPs.

Author: Chris Johns 2024-08-14T23:37:36.942Z

Reset can be overridden by an app by overriding the call using the linker. An example is a Zynq app I know of where the hardware uses a watchdog to override the default reset behavior because the SoC generated reset does not drive POR low. The system level requirement is all hardware must be reset by software. This change sort of breaks that decade old application. You could argue the additional arguments will be ignored. I would rather we acknowledge that than ignore it.

The other problem is deciding if these `bootcard` calls are interfaces we need to maintain? I do not have an answer for this because it is double edged and can cut both ways.

I like `void bsp_reset(void)` because it is clearly about performing a reset and nothing more. The addition of the options implies extra functionality. Do the arguments mean there can optionally be an extra layer added in a BSP before the actual reset is performed? What do you see the arguments being used for?

I also noticed BSPs have slightly different signatures, some with attributes? Does this means the function signature is BSP specific?

Author: Sebastian Huber 2024-08-14T23:37:36.942Z

The function is declared in <bsp/bootcard.h>:

```
RTEMS_NO_RETURN void bsp_reset(rtems_fatal_source source, rtems_fatal_
↪code code);
```

The system termination changes are something for the hand written release notes. In existing applications, you can use RTEMS version defines to ensure compatibility to a certain RTEMS version.

The sparc `bsp_reset()` uses a system call with two parameters to do the reset:

```
SYM(bsp_reset):
SYM(sparc_syscall_exit):

mov     SYS_exit, %g1
mov     %o0, %g2        ! Additional exit code 1
mov     %o1, %g3        ! Additional exit code 2
ta      SPARC_SWTRAP_SYSCALL
```

Another use case could be to save the source/code in a reset safe register. After reset, the boot code could check this register and do do some actions depending on the reset cause.

Author: Chris Johns 2024-08-14T23:37:36.942Z

Thanks for the information. I suggest the release notes update reference this MR as MRs are now in the release notes.

Author: Chris Johns 2024-08-14T22:13:12.039Z

marked this merge request as **draft**

Author: Chris Johns 2024-08-14T22:13:47.991Z

I have marked this MR as draft until the signature change question is resolved as I cannot see a resolved button.

Author: Chris Johns 2024-08-14T23:37:36.965Z

resolved all threads

Author: Chris Johns 2024-08-14T23:37:53.093Z

added 18 commits

- 73918bc7 - 1 commit from branch `rtems/rtos:main`
- 73918bc7...ce7a2eb1 - 7 earlier commits
- 2b18564c - bsps/sparc: Use default fatal extension
- 32e1aa50 - bsp/niagara: Use default fatal extension
- 3b7af453 - bsp/mrm332: Remove unused file
- 1b344ea6 - bsp/mcf5225x: Remove unused file
- 1c3d630c - bsps: Simplify build
- b358e678 - nios2: Use higher level error handling
- 95718392 - score: Mark _CPU_Thread_Idle_body() as no-return
- 29ffcdc0 - score: Simplify _Terminate()
- bebb3cd8 - score: Remove unused _CPU_Fatal_halt()
- 78c6a2ee - score: Disable ISR for fatal extensions

Compare with previous version

Author: Chris Johns 2024-08-14T23:38:05.841Z

marked this merge request as **ready**

Author: Chris Johns 2024-08-14T23:38:20.315Z

approved this merge request

Author: Amar Takhar 2024-08-16T19:47:18.952Z

added 18 commits

- 606584d0 - 1 commit from branch `rtems/rtos:main`
- 606584d0...ee5d213c - 7 earlier commits
- 4d640833 - bsps/sparc: Use default fatal extension
- 184a11c5 - bsp/niagara: Use default fatal extension
- edc982a5 - bsp/mrm332: Remove unused file
- 4defaed3 - bsp/mcf5225x: Remove unused file
- a8fffdc7 - bsps: Simplify build

- 963f2c16 - nios2: Use higher level error handling
- 6fe1118f - score: Mark _CPU_Thread_Idle_body() as no-return
- ef5b0e15 - score: Simplify _Terminate()
- 52eecb3e - score: Remove unused _CPU_Fatal_halt()
- 41022503 - score: Disable ISR for fatal extensions

Compare with previous version

Author: Amar Takhar 2024-08-16T19:47:35.003Z

@joel this needs approval from you due to Moxie

Author: Sebastian Huber 2024-08-21T07:39:44.927Z

mentioned in issue administration/gitlab#69

Author: Joel Sherrill 2024-08-21T14:10:32.140Z

approved this merge request

Author: Sebastian Huber 2024-08-21T14:59:03.761Z

added 17 commits

- 41022503...54a01ab1 - 7 earlier commits
- f83605b8 - bsps/sparc: Use default fatal extension
- a5a431a7 - bsp/niagara: Use default fatal extension
- b356ab88 - bsp/mrm332: Remove unused file
- 0d336cde - bsp/mcf5225x: Remove unused file
- 92a10939 - bsps: Simplify build
- e494ab25 - nios2: Use higher level error handling
- 409924e9 - score: Mark _CPU_Thread_Idle_body() as no-return
- 6ec92dd3 - score: Simplify _Terminate()
- c5ce3e92 - score: Remove unused _CPU_Fatal_halt()
- 16a346a4 - score: Disable ISR for fatal extensions

Compare with previous version

Author: Sebastian Huber 2024-08-21T14:59:19.019Z

reset approvals from @joel, @chris, @gedare, and @amar by pushing to the branch

Author: Sebastian Huber 2024-08-21T15:05:52.306Z

I had to fix a test case. Sorry, this did reset all the approvals.

Author: Gedare Bloom 2024-08-21T16:56:01.520Z

approved this merge request

Author: Kinsey Moore 2024-08-21T17:10:57.548Z

approved this merge request

Author: Sebastian Huber 2024-08-23T06:47:36.031Z

@joel Sorry, I had to fix a test case. Would you mind approving this MR? Thanks.

Author: Joel Sherrill 2024-08-23T14:53:56.603Z

approved this merge request

Author: Joel Sherrill 2024-08-23T14:54:43.399Z

added 18 commits

- 991b3b16 - 1 commit from branch `rtems/rtos:main`
- 991b3b16...ca968579 - 7 earlier commits
- 2bb8ce97 - bsps/sparc: Use default fatal extension
- 21282016 - bsp/niagara: Use default fatal extension
- 450f0d7e - bsp/mrm332: Remove unused file
- 9b7d36c6 - bsp/mcf5225x: Remove unused file
- 5cc04d54 - bsps: Simplify build
- cd748d5f - nios2: Use higher level error handling
- e2ce9d42 - score: Mark _CPU_Thread_Idle_body() as no-return
- e80883b4 - score: Simplify _Terminate()
- e81a5db7 - score: Remove unused _CPU_Fatal_halt()
- 3332e547 - score: Disable ISR for fatal extensions

Compare with previous version

3.9.2.127 98 - Add new section: .debug_gdb_scripts, across all executables on RTEMS

Id	98
State	merged
Merged by	Amar Takhar
Merged at	2024-08-05T21:34:29.756Z
Reviewer(s)	Christian Mauderer
Created	2024-06-27T19:08:50.879Z
Updated	2024-08-19T07:30:50.806Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/98
Commit	e13236123ca8a6d7934b75aee03ba0c8bfb268ba

Summary

This MR will modify linker scripts across all architectures (and every BSP for some older architectures), to let their respective linkers know about the new section, `.debug_gdb_scripts` added when linking (from `cpukit/sapi/src/exinit.c`). This is required for auto-loading of Python script(s) specified in the section, which in turn allows for GCC's pretty-printing scripts to load automatically - thereby adding pretty-printing support to RTEMS GDB.

Closes rtems/rtos/rtems#5035

Author: Suraj Kumar 2024-06-27T19:49:22.362Z

Author: Suraj Kumar 2024-07-02T21:20:20.272Z

added 6 commits

- 96f225fd - aarch64: modified linkcmds.base to add new section for GDB pretty-printing
- 397957d3 - arm: modified linkcmds.base to add new section for GDB pretty-printing
- 2c5447fb - m68k: modified linkcmds.base to add new section for GDB pretty-printing
- d8386c94 - powerpc: modified linkcmds.base to add new section for GDB pretty-printing
- e0245cf7 - sparc: modified linkcmds.base to add new section for GDB pretty-printing
- 4f07d3f6 - sparc64: modified linkcmds to add new section for GDB pretty-printing

Compare with previous version

Author: Suraj Kumar 2024-07-08T16:15:06.878Z

added 4 commits

- 058cf6b4 - riscv: modified linkcmdsbase.yml to add new section for gdb-inlined script
- aa59a331 - sh: modified linkcmds for all BSPs for gdb-inlined script support
- cf11cc16 - x86_64: modified linkcmds for gdb-inlined script support
- 10e0e1d9 - moxie: modified linkcmds for gdb-inlined script support

Compare with previous version

Author: Suraj Kumar 2024-07-08T16:28:36.463Z

added 1 commit

- 35989010 - cpukit/sapi/src: added DEFINE_GDB_PY macro to exinit.c to embed gdb-inline section

Compare with previous version

Author: Suraj Kumar 2024-07-08T16:58:16.208Z

added 1 commit

- 65380e87 - mips: modified linker script files for gdb-inlined script support

Compare with previous version

Author: Suraj Kumar 2024-07-08T17:07:07.273Z

added 1 commit

- c36be1c1 - or1k: modified linkcmds.base to add gdb-inlined script support

Compare with previous version

Author: Suraj Kumar 2024-07-08T17:14:33.774Z

changed title from **Draft: {-arm: modified linkcmds.base to add new section for gdb-inlined script-}** to **Draft: {+Add new section: ``.debug_gdb_scripts``, across all executables on RTEMS+}**

Author: Suraj Kumar 2024-07-08T17:14:33.800Z

changed the description

Author: Suraj Kumar 2024-07-08T17:16:34.011Z

changed title from **Draft: Add new section: {-``-}.debug_gdb_scripts{-``-}, across all executables on RTEMS** to **Draft: Add new section: .debug_gdb_scripts, across all executables on RTEMS**

Author: Suraj Kumar 2024-07-08T17:55:23.679Z

added 1 commit

- 1f2f5898 - m68k: modified BSP specific linker scripts

Compare with previous version

Author: Suraj Kumar 2024-07-08T18:02:07.172Z

added 1 commit

- d36a8f0a - bfin: modified linker scripts for all BSPs for gdb-inlined script support

Compare with previous version

Author: Suraj Kumar 2024-07-08T18:45:19.331Z

added 1 commit

- c59154e2 - lm32: modified linker scripts for gdb-inlined script support

Compare with previous version

Author: Christian Mauderer 2024-07-12T06:12:28.324Z

For some reason you have a tab instead of two spaces here. You have that a few more times.

Author: Suraj Kumar 2024-07-11T20:50:52.180Z

changed this line in version 10 of the diff

Author: Suraj Kumar 2024-07-12T06:12:28.324Z

Seems to have been an issue with my code editor, even though I had configured tab to 2 spaces instead of 4. Nevertheless, I have fixed all the formatting issues. Thanks for pointing them out.

Author: Christian Mauderer 2024-07-16T14:47:32.414Z

Is it necessary to have it inside of a function or could you place it outside of one? I'm not sure whether the `asm()` works outside of a function so please just tell me if it doesn't work.

If it works outside of a function, you might can remove the macro too and just add the `asm()` directly. Inside the function I like the solution because it does look quite clean.

Author: Suraj Kumar 2024-07-16T14:47:32.414Z

@c-mauderer Sorry for the late reply, I missed this comment.

Yes, `asm()` works outside of a function as well, would you like me to remove the macro and the function call and just add it directly as global code, or inside the function?

I'm not sure what you meant by:

> Inside the function I like the solution because it does look quite clean.

Author: Sebastian Huber 2024-07-16T14:47:32.414Z

I hope this GDB stuff doesn't need anything which executes on the target. If this `DEFINE_GDB_PY()` just produces a couple of debug sections, then it should be placed at file scope.

Author: Chris Johns 2024-07-16T14:47:32.414Z

It should be stripped by our linker command files. I doubt we have a wildcard that would catch these sections.

Author: Suraj Kumar 2024-07-16T14:47:32.414Z

@sebhub Yes, I think placing `DEFINE_GDB_PY()` at the very top might be a more suitable and clean solution. I was waiting for @c-mauderer's reply as well on this.

Author: Christian Mauderer 2024-07-16T14:47:32.414Z

If it works at a file scope: Please place it at that scope.

You only add the code once. So I don't think the macro is necessary. I would suggest to use the `asm()` statement directly.

Author: Suraj Kumar 2024-07-17T00:21:01.383Z

changed this line in version 12 of the diff

Author: Christian Mauderer 2024-07-10T18:47:00.564Z

requested changes

Author: Christian Mauderer 2024-07-10T18:47:35.569Z

requested review from @c-mauderer

Author: Suraj Kumar 2024-07-11T20:50:53.212Z

added 1 commit

- 4b64038e - linker scripts: fixed formatting - replaced tab with 2 spaces

Compare with previous version

Author: Suraj Kumar 2024-07-11T20:53:09.060Z

added 1 commit

- ff6e39a2 - linker scripts: some more formatting changes (tab –> space)

Compare with previous version

Author: Sebastian Huber 2024-07-17T02:04:12.572Z

Why don't we add the Python code directly here? Relying on a matching RTEMS Tools installation could be a bit brittle.

Author: Chris Johns 2024-07-17T02:04:12.572Z

The idea was to minimize the amount of code we add here and to align the contents of `stdcxx.py` with what ever GCC does. Adding the needed code here means this code is then keyed into how GCC lays out out the pretty printers.

How would you find the version string for GCC? I cannot find it in the built in defines? The `stdcxx.py` is updated by the RSB when installing `gcc` to point to the specific release of `gcc` being built. The RSB finds the version by running the freshly built `gcc`.

Being in `rtems-tools` we could use it to handle RTEMS specific pretty printers as well. I suppose in respect to that maybe the file should be called `rtems.pprinters` and it loads `stdcxx.py`?

Author: Suraj Kumar 2024-07-17T02:04:12.572Z

@sebhub Also, we need not ever change this code as it essentially only points to (loads) another script in `rtems-tools`, which we can modify at will. The `stdcxx.py` script, as Chris has already mentioned, would be installed fresh with every new build with the modifications to the RSB.

@chris Are you suggesting we make a new file (`pprinters.py`) and have that load `stdcxx.py` and other printers? What I had in mind was a little different: We could have a separate directory under `share/gdb/python/rtems` specially for RTEMS specific pretty-printers, and leave `stdcxx.py` as it is since it is only for loading the printers that GCC provides. I felt that would also provide a nice distinction between the two. We can modify `__init__.py` under `gdb/python/rtems` to automatically import every file under that directory at initialisation time, so the support is always

there for both regardless and we would not need to modify the custom section at all. Please let me know what you think of this.

Author: Chris Johns 2024-07-17T02:04:12.572Z

Yes I think we should add a new file to `rtrems-tools` called `pprinters.py` and the debug section in the MR loads that file. This file can load the installed `stdcxx.py`. This extra layer gives us the ability to update `rtems-tools` to automatically load any other printers we development. For example the pretty printers to inspect internal structures.

Author: Suraj Kumar 2024-07-17T00:21:02.201Z

changed this line in version 12 of the diff

Author: Suraj Kumar 2024-07-17T02:04:12.572Z

I have updated the file (`exinit.c`) with the necessary changes.

Author: Chris Johns 2024-07-17T02:05:15.402Z

Thanks. Looks good to me. I will resolve this thread and if @sebhub has any issues it can be unresolved.

Author: Suraj Kumar 2024-07-17T00:21:02.433Z

added 1 commit

- f85d5843 - cpukit/sapi/src: removed macro, made asm() global at file scope and changed...

Compare with previous version

Author: Chris Johns 2024-07-17T02:04:12.625Z

resolved all threads

Author: Chris Johns 2024-07-17T02:04:28.452Z

added 39 commits

- f85d5843...26b95e14 - 19 commits from branch `rtems/rtos:main`
- 26b95e14...3683c21b - 10 earlier commits
- 797f0081 - moxie: modified linkcmds for gdb-inlined script support

- 8908cd90 - cpukit/sapi/src: added DEFINE_GDB_PY macro to exinit.c to embed gdb-inline section
- 8d1ad3e7 - mips: modified linker script files for gdb-inlined script support
- 2eac1452 - or1k: modified linkcmds.base to add gdb-inlined script support
- c12e356b - m68k: modified BSP specific linker scripts
- 720964cf - bfin: modified linker scripts for all BSPs for gdb-inlined script support
- 9515337b - lm32: modified linker scripts for gdb-inlined script support
- 2dc79a9b - linker scripts: fixed formatting - replaced tab with 2 spaces
- 82c8939a - linker scripts: some more formatting changes (tab –> space)
- 11097eaf - cpukit/sapi/src: removed macro, made asm() global at file scope and changed...

Compare with previous version

Author: Suraj Kumar 2024-07-17T02:09:14.767Z

added 1 commit

- 789cfe8b - cpukit/sapi/src: fixed grammar mistake in comment in exinit.c

Compare with previous version

Author: Joel Sherrill 2024-08-05T21:27:22.485Z

approved this merge request

Author: Amar Takhar 2024-08-05T21:30:05.537Z

added 63 commits

- 789cfe8b...a69269da - 42 commits from branch `rtems/rtos:main`
- a69269da...5fa414f3 - 11 earlier commits
- fad8219a - cpukit/sapi/src: added DEFINE_GDB_PY macro to exinit.c to embed gdb-inline section
- aea2f385 - mips: modified linker script files for gdb-inlined script support
- 53c2dc6b - or1k: modified linkcmds.base to add gdb-inlined script support
- 56158c1c - m68k: modified BSP specific linker scripts
- 39a2ad62 - bfin: modified linker scripts for all BSPs for gdb-inlined script support
- 79d5f22b - lm32: modified linker scripts for gdb-inlined script support
- 0c6b1f11 - linker scripts: fixed formatting - replaced tab with 2 spaces

- c76f41af - linker scripts: some more formatting changes (tab –> space)
- 362deb38 - cpukit/sapi/src: removed macro, made asm() global at file scope and changed...
- e1323612 - cpukit/sapi/src: fixed grammar mistake in comment in exinit.c

Compare with previous version

Author: Amar Takhar 2024-08-05T21:30:50.193Z

marked this merge request as **ready**

Author: Amar Takhar 2024-08-05T21:30:53.032Z

approved this merge request

Author: Amar Takhar 2024-08-06T03:21:59.035Z

This had an interdependence with https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/35 I should not have merged it until that was done.

GitLab offers a way to block MRs when they have an interdependence getting too used to that and jumped the gun here

Author: Suraj Kumar 2024-08-19T07:30:50.775Z

mentioned in merge request rtems/docs/rtems-docs!43

3.9.2.128 177 - msdos: Fix file truncated to 0

Id	177
State	merged
Merged by	Gedare Bloom
Merged at	2024-08-15T15:42:52.181Z
Created	2024-08-08T05:06:26.138Z
Updated	2024-08-17T04:41:54.505Z
Milestone	6.1
Labels	filesystem::fat
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/177
Commit	606584d032b29f076400c6ea9fccd2b5fef96c6b

Summary

msdos: Fix file truncated to 0

Previously the first cluster of the file was not updated when truncating to 0 but was in any case freed. Now the first cluster of the file is updated during the truncation, leaving the directory entry in a consistent state.

Closes #2757

Author: Loris Nardo 2024-08-08T17:43:14.859Z

added 1 commit

- 7d4b6ca4 - msdos: Fix file truncated to 0

Compare with previous version

Author: Loris Nardo 2024-08-10T09:33:03.402Z

added 4 commits

- 7d4b6ca4...e8172c86 - 3 commits from branch `rtems/rtos:main`
- 9e8ae66d - msdos: Fix file truncated to 0

Compare with previous version

Author: Chris Johns 2024-08-11T02:06:03.242Z

added 3 commits

- 9e8ae66d...a51b7d4b - 2 commits from branch `rtems/rtos:main`
- 33a2bc0a - msdos: Fix file truncated to 0

Compare with previous version

Author: Chris Johns 2024-08-11T02:06:23.455Z

approved this merge request

Author: Gedare Bloom 2024-08-15T15:42:11.257Z

approved this merge request

Author: Gedare Bloom 2024-08-15T15:42:30.250Z

added 9 commits

- 33a2bc0a...73918bc7 - 8 commits from branch `rtems/rtos:main`
- 606584d0 - msdos: Fix file truncated to 0

Compare with previous version

Author: Gedare Bloom 2024-08-17T04:41:54.522Z

Is there a test case for this anywhere?

Author: Loris Nardo 2024-08-17T04:41:54.485Z

There is a testcase about truncate to zero length (fsrdwr), but that testcase passes also before the changes of this MR. It seems that the FAT implementation ignores the value of the first cluster if the file length is zero.

3.9.2.129 86 - Feature/stack reporter config

Id	86
State	merged
Merged by	Amar Takhar
Merged at	2024-08-02T20:00:36.878Z
Created	2024-06-20T23:44:58.540Z
Updated	2024-08-15T18:16:29.077Z
Milestone	6.1
Labels	cpukit, rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/86
Commit	dc123bb828251b4e567390e9b6cfcae48af967b4

Summary

In this draft merge request I added a feature that make the stack checker function that reports a blown stack configurable. I followed the same pattern of `CONFIGURE_TASK_STACK_ALLOCATOR` which is configure at `rtems/cpukit/include/rtems/confdefs/wkspace.h` as follows: 1. At include/rtems/confdefs/extenions.h I added the conditional configuration macros following `CONFIGURE_TASK_STACK_ALLOCATOR` provided here include/rtems/confdefs/wkspace.h 2. Here include/rtems/confdefs/percpu.h I remove everything related to stack check configuration macros I added before. 3. At include/rtems/stackchk.h I've defined the function pointer, declared a variable of it's type same as [include/rtems/score/stack.h](https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/cpukit/include/rtems/score/stack.h#L78) and mapped the configuration constants to the reporting function like [bsps/include/bsp/stackalloc.h](https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/bsps/include/bsp/stackalloc.h?ref_type=heads) 4. Modified libmisc/stackchk/check.c so that `rtems_stack_checker_switch_extension` call the function pointer instead of the default `Stack_check_report_blown_task`.

Author: Mohamed Hassan 2024-06-20T23:52:41.869Z

mentioned in issue #5047

Author: Joel Sherrill 2024-07-05T19:31:24.576Z

Why do both configure the same value?

Author: Mohamed Hassan 2024-07-05T19:31:24.576Z

Sorry I don't get this, I have one function pointer `_Stack_checker_reporter_initialize: * if CONFIGURE_STACK_CHECKER_REPORTER` defined it will point to `CONFIGURE_STACK_CHECKER_REPORTER * else` it will point to `DEFAULT_STACK_CHECKER_REPORTER`

this pointer is called inside `rtems_stack_checker_switch_extension` can you elaborate more.

Author: Mohamed Hassan 2024-06-28T09:23:54.184Z

changed this line in version 4 of the diff

Author: Joel Sherrill 2024-07-08T19:53:55.297Z

This has the right signature but the name isn't right. The type would be something like Stack_checker_Reporter_extension.

I can't tell from the web but the line looks to be too long and probably should be split. Check me.

Author: Mohamed Hassan 2024-07-08T19:53:55.297Z

ok noted will be modified.

Author: Mohamed Hassan 2024-06-28T09:23:55.140Z

changed this line in version 4 of the diff

Author: Joel Sherrill 2024-07-08T19:53:55.297Z

I think I noted that this should be formatted like a function prototype.

Author: Joel Sherrill 2024-07-05T20:20:36.838Z

Why are the type and variable name and method all the same? It isn't an initialize method anyway. Think about the naming.

Author: Mohamed Hassan 2024-07-05T20:20:36.838Z

I tried to follow the stack allocate pattern

```
const Stack_Allocator_allocate _Stack_Allocator_allocate =
_CONFIGURE_ASSERT_NOT_NULL(
Stack_Allocator_allocate,
CONFIGURE_TASK_STACK_ALLOCATOR
);
```

however I will revisit the naming.

Author: Mohamed Hassan 2024-07-16T20:09:58.908Z

changed this line in version 14 of the diff

Author: Joel Sherrill 2024-07-08T19:44:20.767Z

If this is the default reporter, the name would be better as _Stack_check_Report_blown_defalut or something along that line._

Author: Mohamed Hassan 2024-07-08T19:44:20.767Z

ok noted

Author: Mohamed Hassan 2024-06-28T09:23:56.158Z

changed this line in version 4 of the diff

Author: Joel Sherrill 2024-07-08T19:44:20.767Z

The stack checker should have a custom checker. The user application/test will provide that and it can be named anything. Yours could be "stackchk03_blown_stack_reporter" and it should work.

Author: Joel Sherrill 2024-07-08T19:44:20.767Z

If this code is current, the custom reporter should not be here. It is a user provided method. It is hooked in by defining the right macro which sets the variable to the user's routine, not the default.

Author: Mohamed Hassan 2024-07-08T19:44:20.767Z

Noted, sorry in the most updated code I relocated the function implementation to the test but kept it's prototype.

Author: Joel Sherrill 2024-07-09T17:09:51.399Z

Same naming issues as stated above.

Author: Mohamed Hassan 2024-07-09T17:09:51.399Z

ok

Author: Mohamed Hassan 2024-06-27T20:42:27.620Z

changed this line in version 3 of the diff

Author: Joel Sherrill 2024-07-09T17:09:51.399Z

This is still showing the type as `Stack_checker_reporter_initialize`. Hopefully that's just a gitlab artifact. I thought I saw this renamed.

Author: Mohamed Hassan 2024-07-09T17:09:51.399Z

Yes it is, it was modified earlier. you can view the updated code

Author: Joel Sherrill 2024-07-09T17:09:51.399Z

Line 254 (closing parenthesis) should be in column 1.

Author: Mohamed Hassan 2024-07-09T17:09:51.399Z

Ok, done.

Author: Joel Sherrill 2024-07-08T19:54:31.632Z

When seen in context, the name looks wrong. The variable set could be "Stack_check_report{-_blown_task" and the current function renamed to "-}Stack_check_report{-_blown_task_default". -}

Looking at the stackchk.h header, the public types and functions follow the rtems_ naming patterns which leads us to something more like:

- rtems_stack_check_report_blown_task_handler - For the type ???
- rtems_stack_check_report_blown_task - variable name
- rtems_stack_check_report{-_blown_task_default - default handler-}

@gedare What are your thoughts on the names of type, variable set, and default reporting function?

Author: Mohamed Hassan 2024-07-08T19:54:31.632Z

Alright, all will be revised.

Author: Mohamed Hassan 2024-06-28T09:23:56.843Z

changed this line in version 4 of the diff

Author: Joel Sherrill 2024-07-08T19:54:31.632Z

It just occurred to me what might help. Using “initialize” in the name of the type or function name is bad and confusing. All names I suggest likely could still be better but it is a step in the right direction.

- ``_Stack_checker_reporter_initialize``is a bad name for the reporter function or type.
- `_Stack_checker_Reporter_handler` is better name for the type.
- `_Stack_checker_Reporter` is a better name for the variable configured.
- Eventually providing the current blown task handler and a quieter alternative would be useful. Both will be prototyped in stackchk.h and implemented in check.c. Further
- `_Stack_checker_Reporter_print_details` is a better name for the current reporter function.
- `_Stack_checker_Reporter_quiet` can be an alternative reporter implementation that JUST calls fatal error.

Notice the use of _ and a capital letter to indicate grouping and item within that group. In C++, the variable might be Stack_Checker::Reporter.

Author: Joel Sherrill 2024-06-25T06:26:15.076Z

The name changes will impact more than I marked.

Author: Mohamed Hassan 2024-06-25T22:03:31.528Z

added 37 commits

- cc9481e2...e5b6fa02 - 24 commits from branch `rtems/rtos:main`
- e5b6fa02...168ec53c - 3 earlier commits
- 0347be94 - include/rtems/confdefs: Modify the config macro
- 0d825982 - include/rtems/stackchk: declare default report blown stack function
- df1d4a12 - libmisc/stackchk: remove stack report function pointer instantiation
- 08279d0f - include/rtems/confdefs: Added stack report config macros
- 5a488730 - include/rtems/confdefs: Removed stack report config macros
- d5fdd746 - include/rtems/stackchk: Defined function pointer to initialize the selected stack reporter
- aceb33d5 - libmisc/stackchk: Modified stack checker reporting function to call the selected reporting method
- ae472e32 - confdefs/extension.h: fix inculsion/dependencies

- ff1ec646 - include/rtems/stackchk.h: fix inclusion/dependencies
- 353cf33b - libtests/stackchk03: Add new testsuite for stack reporting configuration

Compare with previous version

Author: Mohamed Hassan 2024-06-27T20:42:28.254Z

added 3 commits

- e809af70 - rtems/confdefs: update the macro check
- f8abbc10 - include/rtems: modify the definition constant
- d9d2f980 - libtests/stackchk03: change the order of header file inclusion

Compare with previous version

Author: Mohamed Hassan 2024-06-28T09:23:57.075Z

added 18 commits

- c847f4c1 - 1 commit from branch `rtems/rtos:main`
- c847f4c1...a7f80e97 - 7 earlier commits
- 6ab03a7f - include/rtems/confdefs: Removed stack report config macros
- 77d827e8 - include/rtems/stackchk: Defined function pointer to initialize the selected stack reporter
- 1e74ade9 - libmisc/stackchk: Modified stack checker reporting function to call the selected reporting method
- 134a47de - confdefs/extension.h: fix inculsion/dependencies
- 8c9fe6ce - include/rtems/stackchk.h: fix inclusion/dependencies
- 5ec2477a - libtests/stackchk03: Add new testsuite for stack reporting configuration
- 7d3e3131 - rtems/confdefs: update the macro check
- 0a19b927 - include/rtems: modify the definition constant
- 1daa7c24 - libtests/stackchk03: change the order of header file inclusion
- e7c5a341 - libmisc/stackchk: Add configurable reporter

Compare with previous version

Author: Mohamed Hassan 2024-07-05T16:03:30.143Z

added 24 commits

- e7c5a341...58748a3a - 6 commits from branch `rtems/rtos:main`
- 58748a3a...dcb8f16c - 8 earlier commits

- d52a2fe3 - include/rtems/stackchk: Defined function pointer to initialize the selected stack reporter
- b35d0e7e - libmisc/stackchk: Modified stack checker reporting function to call the selected reporting method
- 3bc1d6ac - confdefs/extension.h: fix inculsion/dependencies
- 19046641 - include/rtems/stackchk.h: fix inclusion/dependencies
- 7581654a - libtests/stackchk03: Add new testsuite for stack reporting configuration
- 4d50329b - rtems/confdefs: update the macro check
- 368a91d7 - include/rtems: modify the definition constant
- 44c12027 - libtests/stackchk03: change the order of header file inclusion
- 5973afc4 - libmisc/stackchk: Add configurable reporter
- 7cbececd - libtest/stackchk03: Fix the testsuite stackchk03 for reporting function

Compare with previous version

Author: Mohamed Hassan 2024-07-05T19:03:22.639Z

added 7 commits

- 9ba6cc34 - cpukit/../confdefs/percpu.h Add config macro to select stack report
- 9e9d8930 - include/rtems/confdefs: Modify the config macro
- ccde809c - include/rtems/confdefs: Added stack report config macros
- e5cf3c64 - confdefs/extension.h: fix inculsion/dependencies
- e90e8cf8 - rtems/confdefs: update the macro check
- d317e681 - libmisc/stackchk: Add configurable reporter
- f5ae71cc - libtest/stackchk03: Fix the testsuite stackchk03 for reporting function

Compare with previous version

Author: Mohamed Hassan 2024-07-05T19:24:51.640Z

added 7 commits

- 329bce2f - libmisc/stackchk: Add configurability to stack checker reporting function
- 79d2c933 - libmisc/stackchk: Follow config-idle-task_body pattern in configuring stack checker reporter
- b701b5a1 - libmisc/stackchk: Follow config_task_stack_allocator patter in configuring stack checker reporter

- df20d56c - libmisc/stackchk: Fix inculsion/dependencies and develop a test-suite
- a1e0962f - libmisc/stackchk: Fix naming
- adaa09d5 - libmisc/stackchk: Add configurable reporter
- 8de89d4d - libtest/stackchk03: Fix the testsuite stackchk03 for reporting function

Compare with previous version

Author: Joel Sherrill 2024-07-08T19:39:13.017Z

Why was this needed?

Author: Mohamed Hassan 2024-07-08T19:39:13.017Z

It's required for `_CONFIGURE_ASSERT_NOT_NULL`

Author: Joel Sherrill 2024-07-08T19:39:13.017Z

Weird but OK.

Author: Mohamed Hassan 2024-07-16T20:09:59.560Z

changed this line in version 14 of the diff

Author: Joel Sherrill 2024-07-08T19:49:34.925Z

What changed here and why is there no newline at the end of the file?

Author: Mohamed Hassan 2024-07-08T19:49:34.925Z

Actually I don't remember, I added a new blank line at the end of the file, now it's exactly the same as the original file on gitlab.

Author: Mohamed Hassan 2024-07-07T12:04:18.340Z

changed this line in version 8 of the diff

Author: Joel Sherrill 2024-07-09T17:10:52.254Z

Put each parameter on its own line and) on its own. See function prototypes above and follow them.

Author: Mohamed Hassan 2024-07-09T17:10:52.254Z

ok noted.

Author: Joel Sherrill 2024-07-09T17:10:52.254Z

Line 254 -); should be in column 1.

Author: Mohamed Hassan 2024-07-09T17:10:52.254Z

Here, I rewrite it like:

```
typedef void (*Stack_checker_reporter_extension)
(
const Thread_Control *running,
bool pattern_ok
);
```

Author: Mohamed Hassan 2024-07-12T21:27:12.383Z

changed this line in version 11 of the diff

Author: Joel Sherrill 2024-07-08T19:55:08.241Z

This should be provided by the user application. It does not belong here. It could be part of your stackchk test to show it is possible.

Author: Mohamed Hassan 2024-07-08T19:55:08.241Z

Alright, will be modified.

Author: Mohamed Hassan 2024-07-07T12:04:19.403Z

changed this line in version 8 of the diff

Author: Joel Sherrill 2024-07-08T19:40:18.194Z

File header including SPDX, Doxygen, and license. Should be plenty of examples to copy from.

Author: Mohamed Hassan 2024-07-08T19:40:18.194Z

Understood, will be added.

Author: Mohamed Hassan 2024-07-16T20:10:00.186Z

changed this line in version 14 of the diff

Author: Joel Sherrill 2024-07-09T17:11:05.433Z

No need for blank lines between configuration parameters. Use blanks to group similar ones thouogh.

Author: Mohamed Hassan 2024-07-09T17:11:05.433Z

Ok, I will will follow `stackchk02/init.c` format.

Author: Mohamed Hassan 2024-07-07T12:04:20.415Z

changed this line in version 8 of the diff

Author: Mohamed Hassan 2024-07-09T17:11:05.433Z

The blank line #15 will be removed.

Author: Joel Sherrill 2024-07-08T19:52:50.175Z

This should be defining the name of a custom reporter function which is part of this test.

Author: Mohamed Hassan 2024-07-08T19:52:50.175Z

do you mean relocated

```
1 #define STACK_CHECKER_REPORTER_CUSTOM rtems_stack_check_report_blown_
  ↪task_custom
2 #define STACK_CHECKER_REPORTER_DEFAULT rtems_stack_check_report_blown_
  ↪task_default
```

from `stackchk.h` to here? are these definition remain the same regardless of what the custom reporter does, so should it be kept at a header file like `stackchk.h`?

Author: Joel Sherrill 2024-07-08T19:52:50.175Z

Line 16 above should be setting the macro to the name of the user provided custom reporter. Each test/application can provide a unique handler.

The custom handler is not in the RTEMS source. It is part of the application.

Author: Mohamed Hassan 2024-07-11T18:38:17.239Z

changed this line in version 10 of the diff

Author: Joel Sherrill 2024-07-08T19:41:49.458Z

No double blank lines. No blanks between includes unless changing from POSIX ones to RTEMS ones to application specific one. Again, blank lines to indicate groups.

Author: Mohamed Hassan 2024-07-08T19:41:49.458Z

understood, I will will follow `stackchk02/init.c` format.

Author: Mohamed Hassan 2024-07-16T20:10:00.691Z

changed this line in version 14 of the diff

Author: Joel Sherrill 2024-07-09T17:11:14.369Z

Spelling.

Author: Mohamed Hassan 2024-07-09T17:11:14.369Z

Modified.

Author: Mohamed Hassan 2024-07-07T12:04:21.774Z

changed this line in version 8 of the diff

Author: Mohamed Hassan 2024-07-09T17:11:14.369Z

Already fixed, please refer to the latest updated

Author: Joel Sherrill 2024-07-08T19:40:07.195Z

Blank line between license and first text

Author: Mohamed Hassan 2024-07-08T19:40:07.195Z

ok, blank line added.

Author: Joel Sherrill 2024-07-09T16:41:36.857Z

No need for blank lines in this output

Author: Mohamed Hassan 2024-07-09T16:41:36.857Z

alright, blank lines removed.

Author: Mohamed Hassan 2024-07-07T12:04:22.740Z

changed this line in version 8 of the diff

Author: Joel Sherrill 2024-07-05T20:24:38.732Z

I added more comments but they are definitely decreasing in severity. Most are formatting with probably the worst technical one being that the custom stack checker function does NOT appear in RTEMS. It is implemented as part of the user application or test.

Author: Mohamed Hassan 2024-07-07T12:04:22.925Z

added 9 commits

- 89e795a4 - 1 commit from branch `rtems/rtos:main`
- 7989cd42 - libmisc/stackchk: Add configurability to stack checker reporting function
- 89bb3d1a - libmisc/stackchk: Follow config-idle-task_body pattern in configuring stack checker reporter
- 1a052602 - libmisc/stackchk: Follow config_task_stack_allocator patter in configuring stack checker reporter
- 0d52f225 - libmisc/stackchk: Fix inculsion/dependencies and develop a testsuite
- 86549d7a - libmisc/stackchk: Fix naming
- a62623d3 - libmisc/stackchk: Add configurable reporter
- 4507a357 - libtest/stackchk03: Fix the testsuite stackchk03 for reporting function
- e42fc042 - libmisc: Relocate the macro that set the custom reporter to the testsuite

Compare with previous version

Author: Mohamed Hassan 2024-07-08T03:54:28.062Z

added 11 commits

- e42fc042...6d65f2cf - 3 commits from branch `rtems/rtos:main`
- 44dc9112 - libmisc/stackchk: Add configurability to stack checker reporting function
- e75241d5 - libmisc/stackchk: Follow config-idle-task_body pattern in configuring stack checker reporter
- 2ef59535 - libmisc/stackchk: Follow config_task_stack_allocator patter in configuring stack checker reporter
- a3371f7b - libmisc/stackchk: Fix inculsion/dependencies and develop a testsuite
- 5a6e05cd - libmisc/stackchk: Fix naming
- 98132280 - libmisc/stackchk: Add configurable reporter
- 4f0bc0e4 - libtest/stackchk03: Fix the testsuite stackchk03 for reporting function
- 1ca2ee0d - libtest/stackch03: Relocate the user configured stack reporter definition to testsuite

Compare with previous version

Author: Kinsey Moore 2024-07-18T21:26:45.830Z

These and the other header addition from this commit (libmisc/stackchk: Fix inculsion/dependencies and develop a testsuite) look unrelated to the remainder of the content. They need to go with the code that needed them and not in a later commit to fix broken compilation. The codebase should compile after applying each commit in sequence.

Author: Kinsey Moore 2024-07-18T21:26:45.830Z

As I said on Discord, I'd recommend squashing all of your commits for this down to a single commit. This isn't so expansive that it needs multiple commits and squashing avoids having to untangle everything.

Author: Mohamed Hassan 2024-07-18T21:26:45.830Z

Aha, understood, anyways I will squash all the changes into one commit so it will not be confusing anymore.

Author: Mohamed Hassan 2024-07-16T20:10:01.880Z

changed this line in version 14 of the diff

Author: Kinsey Moore 2024-07-08T19:46:27.152Z

requested changes

Author: Joel Sherrill 2024-07-09T17:11:36.901Z

Lines 62 and 63 are odd. Configuring should be like this:

```
#define CONFIGURE_STACK_CHECKER_REPORTER stackchk03_blown_stack_reporter
```

There should not be a define named STACK_CHECKER_REPORTER_CUSTOM.

Author: Mohamed Hassan 2024-07-11T18:38:19.211Z

changed this line in version 10 of the diff

Author: Joel Sherrill 2024-07-18T21:27:37.842Z

No blank lines between these.

Author: Joel Sherrill 2024-07-18T21:27:37.842Z

Line 73-74 need to be reduced to one blank.

Author: Mohamed Hassan 2024-07-18T21:27:37.842Z

Alright, done.

Author: Mohamed Hassan 2024-07-13T09:30:19.379Z

changed this line in version 12 of the diff

Author: Joel Sherrill 2024-07-23T19:05:04.037Z

You should add yourself as a copyright.

Author: Mohamed Hassan 2024-07-23T19:05:04.037Z

Alright, done.

Author: Mohamed Hassan 2024-07-11T18:38:20.068Z

changed this line in version 10 of the diff

Author: Joel Sherrill 2024-07-23T19:05:04.037Z

Entire separate lines for each party:

```
Copyright (C) 2024 On-Line Applications Research Corporation (OAR)
Copyright (C) 2024 Mohamed Hassan <muhammad.hamdy.hassan@gmail.com>
```

Author: Mohamed Hassan 2024-07-23T19:05:04.037Z

Noted, will be modified.

Author: Joel Sherrill 2024-07-23T19:05:04.037Z

Just lists OAR. It doesn't look like you added yourself.

Author: Mohamed Hassan 2024-07-23T19:05:04.037Z

I delete this file in the latest update, I'm using stackch for testing reporting function: * stackchk * stackchk03

Author: Kinsey Moore 2024-07-23T19:05:04.037Z

This appears to be corrected.

Author: Joel Sherrill 2024-07-18T21:30:16.077Z

Look at stackchk for rtems_task_create() and the file blow.c. Really create a task and let it blow the stack. In fact, if you put the rtems configuration in its own file in stackchk (keep what's there) and put your's from stackchk03 in its own file (w/custom handler), then you can adjust the yaml build spec file to share everything else from stackchk. If this isn't clear, chat me.

Author: Mohamed Hassan 2024-07-11T18:38:20.380Z

changed this line in version 10 of the diff

Author: Joel Sherrill 2024-07-08T20:02:07.633Z

Closer

Author: Mohamed Hassan 2024-07-11T18:38:20.577Z

added 9 commits

- 1ca2ee0d...26b95e14 - 8 commits from branch `rtems/rtos:main`
- c2b7b386 - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Mohamed Hassan 2024-07-12T21:27:14.586Z

added 1 commit

- 2cb5d7ee - libmisc stackchk: Fix naming and formatting

Compare with previous version

Author: Mohamed Hassan 2024-07-13T09:30:19.606Z

added 1 commit

- 467235de - libmisc/stackchk: Fix the test case

Compare with previous version

Author: Mohamed Hassan 2024-07-13T16:45:57.325Z

added 1 commit

- 0306a70f - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Mohamed Hassan 2024-07-16T20:10:02.124Z

added 1 commit

- d4564f52 - libmisc/stackchk: Optimize the implementation of making stack checker reporter configurable

Compare with previous version

Author: Joel Sherrill 2024-07-22T14:44:44.463Z

Please do not change from the current noisy reporter to a quiet one as part of adding this functionality. This will change behaviour for users from the noisy reporter which has the default since before May 1995 when the git history starts.

Add the configuration option with the noisy reporter in this MR. File an issue to change the reporter to the quiet one. This will let us have a discussion solely on that change of behaviour. You can resolve this comment by filing an issue.

Author: Mohamed Hassan 2024-07-22T14:44:44.463Z

Ok will be changed & an issue will be filed.

Author: Mohamed Hassan 2024-07-20T16:25:22.932Z

changed this line in version 16 of the diff

Author: Kinsey Moore 2024-07-18T21:53:57.477Z

added 7 commits

- d4564f52...5c5b4b83 - 5 commits from branch `rtems/rtos:main`
- 8b0bd51b - libmisc/stackchk: Add configurability to the stack checker reporting function
- e18ec2cb - libmisc/stackchk: Optimize the implementation of making stack checker reporter configurable

Compare with previous version

Author: Kinsey Moore 2024-07-22T20:00:45.229Z

Both commits need their commit messages modified to match the RTEMS commit requirements.

Author: Mohamed Hassan 2024-07-22T20:00:45.229Z

I think I'm following RTEMS Commit requirements. otherwise please advise.

Author: Kinsey Moore 2024-07-22T20:00:45.229Z

For some reason I thought we had a more strict summary length limit. Given that a more strict limit doesn't actually exist, I don't have any additional change requirements for the commit message, but I would suggest more details in the commit message body.

Author: Mohamed Hassan 2024-07-22T20:00:45.229Z

No problem, thanks for you time and your feedback. Noted, I will add details on the commit message body.

Author: Kinsey Moore 2024-07-22T14:45:34.853Z

Please remove these end of file changes from your patches.

Author: Mohamed Hassan 2024-07-22T14:45:34.853Z

I re-added a removed blank line at the end of the file manually to match the original file, otherwise how to remove these changes? original modified

Author: Joel Sherrill 2024-07-22T14:45:34.853Z

The simplest thing is to manually edit the line back to the original version.

Author: Mohamed Hassan 2024-07-22T14:45:34.853Z

Yep, that's what I did. This file in my repo has identical endings to that's of the upstream repo.

Author: Mohamed Hassan 2024-07-20T16:25:23.120Z

added 4 commits

- e18ec2cb...7333afe0 - 3 commits from branch `rtems/rtos:main`
- 5dd26589 - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Kinsey Moore 2024-07-23T22:33:20.255Z

Trailing whitespace got added here.

Author: Mohamed Hassan 2024-07-23T22:33:20.255Z

deleted.

Author: Kinsey Moore 2024-07-23T22:33:20.255Z

This is still present in the latest patch.

Author: Mohamed Hassan 2024-07-23T21:56:10.428Z

changed this line in version 18 of the diff

Author: Mohamed Hassan 2024-07-23T22:33:20.255Z

I'm sorry, just updated. please refer to stackchk.h

Author: Kinsey Moore 2024-07-22T20:01:43.036Z

This end-of-file change can be dropped.

Author: Mohamed Hassan 2024-07-22T20:01:43.036Z

a blank line will be added to match the original file

Author: Mohamed Hassan 2024-07-22T19:49:56.629Z

changed this line in version 17 of the diff

Author: Mohamed Hassan 2024-07-22T19:49:56.858Z

added 1 commit

- 4c1e9e8f - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Mohamed Hassan 2024-07-23T21:56:10.644Z

added 1 commit

- 4d989269 - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Joel Sherrill 2024-07-23T22:33:20.285Z

resolved all threads

Author: Joel Sherrill 2024-07-25T15:00:47.817Z

I don't understand this include followed by an include of a local directory system.h.

Author: Mohamed Hassan 2024-07-25T15:00:47.817Z

Yeah I'm using almost all files of stackchk including `init.c`. And I had to include `/stackchk03/system.h` first - before including the confdefs - because it configures:

```
#define CONFIGURE_STACK_CHECKER_ENABLED
#define CONFIGURE_STACK_CHECKER_REPORTER  stackchk03_blown_stack_
↪reporter
```

otherwise it will go to the default detailed reporter every time.

Author: Joel Sherrill 2024-07-25T15:00:47.817Z

Add a comment above the include to explain that.

Author: Mohamed Hassan 2024-07-26T19:21:14.407Z

changed this line in version 20 of the diff

Author: Joel Sherrill 2024-07-25T15:01:03.036Z

Why is stackchk03 in here? Move stackchk and stackchk03 specifics into their own files. Their unique code should not be intermingled.

Author: Mohamed Hassan 2024-07-25T15:01:03.036Z

I'm sharing init.c of stackchk testsuite to be used in stackchk03 testsuite in order to avoid duplicating files. that's why I added things related to stackchk03 here.

Author: Joel Sherrill 2024-07-25T15:01:03.036Z

Then split this reporter function into a file that is unique to stackchk03.

Author: Mohamed Hassan 2024-07-25T12:15:50.833Z

changed this line in version 19 of the diff

Author: Mohamed Hassan 2024-07-25T15:01:03.036Z

The latest updated version compiles successfully after including `#include "../stackchk/system.h"` at stackchk03/system.h. However, as

```
1 #define CONFIGURE_STACK_CHECKER_REPORTER stackchk03_blown_stack_reporter
```

comes after the `confdefs`. therefore, it always goes to the default detailed reporter. And whenever I try: * Configure the macro before the `#include "../stackchk/system.h"` it doesn't recognize `stackchk03_blown_stack_reporter` * Then, if I place the prototype at the top, it gives me linker error `undefined reference to stackchk03_blown_stack_reporter`.

Author: Joel Sherrill 2024-07-23T22:35:01.393Z

I had comments that didn't get pushed earlier. When I went to double check everything, they were still pending.

Author: Mohamed Hassan 2024-07-25T12:15:51.067Z

added 5 commits

- 4d989269...43fd756f - 3 commits from branch `rtems/rtos:main`
- 43306fff - libmisc/stackchk: Add configurability to the stack checker reporting function
- 63978cb8 - libtest/stackchk: Relocate stackchk03 testing reporter into a separate file

Compare with previous version

Author: Joel Sherrill 2024-07-25T15:01:03.068Z

resolved all threads

Author: Kinsey Moore 2024-07-26T21:40:06.394Z

This can't be defined as static since it's exported for use elsewhere and causes a compilation error.

Author: Mohamed Hassan 2024-07-26T19:21:15.037Z

changed this line in version 20 of the diff

Author: Mohamed Hassan 2024-07-26T21:40:06.394Z

it's a typo and it has been fixed, please refer to the updated version.

Author: Kinsey Moore 2024-07-29T13:51:08.023Z

I think this is missing some of your local changes or you have some stale build artifacts that aren't being regenerated correctly. Both stackchk.exe and stackchk03.exe produce the default "BLOWN STACK!!!" output and stackchk.exe would fail to build if it were being built according to your comment since it is missing the reference to stackchk03_blown_stack_reporter that is only compiled into stackchk03.exe.

Author: Mohamed Hassan 2024-07-29T13:51:08.023Z

yeah, I reported this issues to my mentor. I uploaded a new version of the code after this issue has been fixed.

Author: Mohamed Hassan 2024-07-26T19:21:15.267Z

added 6 commits

- 63978cb8...8fd3ed26 - 5 commits from branch `rtems/rtos:main`
- dddc4fc6 - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Joel Sherrill 2024-07-29T18:30:40.162Z

Who is it copyright by? :)

Author: Mohamed Hassan 2024-07-29T18:30:40.162Z

Alright will be added :)

Author: Mohamed Hassan 2024-07-27T09:43:40.762Z

changed this line in version 22 of the diff

Author: Mohamed Hassan 2024-07-29T18:30:40.162Z

updated

Author: Mohamed Hassan 2024-07-26T21:56:20.210Z

added 8 commits

- dddc4fc6...0bd9737e - 7 commits from branch `rtems/rtos:main`
- 0b93f687 - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Joel Sherrill 2024-07-31T21:12:45.265Z

No newline at end of file.

Author: Mohamed Hassan 2024-07-31T21:12:45.265Z

It was deleted before please refer to

Author: Joel Sherrill 2024-07-31T21:12:45.265Z

Just make sure it has a proper end of file.

Author: Mohamed Hassan 2024-07-31T21:12:45.265Z

Confirmed.

Author: Joel Sherrill 2024-07-30T14:09:26.547Z

Update all file headers in stackchk and stackchk03 to follow the proper style. SPDX, then Doxygen file block, then license block – as separate comment blocks. You have to be careful that comments and the license do not intermix or show up in Doxygen output together.

Author: Mohamed Hassan 2024-07-30T14:09:26.547Z

I update all files' headers as shown here I removed the file description text as I understood from you previous comment. Please take a look and give me a feedback.

Author: Joel Sherrill 2024-07-30T14:09:26.547Z

Very close. The text for an @brief should be thought of as an entry in a table of contents not a full sentence. Usually when someone does this, it is easy to use the sentence that was the original @brief into the paragraph following the @brief.

From. . .

@brief This is a very long sentence which says this file is for raising the Titanic

To. . .

@brief Titanic Raiser Class Interface

This very long sentence describes what the file contains and often isn't really saying much beyond the @brief above. "This file defines the class interface for the Raising the Titanic class." If it isn't adding anything, do not add the longer version.

Author: Mohamed Hassan 2024-07-30T14:09:26.547Z

Noted, please refer to the updated files.

Author: Joel Sherrill 2024-07-29T18:32:08.973Z

No newline at end of file.

Author: Mohamed Hassan 2024-07-29T18:32:08.973Z

this file has been renamed to config.c

Author: Joel Sherrill 2024-07-29T22:10:17.941Z

In the edits I sent you, I added a config.c to both stackchk and stackchk03 so they could instantiate the configuration differently. Why doesn't that show up here?

Author: Mohamed Hassan 2024-07-29T22:10:17.941Z

Yeah I corrected that yesterday here and [here](https://gitlab.rtems.org/Hamzi/rtems/-/blob/0b93f687e23bdf24fa9bd339a4eb5aa4eb249685/spec/build/testsuites/libtests/stackchk03.yml)

Author: Joel Sherrill 2024-07-29T22:10:17.941Z

stackchk03.yml doesn't appear to have a copyright in it.

Author: Mohamed Hassan 2024-07-29T22:10:17.941Z

It was added stackchk03.yml

Author: Mohamed Hassan 2024-07-27T09:43:42.007Z

added 1 commit

- d5b131ae - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Kinsey Moore 2024-07-29T22:09:36.780Z

This include does not resolve properly, causing the build to fail.

Author: Joel Sherrill 2024-07-29T22:09:36.780Z

It should be ../stackchk/system.h.

Author: Mohamed Hassan 2024-07-29T22:09:36.780Z

Sorry for the typo, will be updated and removed.

Author: Mohamed Hassan 2024-07-29T21:48:16.131Z

changed this line in version 23 of the diff

Author: Joel Sherrill 2024-07-30T13:25:57.867Z

This line appears to be > 80 columns.

Author: Mohamed Hassan 2024-07-30T13:25:57.867Z

noted, will be modified.

Author: Mohamed Hassan 2024-07-29T21:48:16.848Z

changed this line in version 23 of the diff

Author: Mohamed Hassan 2024-07-30T13:25:57.867Z

Done.

Author: Mohamed Hassan 2024-07-29T21:48:17.088Z

added 3 commits

- d5b131ae...4c2e5ad9 - 2 commits from branch `rtems/rtos:main`
- 991eb112 - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Mohamed Hassan 2024-07-30T13:02:23.899Z

added 1 commit

- b80ce2eb - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Kinsey Moore 2024-07-30T14:14:39.986Z

approved this merge request

Author: Mohamed Hassan 2024-07-30T23:21:14.596Z

added 2 commits

- 30ae3ef9 - 1 commit from branch `rtems/rtos:main`

- d4ae1361 - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Mohamed Hassan 2024-07-30T23:21:29.159Z

reset approvals from @opticron by pushing to the branch

Author: Joel Sherrill 2024-07-31T21:19:37.208Z

I think “configure” should be “contains.

Author: Mohamed Hassan 2024-07-31T21:19:37.208Z

Done.

Author: Joel Sherrill 2024-07-31T21:19:37.208Z

Grrr... Reproter.. spelling error. :(

Author: Mohamed Hassan 2024-07-31T21:14:19.190Z

changed this line in version 26 of the diff

Author: Mohamed Hassan 2024-07-31T21:19:37.208Z

Ooh sorry :grin:

Author: Joel Sherrill 2024-07-31T21:14:50.023Z

No period at the end.

Author: Mohamed Hassan 2024-07-31T21:14:50.023Z

Removed.

Author: Mohamed Hassan 2024-07-31T21:14:19.931Z

changed this line in version 26 of the diff

Author: Kinsey Moore 2024-07-31T21:16:13.371Z

Parameter documentation blocks should be spaced appropriately so that the additional lines of the description align with the beginning of the description for better readability. In this case it would look like this:

```
* @param[in] running Points to the currently executing thread which
is being context switched out.
```

This applies to other documentation blocks as well.

Author: Mohamed Hassan 2024-07-31T21:16:13.371Z

Noted & considered.

Author: Mohamed Hassan 2024-07-31T21:14:21.123Z

changed this line in version 26 of the diff

Author: Kinsey Moore 2024-07-31T13:58:36.635Z

requested changes

Author: Mohamed Hassan 2024-07-31T21:14:21.354Z

added 1 commit

- 8676aacd - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Joel Sherrill 2024-07-31T22:39:43.786Z

Remove blank line.

Author: Mohamed Hassan 2024-07-31T22:39:43.786Z

I don't why it looks like that here. But this is the updated code ![Screenshot_from_2024-08-01_00-34-44](/uploads/bd4bffba1897683000f98951008955c8/Screenshot_from_2024-08-01_00-34-44.png)

Author: Joel Sherrill 2024-07-31T22:39:43.786Z

At stackchk.h:105, there are three members which have no documentation.

Author: Mohamed Hassan 2024-07-31T22:39:43.786Z

Added back again.

Author: Joel Sherrill 2024-07-31T21:52:42.725Z

This brief is too long. Convert as previously done.

Author: Mohamed Hassan 2024-07-31T21:52:42.725Z

Done.

Author: Mohamed Hassan 2024-07-31T21:47:10.961Z

changed this line in version 28 of the diff

Author: Joel Sherrill 2024-07-31T22:40:03.875Z

No brief on structure members.

Author: Mohamed Hassan 2024-07-31T22:40:03.875Z

Alright, removed.

Author: Mohamed Hassan 2024-07-31T21:47:11.744Z

changed this line in version 28 of the diff

Author: Joel Sherrill 2024-07-31T22:40:03.875Z

I meant take the Doxygen @brief annotation out and leave the sentence in a Doxygen comment. Sorry for the confusion.

Author: Mohamed Hassan 2024-07-31T22:40:03.875Z

No problem, I re-added them.

Author: Mohamed Hassan 2024-07-31T21:19:24.852Z

added 1 commit

- 49c4b22c - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Mohamed Hassan 2024-07-31T21:47:12.002Z

added 1 commit

- ed814300 - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Mohamed Hassan 2024-07-31T22:23:58.877Z

added 1 commit

- f9e53d54 - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Joel Sherrill 2024-07-31T22:40:03.916Z

resolved all threads

Author: Mohamed Hassan 2024-07-31T22:44:06.683Z

marked this merge request as **ready**

Author: Kinsey Moore 2024-08-01T13:53:28.871Z

approved this merge request

Author: Mohamed Hassan 2024-08-01T20:29:09.782Z

mentioned in issue #5082

Author: Joel Sherrill 2024-08-02T19:58:59.135Z

approved this merge request

Author: Amar Takhar 2024-08-02T20:00:27.411Z

added 2 commits

- a0eecb52 - 1 commit from branch `rtems/rtos:main`

- dc123bb8 - libmisc/stackchk: Add configurability to the stack checker reporting function

Compare with previous version

Author: Sebastian Huber 2024-08-14T02:59:01.306Z

Why was this file comment changed?

Author: Mohamed Hassan 2024-08-14T17:17:44.866Z

It was meant to change the brief comment to be similar to tables headers. this was to make it shorter and direct.

Author: Sebastian Huber 2024-08-14T23:41:12.439Z

Could you please read the Doxygen guidelines before you change existing Doxygen comments:

https://docs.rtems.org/branches/master/eng/coding-doxygen.html

Author: Mohamed Hassan 2024-08-15T17:36:16.600Z

Ok, noted it will be reverted back to the original comment.

Author: Mohamed Hassan 2024-08-15T18:16:29.046Z

@sebhub Please refer to the new MR.

Author: Sebastian Huber 2024-08-14T03:40:40.706Z

Why was this changed as well? This removed the file comment and the group association.

Author: Mohamed Hassan 2024-08-14T17:20:55.004Z

please refer to the previous response.

Author: Sebastian Huber 2024-08-14T03:42:04.644Z

Including this implementation header file here is just wrong.

Author: Mohamed Hassan 2024-08-14T17:28:08.439Z

It's required, removing it causes compilation errors.

Author: Sebastian Huber 2024-08-14T23:42:38.896Z

You can use a forward declaration to avoid the compilation errors and the inclusion of this implementation header, see !187.

Author: Mohamed Hassan 2024-08-15T17:44:50.239Z

Thanks for the info, will follow.

Author: Sebastian Huber 2024-08-14T03:43:12.765Z

This is potentially an in and out parameter.

Author: Mohamed Hassan 2024-08-14T18:34:09.114Z

I think you're right, arg parameter can be both input and output. will be modified.

Author: Sebastian Huber 2024-08-14T03:43:48.950Z

Why was the formatting changed?

Author: Mohamed Hassan 2024-08-14T17:34:04.063Z

It was changed to improve readability by making all lines aligned. !`image <https://gitlab.rtems.org/-/project/uploads/86fb62dd043fff248aaf013e278fcf8d/image.png>`_

Author: Sebastian Huber 2024-08-14T23:47:35.298Z

This style is not in the existing Doxygen guidelines. The new formatting is fine from my point of view. We could even update the guidelines to recommend this style. However, changing the format of existing comments which are in line with the current Doxygen guidelines is not all right.

Author: Kinsey Moore 2024-08-15T14:16:30.900Z

Both lines were already being modified, so the readability was improved in the process.

3.9.2.130 186 - cpukit/libblock: Close all valid FDs

Id	186
State	merged
Merged by	Sebastian Huber
Merged at	2024-08-14T03:12:22.747Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Joel Sherrill
Created	2024-08-12T17:54:29.555Z
Updated	2024-08-14T03:12:25.056Z
Milestone	6.1
Labels	cpukit::block
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/186
Commit	73918bc788241b1eb819716af6595f8b32e9e701

Summary

cpukit/libblock: Close all valid FDs

This is intended to close any valid FDs that were opened, but 0 is also a valid FD. This change ensures that a FD of 0 is also closed properly.

Author: Kinsey Moore 2024-08-12T17:54:29.683Z

requested review from @joel

Author: Kinsey Moore 2024-08-12T17:54:29.702Z

assigned to @opticron

Author: Joel Sherrill 2024-08-12T18:21:51.349Z

Add the coverity ids. This is what I had in the fix I thought I had a MR for.

Coverity CID 1467408 (original)

Coverity CID XXX (followup)

close() was called and fd can potentially be negative. Original patch was “> 0” but should have been “>= 0”

Author: Kinsey Moore 2024-08-12T18:21:47.610Z

added 1 commit

- 73918bc7 - cpukit/libblock: Close all valid FDs

Compare with previous version

Author: Kinsey Moore 2024-08-12T18:21:51.367Z

resolved all threads

Author: Joel Sherrill 2024-08-12T18:22:17.478Z

approved this merge request

Author: Sebastian Huber 2024-08-14T03:12:15.771Z

approved this merge request

3.9.2.131 178 - open: Fix race condition when called with O_TRUNC

Id	178
State	merged
Merged by	Kinsey Moore
Merged at	2024-08-11T18:59:05.746Z
Created	2024-08-08T05:23:11.431Z
Updated	2024-08-11T18:59:09.988Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/178
Commit	9c57576a4b89e513f003e390648c8af00b978e60

Summary

open: Fix race condition when called with O_TRUNC

Fix a race condition in which a file opened with O_TRUNC is made available to other file functions expecting a file descriptor before the truncation is performed.

This is only possible if the other thread was using an invalid file descriptor as the open call has yet to finish.

Closes #5109

Author: Chris Johns 2024-08-08T07:54:30.835Z

Can the commit message please be formatted to less than 80 columns per line?

Please run `git log` on `main` to see how the messages are formatted :smiley:

Thanks

Author: Loris Nardo 2024-08-08T07:54:30.835Z

I've updated the commit message, is it fine now?

Author: Chris Johns 2024-08-08T07:54:30.835Z

Yes. Thanks.

Author: Loris Nardo 2024-08-08T07:45:17.674Z

added 1 commit

- 470ceb6d - open: Fix race condition when called with O_TRUNC

Compare with previous version

Author: Chris Johns 2024-08-08T07:54:30.857Z

resolved all threads

Author: Chris Johns 2024-08-08T20:55:50.696Z

mentioned in issue #5109

Author: Sebastian Huber 2024-08-11T18:58:58.783Z

All the * should be aligned.

Author: Loris Nardo 2024-08-10T09:41:00.282Z

changed this line in version 3 of the diff

Author: Loris Nardo 2024-08-11T18:58:58.783Z

This should be fixed now

Author: Sebastian Huber 2024-08-11T10:57:32.823Z

Blank line between if blocks.

Author: Loris Nardo 2024-08-11T10:57:32.823Z

I've added a blank line, I'm not sure if it is needed also at line 151

Author: Loris Nardo 2024-08-10T09:41:00.924Z

added 1 commit

- 56c3ddfd - open: Fix race condition when called with O_TRUNC

Compare with previous version

Author: Chris Johns 2024-08-11T01:40:57.880Z

added 6 commits

- 56c3ddfd...a51b7d4b - 5 commits from branch `rtems/rtos:main`
- 039cf8c8 - open: Fix race condition when called with O_TRUNC

Compare with previous version

Author: Sebastian Huber 2024-08-11T10:57:43.693Z

approved this merge request

Author: Kinsey Moore 2024-08-11T18:58:23.917Z

added 6 commits

- 039cf8c8...74402646 - 5 commits from branch `rtems/rtos:main`
- 9c57576a - open: Fix race condition when called with O_TRUNC

Compare with previous version

Author: Kinsey Moore 2024-08-11T18:58:36.110Z

approved this merge request

Author: Kinsey Moore 2024-08-11T18:58:58.803Z

resolved all threads

3.9.2.132 168 - amd64: Restructure the APIC code

Id	168
State	merged
Merged by	Amar Takhar
Merged at	2024-08-11T08:18:03.134Z
Created	2024-08-06T19:52:15.144Z
Updated	2024-08-11T08:18:06.856Z
Milestone	6.1
Labels	arch:x86_64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/168
Commit	74402646018dfddb652dd0af5962212f7f5caad2

Summary

The whole code for APIC support was contained inside clock.c. This does some restructuring and moves the APIC implementation to it's own file since it will be expanded and used for SMP.

Author: Matheus Pecoraro 2024-08-06T19:52:48.180Z

This MR should be dependent on !119

Author: Matheus Pecoraro 2024-08-06T21:07:22.875Z

mentioned in merge request !169

Author: Matheus Pecoraro 2024-08-06T21:08:37.096Z

Author: Kinsey Moore 2024-08-06T22:11:40.381Z

added 8 commits

- 70a6e54b...02a89356 - 6 commits from branch `rtems/rtos:main`
- 909145c0 - amd64: Allow early ACPICA table subsystem init
- f79183f3 - amd64: Move APIC implementation out of clock.c

Compare with previous version

Author: Kinsey Moore 2024-08-07T16:06:29.271Z

Multiline comments should have /* and */ on their own line.

Author: Matheus Pecoraro 2024-08-07T16:04:48.115Z

changed this line in version 3 of the diff

Author: Kinsey Moore 2024-08-07T16:06:31.250Z

The parameter is not documented here.

Author: Matheus Pecoraro 2024-08-07T16:04:48.731Z

added 5 commits

- f79183f3...f2998639 - 3 commits from branch `rtems/rtos:main`
- 00d6946d - amd64: Allow early ACPICA table subsystem init
- 3d0c5ac5 - amd64: Move APIC implementation out of clock.c

Compare with previous version

Author: Matheus Pecoraro 2024-08-07T16:06:31.270Z

resolved all threads

Author: Chris Johns 2024-08-11T07:38:39.423Z

added 14 commits

- 3d0c5ac5...f920b6f1 - 12 commits from branch `rtems/rtos:main`
- 0665da8f - amd64: Allow early ACPICA table subsystem init
- 74402646 - amd64: Move APIC implementation out of clock.c

Compare with previous version

Author: Chris Johns 2024-08-11T07:39:02.376Z

approved this merge request

Author: Amar Takhar 2024-08-11T08:17:59.527Z

approved this merge request

3.9.2.133 179 - cpukit/score/src/kern_ntptime.c: Use time_t not a 32-bit type

Id	179
State	merged
Merged by	Chris Johns
Merged at	2024-08-11T02:31:52.193Z
Assignee(s)	Joel Sherrill
Created	2024-08-08T16:34:34.922Z
Updated	2024-08-11T02:31:54.931Z
Milestone	6.1
Labels	rtems::score
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/179
Commit	f920b6f1e49e06f8e8077cc8d4db69939788086f

Summary

cpukit/score/src/kern_ntptime.c: Use time_t not a 32-bit type

A time_t (tv_sec) was being assigned to a 32-bit variable. This introduced a Y2038 issue.

Coverity CID 1512505

Closes #5111.

Author: Joel Sherrill 2024-08-08T16:34:35.161Z

assigned to @joel

Author: Amar Takhar 2024-08-09T00:43:23.862Z

approved this merge request

Author: Sebastian Huber 2024-08-09T05:52:34.124Z

Changes in this file should first go through the FreeBSD review:
https://github.com/freebsd/freebsd-src/pull/1373

Author: Chris Johns 2024-08-09T05:52:34.124Z

Thanks for posting a review and sorting this out.

Author: Chris Johns 2024-08-09T05:52:34.145Z

resolved all threads

Author: Chris Johns 2024-08-11T02:31:30.652Z

added 8 commits

- 3e050a4f...5e6d7dca - 7 commits from branch `rtems/rtos:main`
- f920b6f1 - cpukit/score/src/kern_ntptime.c: Use time_t not a 32-bit type

Compare with previous version

Author: Chris Johns 2024-08-11T02:31:47.178Z

approved this merge request

3.9.2.134 181 - libblock/src/bdpart-register.c: Do not pass bad value to close()

Id	181
State	merged
Merged by	Chris Johns
Merged at	2024-08-11T02:30:50.479Z
Assignee(s)	Joel Sherrill
Created	2024-08-09T13:57:58.109Z
Updated	2024-08-11T02:30:52.921Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/181
Commit	5e6d7dca8fa0b2f622f92d35574228a745f549b7

Summary

libblock/src/bdpart-register.c: Do not pass bad value to close()

Coverity CID 1467408

close() was called and fd can potentially be negative.

Closes #5113.

Author: Joel Sherrill 2024-08-09T13:57:58.352Z

assigned to @joel

Author: Amar Takhar 2024-08-09T18:48:40.608Z

approved this merge request

Author: Amar Takhar 2024-08-09T19:09:02.944Z

This was opened by accident the original is !173 but since this has the change we'll merge this one.

Author: Amar Takhar 2024-08-09T19:09:33.848Z

mentioned in merge request !173

Author: Chris Johns 2024-08-11T02:30:05.084Z

approved this merge request

Author: Chris Johns 2024-08-11T02:30:22.593Z

added 7 commits

- a55b1dc3...447f767a - 6 commits from branch `rtems/rtos:main`
- 5e6d7dca - libblock/src/bdpart-register.c: Do not pass bad value to close()

Compare with previous version

3.9.2.135 120 - aarch64/raspberrypi: Add Watchdog Timer driver

Id	120
State	merged
Merged by	Chris Johns
Merged at	2024-08-11T02:24:07.807Z
Created	2024-07-17T12:57:41.026Z
Updated	2024-08-11T02:24:10.008Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/120
Commit	447f767abc86b8319eea5d615006454d7196f2d5

Summary

Author: Ning Yang 2024-07-17T12:59:28.957Z

Author: Ning Yang 2024-07-17T13:06:30.202Z

added 1 commit

- 2de0b8e6 - aarch64/raspberrypi: Add Wathdog Timer driver

Compare with previous version

Author: Kinsey Moore 2024-07-17T15:23:57.582Z

changed title from **aarch64/raspberrypi: Add Wathdog Timer driver** to **aarch64/raspberrypi: Add Wat{+c+}hdog Timer driver**

Author: Gedare Bloom 2024-07-19T15:55:53.721Z

Kinsey Moore changed title from aarch64/raspberrypi: Add Wathdog Timer driver to aarch64/raspberrypi: Add Watchdog Timer driver 5 hours ago

Please fix the typo in the commit messsage.

Author: Gedare Bloom 2024-07-19T15:56:16.883Z

use the consistent naming convention for this bsp. I think it is either `raspberrypi` or `raspberrypi_4` (although I think that should have been `raspberrypi4`.

Author: Ning Yang 2024-07-19T15:54:56.635Z

changed this line in version 3 of the diff

Author: Gedare Bloom 2024-07-19T15:56:35.537Z

spell out `watchdog`.

Author: Ning Yang 2024-07-19T15:54:57.126Z

changed this line in version 3 of the diff

Author: Gedare Bloom 2024-07-19T15:56:54.419Z

The interface for this could probably be copied from `sparc/leon3/include/bsp/watchdog.h`. Although there is no standard, it is a good idea to try to be close to similar interfaces in other BSPs when it makes sense.

Author: Ning Yang 2024-07-19T15:54:57.654Z

changed this line in version 3 of the diff

Author: Gedare Bloom 2024-07-19T15:57:04.304Z

line length

Author: Ning Yang 2024-07-19T15:54:58.335Z

changed this line in version 3 of the diff

Author: Gedare Bloom 2024-07-19T15:57:12.861Z

maybe add some static helper functions in this file to read/write the WDOG and RSTC registers. it will make this more readable.

Author: Ning Yang 2024-07-19T15:54:58.735Z

changed this line in version 3 of the diff

Author: Gedare Bloom 2024-07-19T15:57:26.589Z

this doesn't seem like it needs to be a global variable. It appears only to be used where it gets passed directly as an argument?

Author: Ning Yang 2024-07-19T15:54:59.344Z

changed this line in version 3 of the diff

Author: Gedare Bloom 2024-07-17T21:21:24.399Z

requested changes

Author: Ning Yang 2024-07-19T15:54:59.731Z

added 1 commit

- bda0fc3f - aarch64/raspberrypi: Add Wathdog Timer driver

Compare with previous version

Author: Ning Yang 2024-07-19T15:55:24.884Z

added 1 commit

- 480f4eba - aarch64/raspberrypi: Add Watchdog Timer driver

Compare with previous version

Author: Ning Yang 2024-07-19T15:57:26.607Z

resolved all threads

Author: Ning Yang 2024-07-19T16:05:16.571Z

WDT test https://github.com/yangn0/RTEMS_app/blob/main/test/test_WDT.c

Author: Kinsey Moore 2024-07-26T01:20:21.277Z

added 25 commits

- 480f4eba...8fd3ed26 - 24 commits from branch `rtems/rtos:main`
- 89930a74 - aarch64/raspberrypi: Add Watchdog Timer driver

Compare with previous version

Author: Kinsey Moore 2024-07-30T15:47:34.233Z

The number of timer clocks is somewhat nebulous. Is this configurable in the watchdog itself or is this dependent on a system clock rate? Is there a way for the user to know how long the watchdog clock interval is?

Author: Ning Yang 2024-07-30T15:46:02.164Z

changed this line in version 6 of the diff

Author: Kinsey Moore 2024-07-30T15:47:24.313Z

What is the unit for the return value?

Author: Ning Yang 2024-07-30T15:46:02.504Z

changed this line in version 6 of the diff

Author: Kinsey Moore 2024-07-26T01:45:56.921Z

requested changes

Author: Kinsey Moore 2024-07-30T15:47:09.858Z

This should likely be static, but I'm not sure I understand its purpose other than indicating whether the watchdog is "enabled" and once it's enabled it can't be disabled. It feels especially useless since any calls that depend on it being non-zero call the initialization function to set it to 1 if it isn't.

Author: Ning Yang 2024-07-30T15:47:09.858Z

https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/120#note_109477

I designed the interface with reference to `sparc/leon3/include/bsp/watchdog.h`. It seems to have multiple wdt devices. But in rpi4 there is only one, should I keep it consistent?

Author: Kinsey Moore 2024-07-30T15:47:09.858Z

You should adjust the implementation to the Raspberry Pi hardware.

Author: Ning Yang 2024-07-30T15:46:03.199Z

changed this line in version 6 of the diff

Author: Kinsey Moore 2024-07-30T15:46:18.945Z

I think this has just about all the right parts to implement full watchdog functionality, but they're in a slightly odd form.

I would expect these functions to be available: * init (in this case it would do nothing, so not necessary for this implementation) * start (turn on the watchdog/begin the counter at the desired value) * stop (turn off the watchdog) * reload (often called petting the watchdog or tickling the watchdog, it appears this currently also serves the role of the start function) * get_remaining_time (get_timeleft in your code, not always available depending on the implementation)

I would expect to call them in this order: * init * start * reload * reload * ... * reload * stop

The documentation for get_timeleft should specify whether the return value is valid when the watchdog has been stopped.

reset_system is unnecessary since it is such a thin wrapper around reload.

Once you've done some rework on this, the header file should contain a brief example of expected usage.

Author: Ning Yang 2024-07-30T15:46:18.945Z

I designed the interface with reference to `sparc/leon3/include/bsp/watchdog.h`.

Should the WDT interface design of rpi4 be consistent with the existing interface?

Author: Kinsey Moore 2024-07-30T15:46:18.945Z

There isn't a watchdog timer driver framework in RTEMS as far as I know, so you should only use that WDT driver as a guideline.

Author: Joel Sherrill 2024-07-30T15:46:18.945Z

There are only 3 BSPs with a watchdog driver. The leon3 has bsp/watchdog.h which looks to be a generic BSP-independent API. Could this support use the same API? Or is it missing something?

I am not proposing you completely solve the generic watchdog API problem. Just see if you can align with the leon3 API or if it needs additions.

Author: Kinsey Moore 2024-07-30T15:46:18.945Z

Joel and I had a conversation about this and the leon3 API isn't quite ready to be a public watchdog API for a few reasons, so you should adhere to that model only when it makes sense to do so. There is only 1 watchdog on the rpi4, so the API should be adjusted to fit that. As mentioned elsewhere, a sample watchdog call sequence should be included in the header file with the API provided.

Author: Ning Yang 2024-07-30T15:46:03.400Z

added 1 commit

- 70b9fa31 - aarch64/raspberrypi: Add Watchdog Timer driver

Compare with previous version

Author: Ning Yang 2024-07-30T15:47:34.253Z

resolved all threads

Author: Kinsey Moore 2024-08-06T18:11:06.238Z

Are there any values of timeout which are invalid? The documentation claims that timeout is in seconds, but I would expect some kind of conversion to occur here or in the register write below.

Author: Ning Yang 2024-08-06T18:10:53.193Z

changed this line in version 7 of the diff

Author: Ning Yang 2024-08-06T18:10:53.455Z

added 1 commit

- 3ce3e344 - aarch64/raspberrypi: Add Watchdog Timer driver

Compare with previous version

Author: Ning Yang 2024-08-06T18:11:06.261Z

resolved all threads

Author: Ning Yang 2024-08-06T18:20:34.322Z

added 1 commit

- 661c58b5 - aarch64/raspberrypi: Add Watchdog Timer driver

Compare with previous version

Author: Kinsey Moore 2024-08-07T07:09:00.272Z

I would recommend against using floating point math here since it's not necessary. Instead, you can use a uint32_t and reorder the operations such that the multiplication occurs first followed by the division. The get_remaining_time() function should also return a uint32_t utilizing similar principles.

Author: Ning Yang 2024-08-07T07:08:31.599Z

changed this line in version 9 of the diff

Author: Kinsey Moore 2024-08-07T07:08:54.712Z

This should use an explicitly sized type. In this case, uint32_t is appropriate.

Author: Joel Sherrill 2024-08-07T07:08:54.712Z

And it should be unsigned. The timeout cannot be negative.

Author: Ning Yang 2024-08-07T07:08:32.057Z

changed this line in version 9 of the diff

Author: Ning Yang 2024-08-07T07:08:32.235Z

added 1 commit

- db83555c - aarch64/raspberrypi: Add Watchdog Timer driver

Compare with previous version

Author: Ning Yang 2024-08-07T07:09:00.293Z

resolved all threads

Author: Ning Yang 2024-08-07T07:10:24.133Z

added 1 commit

- 13ea92fa - aarch64/raspberrypi: Add Watchdog Timer driver

Compare with previous version

Author: Kinsey Moore 2024-08-07T13:55:27.206Z

Everything looks good now. This just needs a manual rebase due to the other work going in and then I'll approve it.

Author: Ning Yang 2024-08-07T13:55:27.206Z

Done.

Author: Ning Yang 2024-08-07T13:53:45.487Z

added 68 commits

- 13ea92fa...f2998639 - 67 commits from branch `rtems/rtos:main`
- 01106b37 - aarch64/raspberrypi: Add Watchdog Timer driver

Compare with previous version

Author: Ning Yang 2024-08-07T13:55:27.228Z

resolved all threads

Author: Kinsey Moore 2024-08-07T13:59:30.695Z

approved this merge request

Author: Chris Johns 2024-08-11T02:08:55.092Z

added 10 commits

- 01106b37...a51b7d4b - 9 commits from branch `rtems/rtos:main`
- 447f767a - aarch64/raspberrypi: Add Watchdog Timer driver

Compare with previous version

Author: Chris Johns 2024-08-11T02:24:01.260Z

approved this merge request

3.9.2.136 163 - libdebugger: Add support for PowerPC

Id	163
State	merged
Merged by	Amar Takhar
Merged at	2024-08-07T18:31:27.521Z
Assignee(s)	Chris Johns
Created	2024-08-05T05:49:18.791Z
Updated	2024-08-11T02:15:01.090Z
Milestone	6.1
Labels	arch:powerpc, cpukit::debugger
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/163
Commit	cc34558448eb48a70cb39f06d183a133971c79b3

Add support for the PowerPC to libdebugger

Updates and closes #5098

Author: Chris Johns 2024-08-05T05:49:19.002Z

assigned to @chris

Author: Kinsey Moore 2024-08-05T13:45:17.910Z

added 5 commits

- 533e53e3...a69269da - 2 commits from branch `rtems/rtos:main`
- 330caa8e - libdebugger/target: Move global stepping variables in to the target data
- 667ca6d8 - libdebugger/target: Add support for backend code writters
- e1599d14 - libdebugger/powerpc: Add PowerPC support

Compare with previous version

Author: Joel Sherrill 2024-08-06T02:09:36.419Z

Why is this commented out? And why use C++ comments

Author: Chris Johns 2024-08-06T02:09:36.419Z

The commented code is to be removed. I have removed it.

Author: Chris Johns 2024-08-06T02:09:35.534Z

changed this line in version 3 of the diff

Author: Joel Sherrill 2024-08-06T14:03:01.135Z

Shouldn't these be aligned?

Author: Chris Johns 2024-08-06T14:03:01.135Z

If you mean the `Type 1:`. no it is indented for each of the types.

Author: Joel Sherrill 2024-08-06T14:03:01.135Z

OK. Must have just looked funny in the review mode.

Author: Joel Sherrill 2024-08-06T03:04:17.907Z

Do you want to define an error code in rtems/score/interr.h and use that here?

Author: Chris Johns 2024-08-06T03:04:17.907Z

Sure. You have entered `k` in `gdb` to end up here so I do not mind.

Author: Chris Johns 2024-08-06T03:04:17.907Z

After having a look I do not think there is any value in adding a special error code. The value is the TCP port number :smile:

Author: Kinsey Moore 2024-08-07T04:53:23.536Z

The first patch has quite a bit of reformatting of code and comments that seems unrelated to the change specified. It also contains the addition of a sleep(2) that I wouldn't expect in a code reorganization patch.

Author: Chris Johns 2024-08-07T04:53:23.536Z

The `sleep(2)` has been added to allow the response on the networking to happen and the connection to be taken down because a reset happens. It is needed on the legacy stack or the legacy stack and the PowerPC BSPs.

This code is not written under the RTEMS coding standard. Moving it would need to be discussed and then the format tool in place. The formatting changes I made where to bring the code inline with the rest of the `libdebugger` code.

Author: Kinsey Moore 2024-08-07T04:53:23.536Z

Sure, all those changes are fine for those reasons, it's just unexpected in a narrowly targeted code refactoring patch.

Author: Joel Sherrill 2024-08-07T04:53:23.536Z

@kiwichris Would you mind putting a comment above that block of code to explain that like you did here?

Author: Chris Johns 2024-08-07T04:53:23.536Z

Done.

Author: Chris Johns 2024-08-06T02:09:37.639Z

added 3 commits

- 01922feb - libdebugger/target: Move global stepping variables in to the target data
- 2b0314e8 - libdebugger/target: Add support for backend code writters
- d87731ae - libdebugger/powerpc: Add PowerPC support

Compare with previous version

Author: Kinsey Moore 2024-08-07T04:53:41.381Z

It should be called out explicitly that this call is responsible for cache sync.

Author: Chris Johns 2024-08-07T04:53:41.381Z

Sure. I have updated the comment.

Author: Kinsey Moore 2024-08-07T14:17:54.112Z

This is missing SPDX and doxygen file header.

Author: Chris Johns 2024-08-07T14:17:54.112Z

None of the files in `libdebugger` have this. Should I create a new MR once this is merged to add this to all files?

Author: Kinsey Moore 2024-08-07T14:17:54.112Z

That would be fine. I guess we need a janitor project for that if we don't already have one.

Author: Chris Johns 2024-08-07T04:53:15.208Z

added 1 commit

- 094c208f - libdebugger/powerpc: Add PowerPC support

Compare with previous version

Author: Chris Johns 2024-08-07T05:09:44.871Z

added 46 commits

- 094c208f...f2998639 - 43 commits from branch `rtems/rtos:main`
- 6a367f46 - libdebugger/target: Move global stepping variables in to the target data
- 53a62631 - libdebugger/target: Add support for backend code writters
- cc345584 - libdebugger/powerpc: Add PowerPC support

Compare with previous version

Author: Kinsey Moore 2024-08-07T14:17:54.133Z

resolved all threads

Author: Joel Sherrill 2024-08-07T15:37:19.216Z

Missing SPDX line.

Author: Joel Sherrill 2024-08-07T15:37:19.586Z

created #5103 to continue this discussion

Author: Joel Sherrill 2024-08-07T15:37:19.239Z

resolved all threads

Author: Joel Sherrill 2024-08-07T15:37:19.522Z

mentioned in issue #5103

Author: Joel Sherrill 2024-08-07T15:37:42.686Z

approved this merge request

Author: Amar Takhar 2024-08-07T18:31:20.133Z

approved this merge request

Author: Chris Johns 2024-08-11T02:15:01.014Z

mentioned in issue #5115

3.9.2.137 171 - objectinitializeinformation.c: Add Assert for API index too high

Id	171
State	merged
Merged by	Chris Johns
Merged at	2024-08-11T01:39:59.487Z
Assignee(s)	Joel Sherrill
Created	2024-08-07T13:17:56.755Z
Updated	2024-08-11T01:40:02.778Z
Milestone	6.1
Labels	rtems::score, scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/171
Commit	a51b7d4b573b6682d1dcd024bab0b9a3d2e78fba

Summary

objectinitializeinformation.c: Add Assert for API index too high

Coverity Scan spotted the possibility that the _Objects_Information_table could be over-indexed if the API value provided was too high. This function is only used during initialization and the input should be trusted. Adding a debug _Assert() emphasizes this trust.

Coverity CID 1512508

Closes #5084.

Author: Joel Sherrill 2024-08-07T13:17:57.032Z

assigned to @joel

Author: Joel Sherrill 2024-08-07T14:10:57.232Z

Accidentally opened another one.

Author: Joel Sherrill 2024-08-10T15:01:34.081Z

This code has not been merged. The issue was closed incorrectly by another commit.

Author: Amar Takhar 2024-08-10T17:43:50.294Z

added 8 commits

- f42e1dbf...e8172c86 - 7 commits from branch `rtems/rtos:main`
- c380f690 - objectinitializeinformation.c: Add Assert for API index too high

Compare with previous version

Author: Amar Takhar 2024-08-10T17:43:58.278Z

approved this merge request

Author: Chris Johns 2024-08-11T01:31:06.813Z

added 2 commits

- 43373006 - 1 commit from branch `rtems/rtos:main`
- a51b7d4b - objectinitializeinformation.c: Add Assert for API index too high

Compare with previous version

Author: Chris Johns 2024-08-11T01:39:55.348Z

approved this merge request

3.9.2.138 35 - bsps: Add a Bit Banged SPI

Id	35
State	merged
Merged by	Gedare Bloom
Merged at	2024-06-10T17:31:47.417Z
Created	2024-05-17T08:43:44.280Z
Updated	2024-08-10T00:40:56.503Z
Milestone	6.1
Labels	arch:arm, device::spi
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/35
Commit	fc68da47d5a24f15c473891af1878c9613056cab

Summary

Add a generic bit banged SPI driver that should work with all BSPs if they provide a GPIO get / set function. Implement one for the arm/imx and arm/imxrt BSPs.

A few limitations of the imx* GPIO and IOMUX drivers appeared when working on that. They have been fixed together with that.

Fixes #5014

Author: Amar Takhar 2024-05-18T16:57:26.900Z

Closing and re-opening to see if the approvers change.

Author: Amar Takhar 2024-05-18T17:04:48.912Z

approved this merge request

Author: Amar Takhar 2024-05-18T17:06:07.272Z

Originally this said it needed 3 approvers however anything under a group will get filled in if someone from that group approves

Author: Chris Johns 2024-05-24T04:20:55.826Z

Please make these something readable if these defined a needed, for example `WAITING_FOR_ABC`. Code fenced with `#if 0` does not age well because you never know if it can be removed or it has been excluded by mistake

Author: Christian Mauderer 2024-05-24T04:20:55.826Z

You are right. I'll remove the three iomuxcs and only add a comment at the one at address 0 that it handles all three.

Author: Christian Mauderer 2024-05-22T05:35:59.414Z

changed this line in version 4 of the diff

Author: Christian Mauderer 2024-05-24T04:20:55.826Z

I removed these lines and updated the pull request. Thanks for the suggestion.

Author: Chris Johns 2024-06-03T13:54:47.224Z

How is this file generated and from what?

Author: Christian Mauderer 2024-06-03T13:54:47.224Z

It's generated from the dts file with the command listed in the comment in that file: https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/bsps/arm/imxrt/dts/imxrt1166-cm7-saltshaker.dts?ref_type=heads#L28

When I originally added the i.MXRT BSP, we didn't have a dtc that would run on all platforms (at least I think it wouldn't run on Windows). Therefore I couldn't auto-generate the C file without breaking the build on some platforms and - as a workaround - generated it by hand. I planned to revisit that some-when but haven't found the time yet.

Author: Gedare Bloom 2024-06-03T13:54:47.224Z

i think you should technicallyl include a 2-bsd header in the generated file. This may be something worth adding to `rtems-bin2c`

Author: Christian Mauderer 2024-06-03T13:54:47.224Z

I think adding this feature to rtems-bin2c is a separate issue that will need a bit of discussion like which licenses we need to support and whether a simple tool like that should really have that ability. Do you want me to create a issue for that discussion?

I can add the header manually till then if you want.

Author: Gedare Bloom 2024-06-03T13:54:47.224Z

yes, open an issue and add a header manually, thanks

Author: Christian Mauderer 2024-06-03T13:52:20.768Z

changed this file in version 6 of the diff

Author: Christian Mauderer 2024-06-03T13:54:47.224Z

I added a header and created the issue in the rtems-tools: https://gitlab.rtems.org/rtems/tools/rtems-tools/-/issues/4

Author: Amar Takhar 2024-05-22T01:53:59.154Z

unapproved this merge request

Author: Kinsey Moore 2024-05-22T01:54:39.576Z

added 18 commits

- 5cc99dfe...e74cea41 - 14 commits from branch `rtems/rtos:main`
- 0bf8cbea - bsps/imx*-gpio: Parse active level of FDT
- 6f2cc60e - bsps: Add a GPIO based SPI driver
- dd951da6 - bsps/imx*: Add an i.MX* specific GPIO SPI driver
- 328a0a48 - bsps/imxrt1166*: Absolute address for pins in FDT

Compare with previous version

Author: Christian Mauderer 2024-05-22T05:36:00.011Z

added 1 commit

- 2bb72581 - bsps/imxrt1166*: Absolute address for pins in FDT

Compare with previous version

Author: Gedare Bloom 2024-05-24T05:57:58.127Z

`0xFFFFFFFFU`

Author: Christian Mauderer 2024-05-24T05:57:58.127Z

I'll change that with the next version.

Author: Christian Mauderer 2024-05-24T05:57:40.110Z

changed this line in version 5 of the diff

Author: Gedare Bloom 2024-06-03T13:55:46.881Z

Doxygen?

Author: Christian Mauderer 2024-06-03T13:55:46.881Z

Do you want me to remove the Doxygen or should I split it up in a short and a long description?

Author: Gedare Bloom 2024-06-03T13:55:46.881Z

Using the doxygen should be consistent, usually using `@brief` and other labels etc.

Author: Christian Mauderer 2024-06-03T13:52:22.126Z

changed this line in version 6 of the diff

Author: Christian Mauderer 2024-06-03T13:55:46.881Z

I relied on Doxygen to use the first sentence as brief description. But you are right that I should have written a better description. It's improved now.

Author: Gedare Bloom 2024-05-24T05:58:10.911Z

why not `active_level == GPIO_ACTIVE_LOW` it seems intuitive

Author: Christian Mauderer 2024-05-24T05:58:10.911Z

Because GPIO_ACTIVE_HIGH is a 0 while GPIO_ACTIVE_LOW is a 1. I somewhen started to compare for equal or not equal to 0. I'm not entirely sure but I think in some architectures, that should be more efficient. But in this case, efficiency isn't really a problem so I'll change that to prefer readability.

Author: Christian Mauderer 2024-05-24T05:57:41.346Z

changed this line in version 5 of the diff

Author: Gedare Bloom 2024-05-24T05:58:25.417Z

avoid declaring variables in the for(...)

Author: Christian Mauderer 2024-05-24T05:58:25.417Z

Sorry, missed that. Habit from a different coding style. I'll change it.

Author: Christian Mauderer 2024-05-24T05:57:42.875Z

changed this line in version 5 of the diff

Author: Gedare Bloom 2024-05-24T05:59:26.920Z

this is a NULL pointer exception in case the first `spi_bus_alloc_and_init` failed.

Author: Christian Mauderer 2024-05-24T05:59:26.920Z

Thanks. I'll fix it.

Author: Gedare Bloom 2024-05-31T19:49:32.959Z

unnecessary

Author: Christian Mauderer 2024-05-31T19:49:32.959Z

The `node=-1` is necessary because it is a parameter to `fdt_node_offset_by_compatible` inside of the loop. It searches the next compatible node starting from the one passed to it. When calling that function the first time, the parameter should be -1 according to the documentation.

Author: Gedare Bloom 2024-05-31T19:49:32.959Z

thanks i missed that.

Author: Gedare Bloom 2024-05-24T05:59:37.812Z

What happens if some of the nodes completed successfully but some did not?

Author: Christian Mauderer 2024-05-24T05:59:37.812Z

You are right. I will add a `&& sc == RTEMS_SUCCESSFUL` to the loop condition so that the return value is correct.

Author: Gedare Bloom 2024-05-24T05:59:41.729Z

idle idle

Author: Christian Mauderer 2024-05-24T05:59:41.729Z

Thanks.

Author: Christian Mauderer 2024-05-24T05:57:45.083Z

changed this line in version 5 of the diff

Author: Gedare Bloom 2024-05-24T05:59:48.380Z

SPI_GPIO_MAX_CS

Author: Christian Mauderer 2024-05-24T05:59:48.380Z

Of course. Seems I have been half asleep when writing this. Sorry.

Author: Christian Mauderer 2024-05-24T05:57:45.620Z

changed this line in version 5 of the diff

Author: Gedare Bloom 2024-05-24T06:00:00.050Z

`const char *device`

Author: Christian Mauderer 2024-05-24T05:57:46.057Z

changed this line in version 5 of the diff

Author: Gedare Bloom 2024-06-03T13:57:26.455Z

decl i. why size_t?

Author: Christian Mauderer 2024-06-03T13:57:26.455Z

I'll move the declaration out of the loop.

As far as I know, size_t should be the type that is able to hold any array index. Therefore I usually use size_t if I iterate over an array. For a small index like here it doesn't really matter whether I use `int` or `size_t`. But for _really_ and usually unrealistic big arrays (like one starting at `0x0` and addressing the index `0x80000000`) it would be relevant.

Author: Christian Mauderer 2024-05-24T05:57:46.725Z

changed this line in version 5 of the diff

Author: Gedare Bloom 2024-06-03T13:57:26.455Z

The `size_t` type should usually be for something in units usually of bytes. It is about storing the size of an object. it's basically the same as an `unsigned long`. It shouldn't make any real difference here although `int` might be slightly faster in some architectures.

Author: Christian Mauderer 2024-06-03T13:57:26.455Z

I'm not entirely sure whether size_t is really thought only for bytes. I would have to look that up in the C-standard. But it really doesn't matter here. I used an int for the chip selects and I used a separate size_t for the byte array later.

Author: Gedare Bloom 2024-05-24T06:00:16.372Z

decl variables at start of the block

Author: Christian Mauderer 2024-05-24T06:00:25.882Z

Should be fixed now.

Author: Gedare Bloom 2024-05-24T06:00:32.696Z

ditto

Author: Christian Mauderer 2024-05-24T05:57:47.406Z

changed this line in version 5 of the diff

Author: Gedare Bloom 2024-05-24T06:00:38.529Z

this looks wrong. It will always be `0`?

think you need `|` instead of `&`.

Author: Christian Mauderer 2024-05-24T06:00:38.529Z

Yes, you are right. I used the code mainly for writing so I didn't note that when testing it.

Author: Christian Mauderer 2024-05-24T05:57:48.071Z

changed this line in version 5 of the diff

Author: Gedare Bloom 2024-05-24T06:00:47.675Z

check `params != NULL`?

Author: Christian Mauderer 2024-05-24T06:00:47.675Z

Added in the next version.

Author: Christian Mauderer 2024-05-24T05:57:48.998Z

added 4 commits

- f6f4fb2f - bsps/imx*-gpio: Parse active level of FDT
- 10226e01 - bsps: Add a GPIO based SPI driver
- b59b4562 - bsps/imx*: Add an i.MX* specific GPIO SPI driver
- 45edbe26 - bsps/imxrt1166*: Absolute address for pins in FDT

Compare with previous version

Author: Christian Mauderer 2024-06-03T13:52:24.279Z

added 17 commits

- 45edbe26...b8910111 - 12 commits from branch `rtems/rtos:main`
- b711761f - bsps/imx*-gpio: Parse active level of FDT
- 65cf5bc1 - bsps: Add a GPIO based SPI driver
- 3612f003 - bsps/imx*: Add an i.MX* specific GPIO SPI driver
- c621cb86 - bsps/arm/imxrt: Add license header to fdt-blobs
- b3fcb10b - bsps/imxrt1166*: Absolute address for pins in FDT

Compare with previous version

Author: Christian Mauderer 2024-06-03T13:57:26.498Z

resolved all threads

Author: Sebastian Huber 2024-06-05T07:03:40.760Z

Missing blank line.

Author: Christian Mauderer 2024-06-05T07:03:40.760Z

Fixed.

Author: Sebastian Huber 2024-06-07T06:44:27.992Z

The driver should have its own Doxygen group. The driver documentation should be moved to this group. The file comment should use the template text.

Author: Christian Mauderer 2024-06-05T07:02:22.434Z

changed this line in version 7 of the diff

Author: Christian Mauderer 2024-06-07T06:44:27.992Z

I created a new group, improved the description and adapted to the template here: https://docs.rtems.org/branches/master/eng/coding-file-hdr.html#c-c-header-file-template

Author: Christian Mauderer 2024-06-07T06:44:27.992Z

@sebhub: Is the doxygen in the latest version OK now so that I can resolve that thread? For some reason gitlab didn't pick up the change here. So here is a link to the changes:

https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/35/diffs?diff_id=807&start_sha=b3fcb10b1fee8807bbbd8187ff2817993c118043#8c490237f998cdaf4d5ef173bfd7675370f93d98

Author: Sebastian Huber 2024-06-05T07:03:20.178Z

Do we really need an argument for each callback? Can't we just pass the structure to each call back. Specialized drivers can then use the structure as a base component and add their own stuff below:

```
typedef struct {
struct spi_gpio_params base;
int my_device_stuff;
} my_device_control;
```

I suggest to use `typedef struct { } spi_gpio_control`.

Author: Christian Mauderer 2024-06-05T07:03:20.178Z

Having an argument for each callback allows to distinguish the pin using the argument. I used that for example here:

https://gitlab.rtems.org/c-mauderer/rtems/-/commit/3612f00378b6ed174964e7377733c526bd737ef9#863225c0b5ffd1d117d3b36ad01ac524ba8bc5ea_0_122

I used a single pin setter function with different arguments.

If I would only use only one argument, I would have to define multiple functions for setting MOSI, SCLK, CS and so on. Alternatively I could pass a parameter which pin should be set. In that case I could remove the function per pin. Something like

```
spi_gpio_set_pin_fn(my_ctx, SPI_MOSI, true);
```

Most likely that will reduce the performance because it adds an extra `switch case` on every pin toggling. I didn't optimize that much for performance but for a bit banged SPI, every instruction reduces the maximum possible speed.

I'll take care of the missing new line and doxygen later or (more likely) tomorrow.

Author: Sebastian Huber 2024-06-05T07:03:20.178Z

Ok, from a performance point of view it makes sense to not have a switch case.

Multiple functions for MOSI, SCLK, CS and so on could make the driver more generic, but I am fine with the multiple arguments version as well.

Author: Christian Mauderer 2024-06-05T07:02:23.111Z

added 4 commits

- ec5fe390 - bsps: Add a GPIO based SPI driver
- 45920043 - bsps/imx*: Add an i.MX* specific GPIO SPI driver
- 081c6d0d - bsps/arm/imxrt: Add license header to fdt-blobs
- 0e1a4e5c - bsps/imxrt1166*: Absolute address for pins in FDT

Compare with previous version

Author: Sebastian Huber 2024-06-07T06:59:32.696Z

This stuff needs to move below to a `@defgroup ... @{ ... code .. @}` group definition. The file documentation should use a standard text like: `This header file provides interfaces of the @ref RTEMSDeviceSPIGPIO.`

Author: Christian Mauderer 2024-06-07T06:44:09.448Z

changed this line in version 8 of the diff

Author: Christian Mauderer 2024-06-07T06:59:32.696Z

I updated the doxygen comments again. I hope everything is correct now:

https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/35/diffs?diff_id=885&start_sha=0e1a4e5c125eef77b7333457241468c331040a87

Author: Sebastian Huber 2024-06-07T06:45:18.853Z

Missing `@file`.

Author: Gedare Bloom 2024-06-06T19:14:31.948Z

approved this merge request

Author: Christian Mauderer 2024-06-07T06:44:10.166Z

added 4 commits

- 21c328f1 - bsps: Add a GPIO based SPI driver
- fa3d9970 - bsps/imx*: Add an i.MX* specific GPIO SPI driver
- fd6308f9 - bsps/arm/imxrt: Add license header to fdt-blobs
- 66360d2b - bsps/imxrt1166*: Absolute address for pins in FDT

Compare with previous version

Author: Christian Mauderer 2024-06-07T06:44:26.376Z

reset approvals from @gedare by pushing to the branch

Author: Sebastian Huber 2024-06-07T06:46:06.558Z

approved this merge request

Author: Sebastian Huber 2024-06-07T06:46:08.871Z

added 19 commits

- 66360d2b...cbe60cea - 14 commits from branch `rtems/rtos:main`
- 7179f233 - bsps/imx*-gpio: Parse active level of FDT
- 0e7567bc - bsps: Add a GPIO based SPI driver
- 15f16def - bsps/imx*: Add an i.MX* specific GPIO SPI driver
- f83968f3 - bsps/arm/imxrt: Add license header to fdt-blobs
- fc68da47 - bsps/imxrt1166*: Absolute address for pins in FDT

Compare with previous version

Author: Christian Mauderer 2024-06-07T06:59:32.720Z

resolved all threads

Author: Gedare Bloom 2024-06-10T17:31:28.043Z

approved this merge request

3.9.2.139 18 - libdl:fix dynamic loading error.

Id	18
State	merged
Merged by	Amar Takhar
Merged at	2024-05-06T05:41:35.466Z
Created	2024-05-03T11:06:04.699Z
Updated	2024-08-10T00:40:56.376Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/18
Commit	670fda8784bb9ab70fcce7e5eeef9ad240f5714e

Summary

This fixed issue #3740.

~"library::libdl"

Author: Chris Johns 2024-05-06T04:43:36.148Z

approved this merge request

Author: xiaojun zheng 2024-05-06T05:40:39.368Z

added 9 commits

- 4655ceee...33f92239 - 8 commits from branch `rtems/rtos:main`
- 670fda87 - Merge branch rtems:main into main

Compare with previous version

Author: Amar Takhar 2024-05-07T00:33:52.677Z

The repository was edited directly to remove the merge commit this merge created.

Author: xiaojun zheng 2024-05-08T00:40:15.367Z

changed the description

Author: xiaojun zheng 2024-05-08T00:41:27.214Z

changed the description

Author: xiaojun zheng 2024-05-08T00:45:05.921Z

changed the description

Author: xiaojun zheng 2024-05-08T00:47:33.752Z

changed the description

Author: xiaojun zheng 2024-05-08T01:09:03.461Z

changed the description

3.9.2.140 11 - bsps/powerpc: Introduction of interrupt locks

Id	11
State	merged
Merged by	Amar Takhar
Merged at	2024-05-06T05:32:29.054Z
Created	2024-05-02T09:43:55.847Z
Updated	2024-08-10T00:40:56.248Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/11
Commit	1dd7a6e2d65ed2cb4531eb372650355b479ab9fd

bsps/powerpc: Introduction of interrupt locks

Interrupt locks are introduced in shared vme device drivers to enable compilation in an SMP configuration of the qoriq BSP.

[this merge request has been ported from a pending patch submitted on the mailing list]

Author: Amar Takhar 2024-05-03T20:13:20.265Z

Please ignore the noise I'm about to create just testing out some approval rules. :)

Author: Chris Johns 2024-05-06T03:43:02.568Z

The changes had a review on the devel@ mailing list before we moved to GitLab. The important detail is:

> Hello Chris, it is tested on an MVME2500 which uses the powerpc/qoriq_e500 in an SMP configuration. Best regards Christian On 2024-04-18 04:04, Chris Johns wrote:
>
> > Hi Vincenzo,
> >
> > Welcome to RTEMS.
> >
> > What hardware in the shared VME PowerPC family of BSPS has this change been
> >
> > tested on? Thanks Chris
> >
> > I am happy with this. Any regressions on other shared PowerPC BSPs can be covered by new issues.

Author: Chris Johns 2024-05-06T03:43:04.758Z

approved this merge request

Author: Ranulfo Raphael 2024-05-07T13:18:26.071Z

It seems that the commit from this merge request is missing on main after update.

Author: Vincenzo Calabretta 2024-05-07T16:31:09.708Z

mentioned in merge request !24

Author: Vincenzo Calabretta 2024-05-07T16:34:20.041Z

I opened a new merge request to replicate the changes !24 .

3.9.2.141 16 - bsp/tms570 Improvements

Id	16
State	merged
Merged by	Amar Takhar
Merged at	2024-06-04T15:51:44.054Z
Created	2024-05-02T12:51:06.204Z
Updated	2024-08-10T00:40:56.112Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/16
Commit	6c66526e820867924bca1374e5d59cebde08d7c4

Summary

Author: Sebastian Huber 2024-05-02T12:52:08.349Z

changed title from **{-arm: Add arm_cp15_data_cache_all_invalidate()-}** to **{+bsp/tms570 Improvements+}**

Author: Sebastian Huber 2024-05-02T12:52:08.374Z

changed the description

Author: Sebastian Huber 2024-05-03T06:00:09.928Z

mentioned in issue #4982

Author: Sebastian Huber 2024-05-21T08:53:42.323Z

mentioned in merge request !36

Author: Sebastian Huber 2024-05-24T09:04:08.956Z

I have a patch set for another BSP which depends on this.

Author: Sebastian Huber 2024-05-24T09:04:17.254Z

added 52 commits

- f34716c4...64844f44 - 42 commits from branch `rtems/rtos:main`
- 92e570b0 - arm: Add arm_cp15_data_cache_all_invalidate()
- 5f7d7190 - bsps/cache: Simplify Cortex-R5 cache support
- cbd9a9b2 - bsps/cache: Fix ARM CP-15 get cache size
- fd5f84b2 - bsp/tms570: Add TMS570LC4357 PLL support
- 917e8fce - bsp/tms570: Add clock BSP options
- 115c55a4 - bsp/tms570: Fix clock driver
- 1d7861cc - bsp/tms570: Add TMS570_FATAL_RTI_IRQ_INSTALL
- f439ebf3 - bsp/tms570: Use RTI for CPU counter
- e91224c4 - bsp/tms570: Use write-back/write-allocate SDRAM
- 3317e010 - bsp/tms570: Move ECLK pin initialization

Compare with previous version

Author: Chris Johns 2024-06-04T09:41:31.341Z

approved this merge request

Author: Amar Takhar 2024-06-04T15:51:00.833Z

added 15 commits

- 3317e010...b8910111 - 5 commits from branch `rtems/rtos:main`
- f67f1c87 - arm: Add arm_cp15_data_cache_all_invalidate()
- ef570cf1 - bsps/cache: Simplify Cortex-R5 cache support
- 123e0e6f - bsps/cache: Fix ARM CP-15 get cache size
- 28e4a46d - bsp/tms570: Add TMS570LC4357 PLL support
- cc6f1d86 - bsp/tms570: Add clock BSP options
- 575ec7ed - bsp/tms570: Fix clock driver
- cb43ee69 - bsp/tms570: Add TMS570_FATAL_RTI_IRQ_INSTALL
- b4a4baa3 - bsp/tms570: Use RTI for CPU counter
- 2fbee001 - bsp/tms570: Use write-back/write-allocate SDRAM
- 6c66526e - bsp/tms570: Move ECLK pin initialization

Compare with previous version

Author: Amar Takhar 2024-06-04T15:51:38.298Z

approved this merge request

3.9.2.142 13 - bsps: Use interrupt entry in clock driver

Id	13
State	merged
Merged by	Amar Takhar
Merged at	2024-05-06T05:34:21.704Z
Created	2024-05-02T12:47:39.589Z
Updated	2024-08-10T00:40:55.997Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/13
Commit	86dcfc7ca5d8cdff4cab088de674dd61ae09222a

Summary

bsps: Use interrupt entry in clock driver

This avoids a dependency on memory allocations.

Author: Chris Johns 2024-05-06T04:02:34.431Z

approved this merge request

Author: Amar Takhar 2024-05-06T05:33:02.891Z

added 2 commits

- 1dd7a6e2 - 1 commit from branch `rtems/rtos:main`
- 86dcfc7c - bsps: Use interrupt entry in clock driver

Compare with previous version

3.9.2.143 15 - Doxygen improvements

Id	15
State	merged
Merged by	Amar Takhar
Merged at	2024-05-06T05:36:03.240Z
Created	2024-05-02T12:49:56.664Z
Updated	2024-08-10T00:40:55.864Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/15
Commit	33f92239769cfeea96d64f94d301d724f8f27b41

Author: Sebastian Huber 2024-05-02T12:53:48.138Z

changed title from **{-bsps/aarch64: Define Doxygen group-}s** to **{+Doxygen improvement+}s**

Author: Sebastian Huber 2024-05-02T12:53:48.163Z

changed the description

Author: Chris Johns 2024-05-06T05:35:57.668Z

Is there any documentation on how this name is constructed? I found some in the Eng manual specific. Is the naming mature enough we could formalize of the naming?

Author: Sebastian Huber 2024-05-06T05:35:57.668Z

We have documentation here:

https://docs.rtems.org/branches/master/eng/coding-doxygen.html#group-names

We could probably also provide a regular expression. However, third-party code may use different rules.

Author: Chris Johns 2024-05-06T03:51:42.204Z

approved this merge request

Author: Chris Johns 2024-05-06T03:56:26.256Z

These changes have me wondering why we have churn like this? Some seems to be style driven and some because it is broken. I am fine with the style and my comment is more directed at why there are differences? I know I struggle to understand what is right and acceptable as Doxygen is tolerant of various styles.

1. Are we lacking needed documentation on how to add Doxygen comments?
2. Would a CI builder help?

Author: Sebastian Huber 2024-05-06T05:35:21.062Z

If you want to use the Doxygen generated documentation, it helps if you have a good group hierarchy and files are connected to the right group. In the BSP area this is still work in progress.

Author: Amar Takhar 2024-05-06T05:35:33.062Z

added 8 commits

- d2ef0aaa...86dcfc7c - 2 commits from branch `rtems/rtos:main`
- c8dff8ff - bsps: Add Doxygen group for Arm Generic Timer
- 04e4b11e - aarch64: Add files to Doxygen groups
- e35d7fc7 - bsps/aarch64: Define Doxygen groups
- d2e56b17 - bsps/arm: Add Doxygen group for Armv7-M SysTick
- 4b1a105a - bsps/arm: Add CMSIS files to Doxygen group
- 33f92239 - bsps/arm: Fix Doxygen group assignment

Compare with previous version

Author: Amar Takhar 2024-05-06T05:35:57.685Z

resolved all threads

3.9.2.144 45 - validation: Improve interrupt controller tests

Id	45
State	merged
Merged by	Gedare Bloom
Merged at	2024-05-31T20:05:12.554Z
Created	2024-05-22T16:06:02.496Z
Updated	2024-08-10T00:40:55.757Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/45
Commit	b89101116fbce2bffed4b79a5b39fdc604f91975

Summary

validation: Improve interrupt controller tests

Update #3716.

Author: Chris Johns 2024-05-28T21:21:29.783Z

Why no `T_*` handling of `sc` from this last call?

Author: Sebastian Huber 2024-05-28T21:21:29.783Z

If you can't set the task affinity to the present interrupt affinity, then this interrupt may belong to another executable, for example a Zynq RPU in split mode has a shared GIC distributor.

Author: Chris Johns 2024-05-28T21:21:29.783Z

Please add a comment

Author: Sebastian Huber 2024-05-24T09:14:34.547Z

added 1 commit

- 7c62d7e3 - validation: Improve interrupt controller tests

Compare with previous version

Author: Chris Johns 2024-05-28T21:21:29.799Z

resolved all threads

Author: Chris Johns 2024-05-28T21:21:53.521Z

approved this merge request

Author: Chris Johns 2024-05-28T21:22:16.309Z

added 9 commits

- 7c62d7e3...b3a4f539 - 8 commits from branch `rtems/rtos:main`
- 8e60fc5e - validation: Improve interrupt controller tests

Compare with previous version

Author: Gedare Bloom 2024-05-31T20:03:51.451Z

approved this merge request

Author: Gedare Bloom 2024-05-31T20:04:35.688Z

added 4 commits

- 8e60fc5e...48f6b500 - 3 commits from branch `rtems/rtos:main`
- b8910111 - validation: Improve interrupt controller tests

Compare with previous version

3.9.2.145 7 - validation: Fix powerpc in test case

Id	7
State	merged
Merged by	Amar Takhar
Merged at	2024-04-30T07:51:56.947Z
Created	2024-04-30T05:41:33.016Z
Updated	2024-08-10T00:40:55.540Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/7
Commit	00f0d307b49097236dd10329456bb4103c283024

Summary

Update GitLab repository to match git.rtems.org.

Author: Amar Takhar 2024-04-30T05:41:40.992Z

approved this merge request

Author: Amar Takhar 2024-04-30T05:44:08.503Z

Refs administration/gitlab#41

Author: Chris Johns 2024-04-30T07:36:18.962Z

approved this merge request

3.9.2.146 42 - cpukit/posix/src/aio_misc.c: Created helper method for rtems_aio_handle()

Id	42
State	merged
Merged by	Chris Johns
Merged at	2024-05-29T22:12:56.744Z
Created	2024-05-21T17:06:46.973Z
Updated	2024-08-10T00:40:55.433Z
Milestone	6.1
Labels	api::posix
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/42
Commit	48f6b5006be685501576791070385ba1a6de71fd

Summary

Created the `rtems_aio_handle_helper` function to handle various types of requests. This moves the processing outside of `rtems_aio_handle`, making the functions more readable.

Closes #5017

Author: Alessandro Nardin 2024-05-21T17:07:19.573Z

changed the description

Author: Joel Sherrill 2024-05-24T15:53:45.031Z

Update comments to Doxygen. Please

Author: Alessandro Nardin 2024-05-24T13:15:10.760Z

changed this line in version 5 of the diff

Author: Joel Sherrill 2024-05-25T16:36:41.909Z

I do not think RTEMS style has a space after the method name.

Author: Alessandro Nardin 2024-05-25T16:36:41.909Z

I looked at all aio*.c files and they are mostly consistent in having a space after method name. I looked at other files ant they seem to not have any space after

method name. I did not find anything specific in the coding conventions. Should i remove all the spaces?

Author: Joel Sherrill 2024-05-25T16:36:41.909Z

https://docs.rtems.org/branches/master/eng/coding-formatting.html#rules says no space after method name.

“No space between a function name or function-like macro and the opening parenthesis.”

Author: Alessandro Nardin 2024-05-24T13:15:14.165Z

changed this line in version 5 of the diff

Author: Kinsey Moore 2024-05-21T20:22:34.661Z

added 2 commits

- cfb9f96c - 1 commit from branch `rtems/rtos:main`
- 0bdaeb9b - created helper method for rtems_aio_handle()

Compare with previous version

Author: Chris Johns 2024-05-25T21:36:18.217Z

If this line is being touched please convert to a `/* ... */` style comment.

Author: Alessandro Nardin 2024-05-24T13:15:15.054Z

changed this line in version 5 of the diff

Author: Joel Sherrill 2024-05-25T21:36:18.217Z

I looked at the diff and think there are some more formatting issues. Just scroll through it looking at indentation and braces style.

Author: Alessandro Nardin 2024-05-25T21:36:18.217Z

I just went through the file. The only thing i found was a missing space before a parenthesis on line 161 (I have not committed this change yet). Since you said on discord that there are still some issues to fix i’m afraid i’m overlooking something. When you find the time could you provide me with an example of what to look for?

Author: Joel Sherrill 2024-05-25T21:36:18.217Z

I was just saying it had enough issues where a top to bottom review was needed. Glad you only found one issue. Set this up to be merged and closed.

Author: Chris Johns 2024-05-25T16:37:09.278Z

Should this call be `static`? I cannot see it being exported anywhere?

Author: Alessandro Nardin 2024-05-25T16:37:09.278Z

Yes, it should be static. i'll fix that

Author: Alessandro Nardin 2024-05-24T13:15:15.794Z

changed this line in version 5 of the diff

Author: Chris Johns 2024-05-24T15:56:24.160Z

Why are these print statements not aligned with the rest of the block? Are there tabs in the source?

Author: Alessandro Nardin 2024-05-24T15:56:24.160Z

The source does not have tabs, I'll fix the alignment.

Author: Alessandro Nardin 2024-05-24T13:15:16.441Z

changed this line in version 5 of the diff

Author: Chris Johns 2024-05-24T15:56:37.883Z

This is normally written as `if (result < 0) { ....`

Author: Alessandro Nardin 2024-05-24T13:15:17.017Z

changed this line in version 5 of the diff

Author: Alessandro Nardin 2024-05-22T13:53:55.016Z

added 8 commits

- 0bdaeb9b...e74cea41 - 7 commits from branch `rtems/rtos:main`
- 50a63c59 - Merge branch rtems:main into aio-helper-creation

Compare with previous version

Author: Gedare Bloom 2024-05-23T21:48:07.993Z

Please rebase locally and force-push your fork to avoid having merge commits in your MR.

For commit messages, see https://docs.rtems.org/branches/master/eng/vc-users.html#commit-message-guidance

Author: Alessandro Nardin 2024-05-24T08:17:45.335Z

added 8 commits

- 50a63c59...64844f44 - 7 commits from branch `rtems/rtos:main`
- db924f0e - created helper method for rtems_aio_handle()

Compare with previous version

Author: Alessandro Nardin 2024-05-24T13:15:17.556Z

added 4 commits

- 750bb53c - Doxygen documentation for aio_misc.c
- ac343cce - Made rtems_aio_helper() static
- 511f9d7c - Formatting changes only
- 59d47dfa - Modified code to ahdere to coding standard

Compare with previous version

Author: Alessandro Nardin 2024-05-24T13:19:50.224Z

changed title from **{-c-}reated helper method for rtems_aio_handle()** to **{+posix: C+}reated helper method for rtems_aio_handle()**

Author: Alessandro Nardin 2024-05-24T13:19:50.249Z

changed the description

Author: Alessandro Nardin 2024-05-24T13:21:01.756Z

changed the description

Author: Alessandro Nardin 2024-05-24T21:34:32.576Z

added 1 commit

- a20cc6f7 - Formatting changes only

Compare with previous version

Author: Alessandro Nardin 2024-05-24T21:50:33.531Z

added 1 commit

- 21953314 - Formatting changes only

Compare with previous version

Author: Joel Sherrill 2024-05-25T21:36:18.243Z

resolved all threads

Author: Alessandro Nardin 2024-05-25T21:53:50.909Z

added 1 commit

- 3d500ef1 - Formatting changes only

Compare with previous version

Author: Joel Sherrill 2024-05-25T22:18:36.216Z

approved this merge request

Author: Chris Johns 2024-05-28T20:39:39.572Z

Please:

1. Squash the formatting changes into the changes, we do not need to have these on `main`
2. Rebase the MR
3. Please add a prefix to the commit messages to scope the context of the changes, if `libcsupport: xxxx`. This helps those reviewing the git log on what the changes are

Author: Chris Johns 2024-05-28T20:39:39.572Z

I have made the MR draft until the commits and commit messages are ready for review.

Author: Alessandro Nardin 2024-05-28T20:39:39.572Z

I squashed all the commits into one and updated the commit message.

Author: Chris Johns 2024-05-25T23:57:46.257Z

marked this merge request as **draft**

Author: Amar Takhar 2024-05-26T00:04:14.475Z

mentioned in issue rtems/docs/rtems-docs#9

Author: Alessandro Nardin 2024-05-26T08:32:44.956Z

added 4 commits

- b3a4f539 - 1 commit from branch `rtems/rtos:main`
- e341aa14 - cpukit/posix/src/aio_misc.c: created helper method rtems_aio_handle_helper()
- ff2c44ff - cpukit/posix/src/aio_misc.c: added Doxygen documentation
- eb160c2e - cpukit/posix/src/aio_misc.c: made rtems_aio_helper() static

Compare with previous version

Author: Alessandro Nardin 2024-05-26T08:34:13.186Z

changed title from **Draft: {-posix-}: Created helper method for rtems_aio_handle()** to **Draft: {+cpukit/posix/src/aio_misc.c+}: Created helper method for rtems_aio_handle()**

Author: Alessandro Nardin 2024-05-28T20:16:47.745Z

added 1 commit

- 522346c1 - cpukit/posix/src/aio_misc.c: created helper method rtems_aio_handle_helper()

Compare with previous version

Author: Alessandro Nardin 2024-05-28T20:25:33.660Z

added 1 commit

- 000c7df7 - cpukit/posix/src/aio_misc.c: created helper method rtems_aio_handle_helper()

Compare with previous version

Author: Alessandro Nardin 2024-05-28T20:28:33.244Z

added 1 commit

- 5b322e77 - cpukit/posix/src/aio_misc.c: created helper method rtems_aio_handle_helper()

Compare with previous version

Author: Alessandro Nardin 2024-05-28T20:28:44.460Z

reset approvals from @joel by pushing to the branch

Author: Alessandro Nardin 2024-05-28T20:37:03.324Z

added 1 commit

- a58e2d9e - cpukit/posix/src/aio_misc.c: created helper method rtems_aio_handle_helper()

Compare with previous version

Author: Alessandro Nardin 2024-05-28T20:39:39.591Z

resolved all threads

Author: Alessandro Nardin 2024-05-28T20:39:56.496Z

marked this merge request as **ready**

Author: Chris Johns 2024-05-28T21:28:39.846Z

approved this merge request

Author: Amar Takhar 2024-05-29T16:19:14.063Z

Question.. What's with all the spaces after and before all the parenthesis?

Author: Alessandro Nardin 2024-05-29T16:19:14.063Z

I did it to adhere to the formatting standards, following the rules and mimicking what i saw in other files when i had a doubt. Although now I realize that i probably misinterpreted the "Put a single space inside and outside of each parenthesis of a conditional expression" rule since i added the spaces also in ifs and whiles.

Author: Alessandro Nardin 2024-05-29T16:19:14.063Z

Would it be better if i changed it?

Author: Amar Takhar 2024-05-29T16:19:14.063Z

No, what you've done is correct all these years and my eyes have glossed over that. Sorry for the noise.

Author: Alessandro Nardin 2024-05-29T14:17:17.609Z

added 3 commits

- a58e2d9e...4b45d42a - 2 commits from branch `rtems/rtos:main`
- 1e93a34b - cpukit/posix/src/aio_misc.c: created helper method rtems_aio_handle_helper()

Compare with previous version

Author: Amar Takhar 2024-05-29T16:19:14.084Z

resolved all threads

Author: Amar Takhar 2024-05-29T16:57:29.892Z

There are some extra spaces before the @ marker in the Doxygen comments at the top of the file.

Author: Alessandro Nardin 2024-05-29T16:57:29.892Z

Yes, I missed them. Now should be fixed.

Author: Amar Takhar 2024-05-29T16:57:29.892Z

Great thanks!

Author: Alessandro Nardin 2024-05-29T16:55:23.570Z

added 1 commit

- 48f6b500 - cpukit/posix/src/aio_misc.c: created helper method rtems_aio_handle_helper()

Compare with previous version

Author: Alessandro Nardin 2024-05-29T16:55:37.451Z

reset approvals from @chris by pushing to the branch

Author: Amar Takhar 2024-05-29T16:57:29.914Z

resolved all threads

Author: Joel Sherrill 2024-05-29T18:23:08.574Z

approved this merge request

Author: Chris Johns 2024-05-29T22:05:47.462Z

marked this merge request as **draft**

Author: Chris Johns 2024-05-29T22:12:43.688Z

marked this merge request as **ready**

Author: Chris Johns 2024-05-29T22:12:49.370Z

approved this merge request

Author: Alessandro Nardin 2024-06-04T17:39:18.811Z

mentioned in merge request !56

3.9.2.147 22 - Doxygen improvements

Id	22
State	merged
Merged by	Chris Johns
Merged at	2024-05-07T09:19:16.103Z
Created	2024-05-07T09:18:21.535Z
Updated	2024-08-10T00:40:55.235Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/22
Commit	f5b52a3af03468f37bb08bf43dc41f087db6722d

Summary

Submit again since commits disappeared.

Author: Chris Johns 2024-05-07T09:18:57.898Z

approved this merge request

3.9.2.148 40 - corrected the content of psxaio01.scn

Id	40
State	merged
Merged by	Joel Sherrill
Merged at	2024-05-21T21:16:23.430Z
Created	2024-05-21T16:53:10.960Z
Updated	2024-08-10T00:40:55.133Z
Milestone	6.1
Labels	api::posix, rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/40
Commit	fca3f2b8208991c55fc28538902dd6af6f1cb798

Summary

Added correct test output to psxaio01.scn

Fixes #5016

Author: Alessandro Nardin 2024-05-21T16:55:32.550Z

changed the description

Author: Joel Sherrill 2024-05-21T19:46:05.154Z

Looks good. Reviewed by @joel

Author: Joel Sherrill 2024-05-21T19:46:09.887Z

approved this merge request

Author: Kinsey Moore 2024-05-21T20:21:34.123Z

approved this merge request

Author: Kinsey Moore 2024-05-21T20:21:39.121Z

added 2 commits

- cfb9f96c - 1 commit from branch `rtems/rtos:main`
- fca3f2b8 - corrected the content of psxaio01.scn

Compare with previous version

3.9.2.149 39 - bsps: Assign file to Doxygen group

Id	39
State	merged
Merged by	Gedare Bloom
Merged at	2024-05-23T19:03:47.742Z
Created	2024-05-21T08:56:27.897Z
Updated	2024-08-10T00:40:55.024Z
Milestone	6.1
Labels	bsp, doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/39
Commit	80c94eeff4d965ac5ea6caa3ed8ace2bbf3cc12c

Summary

bsps: Assign file to Doxygen group

Add standard file header.

Author: Chris Johns 2024-05-21T23:02:10.500Z

approved this merge request

Author: Joel Sherrill 2024-05-23T18:39:24.713Z

Reviewed by @joel.

Author: Joel Sherrill 2024-05-23T18:39:30.123Z

approved this merge request

Author: Gedare Bloom 2024-05-23T19:03:12.451Z

added 9 commits

- 1cbca6d2...e74cea41 - 8 commits from branch `rtems/rtos:main`
- 80c94eef - bsps: Assign file to Doxygen group

Compare with previous version

3.9.2.150 38 - score: Add _Processor_mask_And_not()

Id	38
State	merged
Merged by	Gedare Bloom
Merged at	2024-05-23T21:45:04.853Z
Created	2024-05-21T08:55:55.240Z
Updated	2024-08-10T00:40:54.848Z
Milestone	6.1
Labels	rtems::score
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/38
Commit	869071dfb240c640776808f82e09a146338af86b

Summary

score: Add _Processor_mask_And_not()

Add it for completeness.

Author: Chris Johns 2024-05-23T00:04:16.312Z

2023?

Author: Sebastian Huber 2024-05-23T00:04:16.312Z

Yes, this patch is from 2023. I have a long back log and it is growing.

Author: Chris Johns 2024-05-23T00:04:16.329Z

resolved all threads

Author: Chris Johns 2024-05-23T00:04:20.324Z

approved this merge request

Author: Gedare Bloom 2024-05-23T21:44:13.802Z

approved this merge request

Author: Gedare Bloom 2024-05-23T21:44:26.160Z

added 12 commits

- 05ec879b...a85402f7 - 11 commits from branch `rtems/rtos:main`
- 869071df - score: Add _Processor_mask_And_not()

Compare with previous version

3.9.2.151 75 - x86_64: Set CPU_USE_LIBC_INIT_FINI_ARRAY to TRUE

Id	75
State	merged
Merged by	Amar Takhar
Merged at	2024-06-17T20:45:43.719Z
Created	2024-06-15T20:32:28.771Z
Updated	2024-08-10T00:40:44.028Z
Milestone	6.1
Labels	arch:x86_64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/75
Commit	7f2b904d6e6a36da26b0cbbda94a057247291676

Summary

x86_64 is expected to use .init_array and .fini_array. Fixes global constructors and destructors not getting called

Closes #5046

Author: Matheus Pecoraro 2024-06-15T20:35:11.938Z

Author: Gedare Bloom 2024-06-17T20:44:41.878Z

approved this merge request

Author: Amar Takhar 2024-06-17T20:45:25.954Z

approved this merge request

Author: Amar Takhar 2024-06-17T20:45:35.476Z

added 3 commits

- 8e755537...64404162 - 2 commits from branch `rtems/rtos:main`
- 7f2b904d - x86_64: Set CPU_USE_LIBC_INIT_FINI_ARRAY to TRUE

Compare with previous version

3.9.2.152 68 - bsps/aarch64: Unify clock driver build

Id	68
State	merged
Merged by	Amar Takhar
Merged at	2024-06-14T02:47:30.450Z
Assignee(s)	Sebastian Huber
Created	2024-06-11T13:37:17.557Z
Updated	2024-08-10T00:40:43.912Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/68
Commit	0951e4e617ce454aac2079516480aa2237430558

Summary

bsps/aarch64: Unify clock driver build

Make sure <dev/clock/arm-generic-timer.h> is installed. The installation was erroneously removed by commit 00f0d307b49097236dd10329456bb4103c283024 for most BSPs.

Author: Sebastian Huber 2024-06-11T13:37:17.659Z

assigned to @sebhub

Author: Kinsey Moore 2024-06-11T13:57:20.123Z

approved this merge request

Author: Ning Yang 2024-06-11T14:12:38.407Z

I'm so sorry for my mistake.

Author: Kinsey Moore 2024-06-12T22:34:05.844Z

added 4 commits

- c795f5fe...20939b21 - 3 commits from branch `rtems/rtos:main`
- 8f3e2717 - bsps/aarch64: Unify clock driver build

Compare with previous version

Author: Amar Takhar 2024-06-13T19:48:40.659Z

added 8 commits

- 8f3e2717...1e682988 - 7 commits from branch `rtems/rtos:main`

- 566a7b7f - bsps/aarch64: Unify clock driver build

Compare with previous version

Author: Amar Takhar 2024-06-14T02:47:04.481Z

added 4 commits

- 566a7b7f...b031cf2b - 3 commits from branch `rtems/rtos:main`
- 0951e4e6 - bsps/aarch64: Unify clock driver build

Compare with previous version

Author: Amar Takhar 2024-06-14T02:47:26.330Z

approved this merge request

3.9.2.153 34 - x86_64: Fix stack aligment for x86-64 SysV ABI

Id	34
State	merged
Merged by	Kinsey Moore
Merged at	2024-05-22T01:45:46.454Z
Assignee(s)	Chris Johns, Matheus Pecoraro
Created	2024-05-14T22:50:03.216Z
Updated	2024-08-10T00:40:43.786Z
Milestone	6.1
Labels	arch:x86_64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/34
Commit	b874f4c99de76c41096bf4c0e33cfca04101a5e0

Summary

The amd64 BSP was broken and would always generate a general protection fault.

The GPF was being caused by an instruction attempting to move an SSE register to an address on the stack not aligned to 16 bytes. The code for setting up the stack frame for a context would result in it being misaligned by 8 bytes as to what is expected by the x86-64 SysV ABI, thus leading the compiler to unknowingly cause the exception (when control is transferred to the function entry point RSP+8 is supposed to be a multiple of 16, without these changes RSP itself was a multiple of 16).

Author: Amar Takhar 2024-05-14T22:51:42.090Z

assigned to @alex and @chris

Author: Amar Takhar 2024-05-14T22:51:52.632Z

assigned to @mpec and unassigned @alex

Author: Chris Johns 2024-05-16T23:58:36.632Z

approved this merge request

Author: Amar Takhar 2024-05-17T00:21:53.883Z

approved this merge request

Author: Amar Takhar 2024-05-17T00:22:22.968Z

I'll merge this after I do the CODEOWNERS checking tonight.

Author: Amar Takhar 2024-05-18T04:17:11.533Z

added 5 commits

- 59f3f13d...d4923b09 - 4 commits from branch `rtems/rtos:main`
- c5774f21 - x86_64: Fix stack aligment for x86-64 SysV ABI

Compare with previous version

Author: Amar Takhar 2024-05-18T04:19:11.288Z

Interesting now that I have commits in this merge request I can't approve or merge anymore. The problem is those commits are already in the repository I guess this is another bug in GitLab.

Author: Amar Takhar 2024-05-18T04:21:29.649Z

mentioned in issue administration/gitlab#57

Author: Kinsey Moore 2024-05-21T20:20:38.527Z

added 4 commits

- c5774f21...cfb9f96c - 3 commits from branch `rtems/rtos:main`
- b7188547 - x86_64: Fix stack aligment for x86-64 SysV ABI

Compare with previous version

Author: Kinsey Moore 2024-05-22T01:31:09.088Z

added 6 commits

- b7188547...2c03b41f - 5 commits from branch `rtems/rtos:main`

- b874f4c9 - x86_64: Fix stack aligment for x86-64 SysV ABI

Compare with previous version

Author: Joel Sherrill 2024-05-22T17:35:26.147Z

mentioned in issue #5018

Author: Matheus Pecoraro 2024-06-13T19:24:36.509Z

3.9.2.154 76 - rtems: Format typedef parameters in comments

Id	76
State	merged
Merged by	Amar Takhar
Merged at	2024-06-17T16:11:56.153Z
Assignee(s)	Sebastian Huber
Created	2024-06-17T09:27:34.600Z
Updated	2024-08-10T00:40:43.672Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/76
Commit	2c0ab5ba0b501ebb813d14f222213b9b39771f6e

Summary

Author: Sebastian Huber 2024-06-17T09:27:34.707Z

assigned to @sebhub

Author: Kinsey Moore 2024-06-17T16:09:20.426Z

approved this merge request

Author: Amar Takhar 2024-06-17T16:11:52.863Z

approved this merge request

3.9.2.155 69 - microblaze: Move interrupt context save to BSP

Id	69
State	merged
Merged by	Amar Takhar
Merged at	2024-06-11T21:04:13.207Z
Assignee(s)	Kinsey Moore
Created	2024-06-11T14:48:35.032Z
Updated	2024-08-10T00:40:43.542Z
Milestone	6.1
Labels	bsp, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/69
Commit	20939b213a0fa7b5354462dfc45cd837a5e5adc5

Summary

microblaze: Move interrupt context save to BSP

The interrupt context save is now done in the BSP. This avoids an issue where a register is modified by the interrupt handler before it is saved. Specifically, the MSR register was modified by the `addi` instruction in the interrupt handler before the MSR was saved. This caused the MSR to be saved with the wrong value.

Closes #4962

Author: Kinsey Moore 2024-06-11T14:48:35.193Z

assigned to @opticron

Author: Kinsey Moore 2024-06-11T14:53:25.408Z

The tabs vs spaces issue has been resolved. Sebastian's suggestion of merging the two functions has not yet been undertaken as I don't have the setup to test this BSP at the moment and I'm not as familiar as I need to be with MicroBlaze assembly.

Edit: I am also not familiar with why the two pieces of the ISR entry were kept separate in the first place. Perhaps @alex can shed some light on the matter.

Author: Kinsey Moore 2024-06-11T14:53:40.131Z

added 20 commits

- 8906668c...28c7475b - 19 commits from branch `rtems/rtos:main`
- 4ee77954 - microblaze: Move interrupt context save to BSP

Compare with previous version

Author: Joel Sherrill 2024-06-11T19:22:14.504Z

approved this merge request

Author: Kinsey Moore 2024-06-11T19:24:42.461Z

added 3 commits

- 4ee77954...9fb9337b - 2 commits from branch `rtems/rtos:main`
- 20939b21 - microblaze: Move interrupt context save to BSP

Compare with previous version

Author: Amar Takhar 2024-06-11T21:04:07.432Z

approved this merge request

3.9.2.156 56 - cpukit/posix/aio*: Updated aio files documentation

Id	56
State	merged
Merged by	Amar Takhar
Merged at	2024-06-11T18:00:42.449Z
Created	2024-06-03T21:29:50.659Z
Updated	2024-08-10T00:40:43.414Z
Milestone	6.1
Labels	api::posix
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/56
Commit	68951fb2a4fb98abda6a88750a0b37be129d0a9d

Summary

cpukit/posix/aio*: Updated aio files documentation

Updated the documentation in all aio files. Moved the Doxygen comments to the headers when possible. Fixed some formatting errors.

Updates #5027

Author: Alessandro Nardin 2024-06-11T12:01:11.171Z

The documentation should be all okay. However, I noticed that when I build it on my machine, the documentation I put in aio.h is not shown. I have noticed that the same happens even before my modifications. I tried looking online and messing around with the code, but I could not manage to fix it.

Author: Joel Sherrill 2024-06-11T12:01:11.171Z

Can you share how you build it? It usually comes down to something wrong with the INCLUDE or EXCLUDE directives that include/exclude files and directories.

Author: Alessandro Nardin 2024-06-11T12:01:11.171Z

I simply used `doxygen Doxyfile` using the Doxyfile that was in the repo.

Author: Sebastian Huber 2024-06-11T15:28:01.562Z

If this is really just an input, then it should be made `const`. Likewise for the other inputs.

Author: Alessandro Nardin 2024-06-11T15:28:01.562Z

I checked and the function modifies the chain in `r_chain->perfd`. I have to make that line, and likely other inputs into `@param[in,out]`.

Author: Alessandro Nardin 2024-06-04T17:37:39.909Z

changed this line in version 2 of the diff

Author: Alessandro Nardin 2024-06-11T15:28:01.562Z

I checked the inputs and now it should be all ok.

Author: Joel Sherrill 2024-06-11T15:37:15.194Z

Might as well convert these per element comments into Doxygen. Adding the comments lines above the structure element will give you more space for text.

Author: Alessandro Nardin 2024-06-04T17:37:40.902Z

changed this line in version 2 of the diff

Author: Alessandro Nardin 2024-06-11T15:37:15.194Z

Yes, now it should be better.

Author: Joel Sherrill 2024-06-11T15:37:26.379Z

This comment can be improved. Any existing comments can be converted to Doxygen. Per field comments can go above the field.

Author: Alessandro Nardin 2024-06-04T17:37:41.392Z

changed this line in version 2 of the diff

Author: Joel Sherrill 2024-06-11T15:43:41.787Z

No documentation yet.

Author: Alessandro Nardin 2024-06-11T11:43:44.603Z

changed this line in version 4 of the diff

Author: Alessandro Nardin 2024-06-11T15:43:41.787Z

Documentation added.

Author: Joel Sherrill 2024-06-11T15:40:33.187Z

Check the Style section of the Software Engineering Guide. This isn't formatted right.

Author: Alessandro Nardin 2024-06-11T15:40:33.187Z

Fixed the formatting

Author: Joel Sherrill 2024-06-11T15:25:56.196Z

Check the Style section of the Software Engineering Guide. This isn't formatted right.

Author: Alessandro Nardin 2024-06-11T15:25:56.196Z

fixed the formatting

Author: Joel Sherrill 2024-06-04T22:00:12.874Z

Is this missing the C++ extern C wrapper? What about aio_misc.h?

Author: Alessandro Nardin 2024-06-04T22:00:12.874Z

I belive both aio.h and aio_misc.h have the wrapper. Both files have

```
#ifdef __cplusplus
extern "C" {
#endif
```

and

```
#ifdef __cplusplus
}
#endif
```

around the code.

Author: Joel Sherrill 2024-06-11T15:26:12.662Z

I do not think we put space between function names and (, after (or before). This is across the file.

Author: Alessandro Nardin 2024-06-11T15:26:12.662Z

It's how I formatted the code also in the previous MR (!42). Looking at other recently modified files, it seemed the right way to do it. There's also an example of that in the formatting rules, in the breaking long lines part. When it talks about function declarations, the declaration in one line has the spaces.

Author: Joel Sherrill 2024-06-11T15:26:12.662Z

We need to check with @gedare. I spot checked some cpukit code and it isn't this way. No fault of yours and it could be an issue with transitioning to eventually using a code formatter.

Author: Gedare Bloom 2024-06-11T15:26:12.662Z

I don't think we have this case well-defined. Most likely, it will end up being a space inside of all parentheses.

Author: Alessandro Nardin 2024-06-11T15:26:12.662Z

Perfect, I will keep the spaces then.

Author: Joel Sherrill 2024-06-11T15:26:34.658Z

We are still adding license text blocks.

Author: Alessandro Nardin 2024-06-11T15:26:34.658Z

Sorry, I'm not understanding. What should i do to fix this?

Author: Joel Sherrill 2024-06-11T15:26:34.658Z

See https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/cpukit/include/rtems/score/corebarrierimpl.h?ref_type=heads#L12 – no license text is included.

That file also shows the formatting as I expected it.

Author: Alessandro Nardin 2024-06-11T15:26:34.658Z

The only difference i found with the file you linked is in the copyright part. Some of the aio files have

```
Copyright 2010, Alin Rus <alin.codejunkie@gmail.com>
```

While the code you linked (and other other aio files)

```
COPYRIGHT (c) 1989-2006.
On-Line Applications Research Corporation (OAR).
```

Should i change the copyright notice to the second one in all aio files, or am i misunderstanding?

Author: Joel Sherrill 2024-06-11T15:26:34.658Z

Add the license text block and list every individual/organisation on a separate copyright line above the license text. This is a link to a file showing two authors:

https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/cpukit/include/rtems/score/chain.h?ref_type=heads#L12

Author: Alessandro Nardin 2024-06-11T15:26:34.658Z

Thanks for the clarification, now I should have added all that was missing.

Author: Joel Sherrill 2024-06-11T15:41:29.665Z

License block.

Author: Joel Sherrill 2024-06-11T15:42:34.831Z

No license block.

Author: Joel Sherrill 2024-06-11T15:42:34.831Z

See above.

Author: Alessandro Nardin 2024-06-04T17:37:43.204Z

added 4 commits

- 9f0aa09d - correction to aio_misc.h documentation and style
- c86c8656 - corrected documentation and formatting in aio_misc.c
- bcff339e - Corrected documentation in aio_misc.c and aio_misc.h
- 0596e3f5 - some corretions in aio.h

Compare with previous version

Author: Alessandro Nardin 2024-06-04T19:49:08.503Z

added 1 commit

- faf679b5 - cpukit/posix/aio*: Updated aio files documentation

Compare with previous version

Author: Alessandro Nardin 2024-06-11T11:43:47.726Z

added 33 commits

- faf679b5...28c7475b - 32 commits from branch `rtems/rtos:main`
- adf4b5b9 - cpukit/posix/aio*: Updated aio files documentation

Compare with previous version

Author: Joel Sherrill 2024-06-11T17:55:19.505Z

@brief is comparable to a Table of Contents entry. The first part is ok. The second sentence should be in a follow up paragraph.

Also line 165 should have the * align with the first one of the /**

Author: Alessandro Nardin 2024-06-11T17:55:19.505Z

I moved the sentence below. I don't see the misaligned asterisk; I think you were referring to the removed part of the diff because I moved all the documentation to the top of the file.

Author: Joel Sherrill 2024-06-11T17:55:19.505Z

Thanks for changing these.

Author: Alessandro Nardin 2024-06-11T17:23:05.850Z

added 1 commit

- 2e540099 - cpukit/posix/aio*: Updated aio files documentation

Compare with previous version

Author: Alessandro Nardin 2024-06-11T17:50:16.827Z

added 1 commit

- 68951fb2 - cpukit/posix/aio*: Updated aio files documentation

Compare with previous version

Author: Joel Sherrill 2024-06-11T17:55:19.527Z

resolved all threads

Author: Joel Sherrill 2024-06-11T17:55:39.652Z

approved this merge request

Author: Joel Sherrill 2024-06-11T17:55:48.132Z

marked this merge request as **ready**

Author: Amar Takhar 2024-06-11T18:00:38.155Z

approved this merge request

3.9.2.157 55 - amd64: Add bsp_reset

Id	55
State	merged
Merged by	Amar Takhar
Merged at	2024-06-13T17:06:05.619Z
Created	2024-06-03T19:39:58.312Z
Updated	2024-08-10T00:40:43.256Z
Milestone	6.1
Labels	arch:x86_64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/55
Commit	ad24b764d654c36b40ad2099d08d95bff9856cdd

Summary

amd64: Add bsp_reset

Add a temporary implementation of bsp_reset to avoid the RTEMS tester running in loop until timeout for every test

Author: Sebastian Huber 2024-06-10T15:42:59.390Z

The file should be added to the Doxygen group of the BSP.

Author: Matheus Pecoraro 2024-06-10T15:42:59.390Z

Looking at the source files it doesn't seem like the BSP currently has a doxygen group, wouldn't it be better to have a separate MR solely for defining the group and adding the files to it?

Author: Gedare Bloom 2024-06-10T15:42:59.390Z

Yes, you can open an Issue to add doxygen for this bsp.

Author: Matheus Pecoraro 2024-06-10T15:42:59.390Z

Done.

Author: Sebastian Huber 2024-06-13T17:05:59.656Z

This is not relevant to the current change. These two BSP items contain a lot of duplication. They should use the approach of other multi-variant BSPs using a common group and object item.

Author: Matheus Pecoraro 2024-06-13T17:05:59.656Z

Makes sense. I created an issue and will start working on another MR to address this.

Author: Amar Takhar 2024-06-13T17:05:59.656Z

What's going on with this MR? was there a modification required? Should it be closed in lieu of the ticket?

Author: Kinsey Moore 2024-06-13T17:05:59.656Z

If I'm reading it correctly, the dedup that needs to occur is unrelated to this MR (see separate issue for it) and is not a blocker for this MR.

Author: Kinsey Moore 2024-06-13T17:05:59.656Z

As far as I can tell, creating the issue should have resolved this comment chain.

Author: Amar Takhar 2024-06-13T17:05:59.656Z

Thanks I'll resolve it what you said makes sense.

Author: Gedare Bloom 2024-06-11T04:56:35.061Z

These should probably be defined in a bsp.h or other header. It looks like they are the same as the i386 BSP. There is likely some header/code sharing that can be done.

Author: Matheus Pecoraro 2024-06-11T04:56:35.061Z

Where would a shared header for two specific archs be located? Also considering these values won't be used on the BSP after ACPICA is implemented is it worth to create a shared header?

Author: Gedare Bloom 2024-06-11T04:56:35.061Z

That probably would not be worth the hassle then.

Author: Gedare Bloom 2024-06-11T04:56:42.543Z

Open an Issue for the TODO.

Author: Matheus Pecoraro 2024-06-11T04:56:42.543Z

Done.

Author: Gedare Bloom 2024-06-10T15:46:27.421Z

approved this merge request

Author: Matheus Pecoraro 2024-06-10T21:14:21.061Z

mentioned in issue #5034

Author: Kinsey Moore 2024-06-13T12:36:05.549Z

added 37 commits

- d5a26d59...1d997f33 - 36 commits from branch `rtems/rtos:main`
- ad24b764 - amd64: Add bsp_reset

Compare with previous version

Author: Kinsey Moore 2024-06-13T12:39:35.949Z

approved this merge request

Author: Amar Takhar 2024-06-13T17:05:27.956Z

mentioned in issue #5028

Author: Amar Takhar 2024-06-13T17:05:42.465Z

resolved all threads

Author: Amar Takhar 2024-06-13T17:05:59.675Z

resolved all threads

Author: Matheus Pecoraro 2024-06-13T19:24:37.138Z

3.9.2.158 72 - amd64: Change console device_file to /dev/ttyS0

Id	72
State	merged
Merged by	Joel Sherrill
Merged at	2024-06-14T20:53:30.320Z
Created	2024-06-13T20:08:42.793Z
Updated	2024-08-10T00:40:43.141Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/72
Commit	20a663ccef6ece812111506a939b1cd3dde13dc5

Summary

amd64: Change console device_file to /dev/ttyS0

Change the device_file path from /dev/console to /dev/ttyS0 since it will already be linked to /dev/console on console_initialize

Closes: #5042

Author: Matheus Pecoraro 2024-06-13T20:10:45.160Z

Author: Sebastian Huber 2024-06-14T09:39:22.830Z

approved this merge request

Author: Amar Takhar 2024-06-14T17:08:11.798Z

approved this merge request

Author: Amar Takhar 2024-06-14T17:08:18.081Z

added 3 commits

- 3277dcd5...0951e4e6 - 2 commits from branch `rtems/rtos:main`
- 20a663cc - amd64: Change console device_file to /dev/ttyS0

Compare with previous version

Author: Joel Sherrill 2024-06-14T20:53:15.307Z

approved this merge request

3.9.2.159 67 - bsps: Fix Xilinx QSPI build

Id	67
State	merged
Merged by	Chris Johns
Merged at	2024-06-13T04:26:42.676Z
Assignee(s)	Sebastian Huber
Created	2024-06-11T11:37:13.304Z
Updated	2024-08-10T00:40:43.036Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/67
Commit	1d997f33386485971e3ea30b7645a3e579155b74

Summary

bsps: Fix Xilinx QSPI build

Update #4870.

Author: Sebastian Huber 2024-06-11T11:37:13.414Z

assigned to @sebhub

Author: Sebastian Huber 2024-06-11T11:43:51.088Z

mentioned in merge request !21

Author: Sebastian Huber 2024-06-11T11:46:38.383Z

added 1 commit

- e63d2b91 - bsps: Maybe fix Xilinx QSPI

Compare with previous version

Author: Kinsey Moore 2024-06-11T12:31:45.770Z

approved this merge request

Author: Kinsey Moore 2024-06-12T00:18:02.713Z

added 4 commits

- e63d2b91...20939b21 - 3 commits from branch `rtems/rtos:main`
- 1d997f33 - bsps: Maybe fix Xilinx QSPI

Compare with previous version

Author: Chris Johns 2024-06-13T04:26:33.805Z

approved this merge request

3.9.2.160 65 - build: Fix double use of objects item

Id	65
State	merged
Merged by	Amar Takhar
Merged at	2024-06-13T19:51:57.635Z
Assignee(s)	Sebastian Huber
Created	2024-06-11T06:27:06.181Z
Updated	2024-08-10T00:40:42.916Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/65
Commit	d773df1d0fc283da5217492098f1df4ebd6060e6

Summary

build: Fix double use of objects item

In waf, install targets must not be specified more than once.

Author: Sebastian Huber 2024-06-11T06:27:06.276Z

assigned to @sebhub

Author: Kinsey Moore 2024-06-11T13:54:53.085Z

approved this merge request

Author: Amar Takhar 2024-06-13T07:31:53.703Z

approved this merge request

Author: Amar Takhar 2024-06-13T07:32:08.295Z

added 5 commits

- 1d8b5ed6...1d997f33 - 4 commits from branch `rtems/rtos:main`
- de0a3936 - build: Fix double use of objects item

Compare with previous version

Author: Amar Takhar 2024-06-13T07:33:05.864Z

@sebhub sorry there are conflicts when I tried to merge this.

Author: Amar Takhar 2024-06-13T19:49:55.254Z

added 7 commits

- de0a3936...1e682988 - 6 commits from branch `rtems/rtos:main`
- d773df1d - build: Fix double use of objects item

Compare with previous version

Author: Amar Takhar 2024-06-13T19:51:53.103Z

@sebhub mentioned on https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/70 that there was no merge conflicts. I tried again here as the base repo had changed. It reported a conflict but when I refereshed it was OK. Clearly a bug I've never seen this happen before.

3.9.2.161 48 - bsps/amd64: Add comments to start.s

Id	48
State	merged
Merged by	Joel Sherrill
Merged at	2024-05-25T19:21:31.793Z
Created	2024-05-25T17:22:45.662Z
Updated	2024-08-10T00:40:42.786Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/48
Commit	b3a4f539c9c5664a87b11ac8da61764ade550ced

Summary

Closes #5018

Author: Amar Takhar 2024-05-25T17:28:54.857Z

approved this merge request

Author: Joel Sherrill 2024-05-25T19:21:24.926Z

approved this merge request

Author: Matheus Pecoraro 2024-06-13T19:24:36.712Z

Author: Armaan Chowfin 2026-08-19T04:58:07.560Z

mentioned in issue #5718

Author: Armaan Chowfin 2026-08-19T06:40:19.876Z

mentioned in merge request !1434

3.9.2.162 66 - spec/stm32h7: Default nucleo-h755zi BSP to build for CORE_M7

Id	66
State	merged
Merged by	Amar Takhar
Merged at	2024-06-11T18:05:12.752Z
Created	2024-06-11T06:33:07.958Z
Updated	2024-08-10T00:40:42.665Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/66
Commit	175dad270b3ba403fb4bab9afe653bc9f76ce4ea

spec/stm32h7: Default nucleo-h755zi BSP to build for CORE_M7

Some of the STM32H7 parts have a secondary Cortex M4 core included and require the user to select which core they are compiling for. The `arm/nucleo-h755zi` BSP was lacking a default core selection, causing the BSP to fail to build with the default options selected. This PR changes the default option to select the larger Cortex M7 core by default.

Author: Jacob Killelea 2024-06-11T06:34:53.859Z

mentioned in merge request !53

Author: Sebastian Huber 2024-06-11T06:36:47.473Z

approved this merge request

Author: Jacob Killelea 2024-06-11T06:37:03.776Z

changed the description

Author: Amar Takhar 2024-06-11T18:04:48.048Z

approved this merge request

Author: Amar Takhar 2024-06-11T18:04:56.019Z

added 2 commits

- 68951fb2 - 1 commit from branch `rtems/rtos:main`
- 175dad27 - spec/stm32h7: Default nucleo-h755zi BSP to build for CORE_M7

Compare with previous version

3.9.2.163 53 - New ST Nucleo STM32H755ZI BSP

Id	53
State	merged
Merged by	Sebastian Huber
Merged at	2024-06-06T05:37:36.448Z
Created	2024-06-02T02:22:01.758Z
Updated	2024-08-10T00:40:42.457Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/53
Commit	f969387817fadf8a25a35d62d7372d439c17440a

Implement a new ST Nucleo STM32H755ZI BSP

Hi all, for a project I recently acquired a Nucleo STM32H755ZI. Thanks to the work of @sebhub, @c-mauderer, and Karel Gardas, it was pretty easy to create a new Nucleo BSP for this chip by copying the Nucleo H743 BSP. I was not able to get the 8 MHz HSE clock enabled, so this is currently clocked off of the PLL using the 64 MHz HSI clock and the RTC clock is disabled. Other features haven't been thoroughly tested, but since they rely on the high quality STM32H7 HAL from ST, I have pretty high confidence in them. I've been able to run most testsuites.

I have tested:

- The CM7 core
- The CM4 core

- Console output on UART3 (the default USB UART) and the shell
- GPIO
- Sample programs like `hello`, `fileio` (and shell), `paranoia`, `unlimited`, etc.

Known Broken:

- Debugging with OpenOCD is wonky. I can set breakpoints, halt the processor and inspect memory and registers and return from functions, but stepping does not work.
- The program begins to run after being flashed but soon (under 1 second) stops running. Pressing the reset button makes the program run continuously afterward. The board resets nearly instantly.
- Shell commands `ls`, `cd`, `cpuuse`, etc. hang for a while before executing. I'm not sure where the time is spent because the built-in `time` command reports that these commands execute nearly instantly.

I haven't tested:

- Pretty much everything else

Author: Jacob Killelea 2024-06-02T02:22:26.671Z

marked this merge request as **ready**

Author: Jacob Killelea 2024-06-02T02:22:41.050Z

changed the description

Author: Jacob Killelea 2024-06-02T02:24:57.458Z

changed the description

Author: Jacob Killelea 2024-06-02T02:25:08.782Z

changed the description

Author: Christian Mauderer 2024-06-04T01:08:35.970Z

Does it really work to just add two enabled-by lines right after each other or does this break the h743zi BSP? Other files (like the `optlinkcmds.yml`) use a list in the form of

```
- enabled-by:
- arm/nucleo-h743zi
- arm/nucleo-h755zi
value: WHATEVER
```

You have that in multiple of the `opt*.yml` files.

Author: Jacob Killelea 2024-06-04T00:47:31.515Z

changed this line in version 5 of the diff

Author: Jacob Killelea 2024-06-04T01:08:35.970Z

Ah good catch, it was working for the `nucleo-h755zi` variant but not the `nucleo-h743zi`. Fixed, thanks!

Author: Christian Mauderer 2024-06-04T01:08:33.944Z

I know it's a 1:1 copy of one of the other files: But please avoid C++ style comments (`// ...`) and use C-style instead (`/* ... */`).

Author: Jacob Killelea 2024-06-04T00:44:40.067Z

changed this line in version 4 of the diff

Author: Jacob Killelea 2024-06-04T01:08:33.944Z

Fixed!

Author: Christian Mauderer 2024-06-04T01:08:33.014Z

Beneath the two points I have noted in the code: Usually the commit summary should have a prefix. In the STM32H7 BSP, that's usually `bsp/stm32h7` or `bsps/stm32h7`. See https://gitlab.rtems.org/jkillelea/rtems/-/commits/main/bsps/arm/stm32h7?ref_type=heads

Author: Jacob Killelea 2024-06-04T01:08:33.014Z

Thanks, I will make those fixes

Author: Jacob Killelea 2024-06-04T01:08:33.014Z

Took a little rebasing and `git push --force`, but the commit history now shows 1 commit with the preferred syntax.

Author: Jacob Killelea 2024-06-04T00:33:40.924Z

added 4 commits

- 1eea9530...b8910111 - 2 commits from branch `rtems/rtos:main`

- e1c1a50e - Initial commit of new ST Nucleo STM32H755ZI BSP
- 6ceb5783 - Merge branch 'stm32h755zi-bsp' of ssh://gitlab.rtems.org:2222/jkillelea/rtems into stm32h755zi-bsp

Compare with previous version

Author: Amar Takhar 2024-06-04T00:38:53.528Z

marked this merge request as **draft**

Author: Amar Takhar 2024-06-04T00:50:31.263Z

I've marked this as a draft @jkillelea there is a merge commit on your changes. Can you rebase instead? Thank you.

Author: Jacob Killelea 2024-06-04T00:42:35.707Z

added 1 commit

- ac2549f8 - Initial commit of new ST Nucleo STM32H755ZI BSP

Compare with previous version

Author: Jacob Killelea 2024-06-04T00:44:40.355Z

added 1 commit

- 487fac77 - bsps/stm32h7: Initial commit of new ST Nucleo STM32H755ZI BSP

Compare with previous version

Author: Jacob Killelea 2024-06-04T00:47:31.742Z

added 1 commit

- 3e2fdeae - bsps/stm32h7: Initial commit of new ST Nucleo STM32H755ZI BSP

Compare with previous version

Author: Amar Takhar 2024-06-04T00:50:51.468Z

marked this merge request as **ready**

Author: Amar Takhar 2024-06-04T00:59:57.496Z

Thanks looks good!

Author: Jacob Killelea 2024-06-04T00:58:30.794Z

added 1 commit

- 0365355e - bsps/stm32h7: Initial commit of new ST Nucleo STM32H755ZI BSP

Compare with previous version

Author: Jacob Killelea 2024-06-04T01:08:35.987Z

resolved all threads

Author: Christian Mauderer 2024-06-04T05:56:35.830Z

approved this merge request

Author: Amar Takhar 2024-06-04T21:59:49.404Z

added 11 commits

- 0365355e...6c66526e - 10 commits from branch `rtems/rtos:main`
- 4452302e - bsps/stm32h7: Initial commit of new ST Nucleo STM32H755ZI BSP

Compare with previous version

Author: Amar Takhar 2024-06-04T21:59:57.142Z

approved this merge request

Author: Amar Takhar 2024-06-04T22:00:11.318Z

unapproved this merge request

Author: Jacob Killelea 2024-06-06T00:29:54.236Z

@sebhub, if you approve of this, would you mind reviewing as well? Thank you.

Author: Sebastian Huber 2024-06-06T05:19:33.792Z

The patch set is all right, however, I can't approve it.

Author: Amar Takhar 2024-06-06T05:34:34.014Z

@sebhub you can approve it you need to rebase first if you look underneath 'merge blocked' you'll see the reasons why it can't be merged to the right of 'merge request must be rebased' click 'rebase without pipeline' if it rebases without conflicts the merge button will show up.

Author: Sebastian Huber 2024-06-06T05:36:12.945Z

added 2 commits

- 25ba6796 - 1 commit from branch `rtems/rtos:main`
- f9693878 - bsps/stm32h7: Initial commit of new ST Nucleo STM32H755ZI BSP

Compare with previous version

Author: Sebastian Huber 2024-06-06T05:36:28.424Z

approved this merge request

Author: Jacob Killelea 2024-06-06T05:37:56.953Z

Many thanks!

Author: Sebastian Huber 2024-06-06T05:38:05.467Z

Thanks, after reloading the page, I did see an Approve button.

Author: Sebastian Huber 2024-06-11T06:12:39.783Z

This change causes build issues:

```
[ 112/4440] Compiling bsps/arm/stm32h7/start/getentropy-rng.c
In file included from /home/EB/sebastian_h/src/rtems/bsps/arm/stm32h7/
↪include/stm32h7xx.h:143,
from /home/EB/sebastian_h/src/rtems/bsps/arm/stm32h7/include/stm32h7xx_
↪ll_swpmi.h:28,
from /home/EB/sebastian_h/src/rtems/bsps/arm/stm32h7/hal/stm32h7xx_ll_
↪swpmi.c:21:
/home/EB/sebastian_h/src/rtems/bsps/arm/stm32h7/include/stm32h755xx.
↪h:243:2: error: #error Please #define CORE_CM4 or CORE_CM7
243 | #error Please #define CORE_CM4 or CORE_CM7
|  ^~~~~
In file included from /home/EB/sebastian_h/src/rtems/bsps/arm/stm32h7/
```

(continues on next page)

(continued from previous page)

```
↪include/stm32h755xx.h:255:
/home/EB/sebastian_h/src/rtems/bsps/arm/stm32h7/include/system_
↪stm32h7xx.h:57:8: error: unknown type name 'uint32_t'
57 | extern uint32_t SystemCoreClock;             /*!< System Domain1␣
↪Clock Frequency  */
|        ^~~~~~~~
/home/EB/sebastian_h/src/rtems/bsps/arm/stm32h7/include/system_
↪stm32h7xx.h:58:8: error: unknown type name 'uint32_t'
58 | extern uint32_t SystemD2Clock;               /*!< System Domain2␣
↪Clock Frequency  */
|        ^~~~~~~~
/home/EB/sebastian_h/src/rtems/bsps/arm/stm32h7/include/system_
↪stm32h7xx.h:59:15: error: unknown type name 'uint8_t'
59 | extern const  uint8_t D1CorePrescTable[16] ; /*!< D1CorePrescTable␣
↪prescalers table values */
```

Author: Jacob Killelea 2024-06-11T06:38:31.730Z

Hey Sebastian,

I just copied what was implemented in the `nucleo-h743zi` BSP. After generating a `config.ini` file, you need to edit the `STM32H7_BOOT_CORE` line to select whether you are targeting the Arm Cortex M7 or the Arm Cortex M4 processor in the chip. If we should pick a default target so it 'just builds', that could also work.

I'm not sure why you are getting errors about `uint32_t` being undefined, but I assume there is a missing header that is being ``#include``d through the appropriate HAL header.

Author: Sebastian Huber 2024-06-12T02:45:42.751Z

The BSP should just build with this config.ini:

```
[arm/nucleo-h755zi]
```

Author: Jacob Killelea 2024-06-12T02:45:42.751Z

My apologies, I have created a bugfix here

Author: Amar Takhar 2024-06-12T02:45:42.751Z

You can refer to other merge requests by using !66 or actually pasting the full URL like this: https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/66 .. GitLab shortens it.

Author: Sebastian Huber 2024-06-12T02:45:42.751Z

Thanks for the quick fix.

Author: Jacob Killelea 2024-06-12T02:45:42.751Z

Sure thing, sorry for not checking this!

Author: Jacob Killelea 2024-06-12T02:45:42.768Z

resolved all threads

3.9.2.164 89 - doxygen: Clarify system termination

Id	89
State	merged
Merged by	Amar Takhar
Merged at	2024-06-25T03:52:53.340Z
Assignee(s)	Sebastian Huber
Created	2024-06-24T04:32:54.844Z
Updated	2024-08-10T00:40:28.873Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/89
Commit	d09d61ffe48e0fc267aa0238f847d4a5523f6919

Summary

Author: Sebastian Huber 2024-06-24T04:32:54.935Z

assigned to @sebhub

Author: Gedare Bloom 2024-06-24T16:33:35.714Z

approved this merge request

Author: Amar Takhar 2024-06-25T03:52:50.347Z

approved this merge request

3.9.2.165 93 - bsp/tms570: Fix SCI baud calculation

Id	93
State	merged
Merged by	Amar Takhar
Merged at	2024-06-25T17:05:37.745Z
Assignee(s)	Sebastian Huber
Created	2024-06-25T08:46:57.986Z
Updated	2024-08-10T00:40:28.767Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/93
Commit	e5b6fa026ac1c07d2522336240547 85b2b29f54e

Summary

bsp/tms570: Fix SCI baud calculation

The bug was introduced by cc6f1d86cc70b9448d802bb43b1d6a60f907a835.

Update #4982.

Author: Sebastian Huber 2024-06-25T08:46:58.088Z

assigned to @sebhub

Author: Kinsey Moore 2024-06-25T13:36:49.269Z

approved this merge request

Author: Kinsey Moore 2024-06-25T13:36:52.079Z

added 3 commits

- a799ac91...263cbb94 - 2 commits from branch `rtems/rtos:main`
- e5b6fa02 - bsp/tms570: Fix SCI baud calculation

Compare with previous version

Author: Amar Takhar 2024-06-25T17:05:33.732Z

approved this merge request

3.9.2.166 59 - aarch64/raspberrypi: Add gpio driver

Id	59
State	merged
Merged by	Amar Takhar
Merged at	2024-06-21T03:29:27.157Z
Reviewer(s)	Joel Sherrill
Created	2024-06-05T05:29:51.773Z
Updated	2024-08-10T00:40:28.647Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/59
Commit	dff15a820fa57a5ed02d2ddf47319d8ad24fdfc4

Summary

aarch64/raspberrypi: Add gpio driver

Update #5029

This commit is pulled from last year's work by @Barusu

Author: Ning Yang 2024-06-07T02:46:40.893Z

added 1 commit

- b20eec9c - aarch64/raspberrypi: Add gpio driver

Compare with previous version

Author: Kinsey Moore 2024-06-07T14:06:07.360Z

added 17 commits

- b20eec9c...cbe60cea - 16 commits from branch `rtems/rtos:main`
- 3a815de1 - aarch64/raspberrypi: Add gpio driver

Compare with previous version

Author: Kinsey Moore 2024-06-12T22:25:19.618Z

added 22 commits

- 3a815de1...20939b21 - 21 commits from branch `rtems/rtos:main`
- 1dec8b25 - aarch64/raspberrypi: Add gpio driver

Compare with previous version

Author: Kinsey Moore 2024-06-14T21:28:18.068Z

All of these need documentation.

Author: Ning Yang 2024-06-14T21:28:18.068Z

https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/18

Author: Kinsey Moore 2024-06-14T21:28:18.068Z

I was referring to in-header doxygen documentation.

Author: Ning Yang 2024-06-14T21:28:18.068Z

Done

Author: Ning Yang 2024-06-18T05:36:54.088Z

changed this line in version 12 of the diff

Author: Kinsey Moore 2024-06-13T22:35:08.287Z

All root-level items should be in alphabetical order except for the license which should remain at the top.

Author: Ning Yang 2024-06-13T05:23:15.004Z

changed this line in version 5 of the diff

Author: Kinsey Moore 2024-06-12T22:30:38.052Z

requested changes

Author: Ning Yang 2024-06-13T05:23:15.168Z

added 1 commit

- 35729e9b - aarch64/raspberrypi: Add gpio driver

Compare with previous version

Author: Ning Yang 2024-06-13T06:55:54.389Z

mentioned in merge request rtems/docs/rtems-docs!18

Author: Ning Yang 2024-06-14T11:13:00.544Z

Author: Ning Yang 2024-06-14T13:59:11.848Z

added 1 commit

- 76cc9e16 - aarch64/raspberrypi: Add gpio driver

Compare with previous version

Author: Kinsey Moore 2024-06-14T21:28:18.086Z

resolved all threads

Author: Kinsey Moore 2024-06-14T21:28:40.590Z

added 50 commits

- 76cc9e16...20a663cc - 49 commits from branch `rtems/rtos:main`
- 01e3c62a - aarch64/raspberrypi: Add gpio driver

Compare with previous version

Author: Kinsey Moore 2024-06-14T21:29:20.430Z

approved this merge request

Author: Joel Sherrill 2024-06-15T11:26:46.227Z

Two blanks lines. Remove one.

Author: Ning Yang 2024-06-15T11:26:46.227Z

Done

Author: Joel Sherrill 2024-06-15T11:26:51.178Z

Our indentation is 2 spaces. See https://docs.rtems.org/branches/master/eng/coding-formatting.html

Author: Ning Yang 2024-06-15T11:22:55.036Z

changed this line in version 8 of the diff

Author: Joel Sherrill 2024-06-15T11:26:56.791Z

Opening brace should be on line below consistently. Check file.

Author: Ning Yang 2024-06-15T11:22:55.329Z

changed this line in version 8 of the diff

Author: Joel Sherrill 2024-06-15T11:29:30.603Z

Method signature should be formatted like this:

https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/cpukit/posix/src/condattrgetpshared.c?ref_type=heads#L45

Author: Ning Yang 2024-06-15T11:22:55.615Z

changed this line in version 8 of the diff

Author: Joel Sherrill 2024-06-15T11:29:54.832Z

Just formatting. Also be sure to avoid tabs.

Author: Ning Yang 2024-06-15T11:29:54.832Z

Thanks.

Author: Amar Takhar 2024-06-14T23:22:43.643Z

approved this merge request

Author: Amar Takhar 2024-06-14T23:23:42.507Z

requested review from @joel

Author: Amar Takhar 2024-06-14T23:23:42.650Z

unapproved this merge request

Author: Ning Yang 2024-06-15T11:22:55.829Z

added 1 commit

- 83374a86 - aarch64/raspberrypi: Add gpio driver

Compare with previous version

Author: Ning Yang 2024-06-15T11:23:08.548Z

reset approvals from @opticron by pushing to the branch

Author: Ning Yang 2024-06-15T11:26:10.140Z

added 1 commit

- 64e39442 - aarch64/raspberrypi: Add gpio driver

Compare with previous version

Author: Ning Yang 2024-06-15T11:29:30.620Z

resolved all threads

Author: Ning Yang 2024-06-15T11:29:54.850Z

resolved all threads

Author: Amar Takhar 2024-06-15T18:27:20.458Z

added 50 commits

- 64e39442...20a663cc - 49 commits from branch `rtems/rtos:main`
- b18beb72 - aarch64/raspberrypi: Add gpio driver

Compare with previous version

Author: Joel Sherrill 2024-06-16T03:23:15.592Z

No C++ comments allowed.

https://docs.rtems.org/branches/master/eng/coding-conventions.html#source-documentation

Author: Ning Yang 2024-06-16T03:23:04.907Z

changed this line in version 11 of the diff

Author: Ning Yang 2024-06-16T03:23:05.071Z

added 1 commit

- d04d95cd - aarch64/raspberrypi: Add gpio driver

Compare with previous version

Author: Ning Yang 2024-06-16T03:23:15.610Z

resolved all threads

Author: Gedare Bloom 2024-06-18T05:38:49.144Z

This is a little unusual. Also, I don't see why you need the following block of code in this header? I think you can move this to the point where it is needed.

Author: Ning Yang 2024-06-18T05:36:55.112Z

changed this line in version 12 of the diff

Author: Gedare Bloom 2024-06-18T05:39:07.512Z

Add the code here, from below

```
#include <bsp/raspberrypi.h>
#define BSP_GPIO_BASE      BCM2711_GPIO_BASE
#define BSP_GPIO_SIZE      BCM2711_GPIO_SIZE
#define BSP_GPIO_PIN_COUNT BCM2711_GPIO_PIN_COUNT
```

Author: Gedare Bloom 2024-06-18T05:39:17.625Z

declare all variables at start of the block

Author: Ning Yang 2024-06-18T05:36:55.866Z

changed this line in version 12 of the diff

Author: Gedare Bloom 2024-06-18T05:39:37.050Z

consider defining a meaningful macro for 3 to improve readability, or make a comment

Author: Ning Yang 2024-06-18T05:36:56.292Z

changed this line in version 12 of the diff

Author: Gedare Bloom 2024-06-18T05:39:41.025Z

same here for `1` and `1`

Author: Ning Yang 2024-06-18T05:36:56.770Z

changed this line in version 12 of the diff

Author: Gedare Bloom 2024-06-18T05:40:12.926Z

the enum/struct/function within this file are raspberrypi specific. preface their names by `raspberrypi_`

Author: Ning Yang 2024-06-18T05:36:57.196Z

changed this line in version 12 of the diff

Author: Gedare Bloom 2024-06-17T20:36:57.536Z

requested changes

Author: Gedare Bloom 2024-06-18T05:40:17.805Z

why this isn't `<bsp/rpi-gpio.h>`?

Author: Ning Yang 2024-06-18T05:36:57.621Z

changed this line in version 12 of the diff

Author: Ning Yang 2024-06-18T05:36:57.839Z

added 1 commit

- ce36aec5 - aarch64/raspberrypi: Add gpio driver

Compare with previous version

Author: Ning Yang 2024-06-18T05:40:17.822Z

resolved all threads

Author: Gedare Bloom 2024-06-18T15:40:33.630Z

added 1 commit

- 5ff30eed - aarch64/raspberrypi: remove extra blank line in gpio.c

Compare with previous version

Author: Gedare Bloom 2024-06-20T02:45:21.923Z

You can squash my whitespace fix, but you should add yourself to the commit message as "Co-authored by: ..."

Author: Ning Yang 2024-06-20T02:45:21.923Z

Done.

Author: Kinsey Moore 2024-06-18T23:03:20.764Z

added 55 commits

- 5ff30eed...0bdeef72 - 53 commits from branch `rtems/rtos:main`
- fd3d4ed8 - aarch64/raspberrypi: Add gpio driver
- 310b08ae - aarch64/raspberrypi: remove extra blank line in gpio.c

Compare with previous version

Author: Ning Yang 2024-06-20T02:44:43.472Z

added 1 commit

- 0b5a3da5 - aarch64/raspberrypi: Add gpio driver

Compare with previous version

Author: Ning Yang 2024-06-20T02:45:21.942Z

resolved all threads

Author: Gedare Bloom 2024-06-20T15:45:58.473Z

approved this merge request

Author: Amar Takhar 2024-06-21T03:29:07.362Z

approved this merge request

Author: Amar Takhar 2024-06-21T03:29:14.410Z

added 6 commits

- 0b5a3da5...e233b5c1 - 5 commits from branch `rtems/rtos:main`
- dff15a82 - aarch64/raspberrypi: Add gpio driver

Compare with previous version

3.9.2.167 90 - bsps/xqspipsu: Add timeouts to NOR transfers

Id	90
State	merged
Merged by	Amar Takhar
Merged at	2024-06-25T07:01:04.383Z
Assignee(s)	Kinsey Moore
Created	2024-06-24T12:57:13.919Z
Updated	2024-08-10T00:40:28.537Z
Milestone	6.1
Labels	arch:aarch64, device::spi
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/90
Commit	39da0b7fd4b224f41966117a4372a34b7473d5f7

Summary

bsps/xqspipsu: Add timeouts to NOR transfers

This switches the XQspiPsu NOR driver layer to use the RTEMS event system so that waits for interrupt-based data transfers can time out instead of waiting indefinitely. It is sometimes possible for either the controller or the NOR chip to fail to issue a transfer completion event and recovery is preferable to a hang.

Author: Kinsey Moore 2024-06-24T12:57:14.077Z

assigned to @opticron

Author: Kinsey Moore 2024-06-24T12:59:13.497Z

added 1 commit

- c6d5eda3 - bsps/xqspipsu: Add timeouts to NOR transfers

Compare with previous version

Author: Gedare Bloom 2024-06-24T17:24:19.503Z

use `XST_SUCCESS`?

Author: Kinsey Moore 2024-06-24T17:24:11.398Z

changed this line in version 3 of the diff

Author: Kinsey Moore 2024-06-24T17:24:19.503Z

Fixed.

Author: Gedare Bloom 2024-06-24T20:58:30.784Z

Unrelated to this patch, can we change how this global `Error` variable is being used? We should generally avoid having global symbols. This file has a few of them. I understand some of this comes from the Xilinx code, but we appear to be modifying this stuff heavily already.

Author: Kinsey Moore 2024-06-24T20:58:30.784Z

This particular file was originally sourced from the Xilinx repo, but is not in its original form as its original form was not suitable for purpose.

This file is now owned by RTEMS as an adapter of sorts. Unfortunately, this Error variable is not part of the QSPI driver, but part of the flash wrapper code that was brought in. It's technically possible to remove the Error variable here by resetting the status handler prior to each call which would allow replacing the void* argument that's passed in, but that runs the risk of leaving a stale pointer into the stack since you can't pass NULL for that field to clear it out (there's an assertion in the underlying code preventing it). This could be rectified by a global struct that houses the XQspiPsu pointer (currently unused) and additional NOR-layer attributes such as the error counter.

Realistically, nothing consumes the error count and it can just be removed until it's actually needed. I'll add another commit that removes it.

Author: Kinsey Moore 2024-06-24T20:57:18.439Z

changed this line in version 4 of the diff

Author: Kinsey Moore 2024-06-24T20:58:30.784Z

I have removed the Error and Test globals. There are still a few in this file. To resolve any more of them, this code needs a refactoring that changes the interface and includes a structure for managing these items.

Author: Gedare Bloom 2024-06-25T02:10:50.548Z

I guess 5 seconds is a long enough time for any reasonable timeout, but should this be configurable?

Author: Kinsey Moore 2024-06-25T02:10:50.548Z

This runs into the same problems as the Error issue. There is currently no place to store NOR configuration and reporting information.

Author: Gedare Bloom 2024-06-25T02:10:50.548Z

Maybe create an Issue to track these concerns?

Author: Kinsey Moore 2024-06-25T02:10:50.548Z

I have created issue #5054 to track these additional improvments.

Author: Kinsey Moore 2024-06-24T17:24:12.224Z

added 1 commit

- 1aa03367 - bsps/xqspipsu: Add timeouts to NOR transfers

Compare with previous version

Author: Kinsey Moore 2024-06-24T20:57:19.046Z

added 1 commit

- 1ace598b - bsps/xqspipsu: Add timeouts to NOR transfers

Compare with previous version

Author: Kinsey Moore 2024-06-25T02:10:19.277Z

mentioned in issue #5054

Author: Kinsey Moore 2024-06-25T02:10:50.589Z

resolved all threads

Author: Sebastian Huber 2024-06-25T06:47:52.431Z

added 8 commits

- 1ace598b...cd4b6761 - 7 commits from branch `rtems/rtos:main`
- 39da0b7f - bsps/xqspipsu: Add timeouts to NOR transfers

Compare with previous version

Author: Sebastian Huber 2024-06-25T06:47:55.822Z

approved this merge request

Author: Amar Takhar 2024-06-25T07:00:59.304Z

approved this merge request

3.9.2.168 88 - amd64: Remove unneeded paging flags

Id	88
State	merged
Merged by	Kinsey Moore
Merged at	2024-06-25T13:35:38.209Z
Created	2024-06-22T17:00:31.657Z
Updated	2024-08-10T00:40:28.413Z
Milestone	6.1
Labels	arch:x86_64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/88
Commit	263cbb940831987e618e63fdd520d31bdc8da3f8

Summary

Removes unneeded paging flags from **PAGE_FLAGS_DEFAULTS**

- **PAGE_FLAGS_GLOBAL**: There's no reason to set this since we currently don't switch the page table. Also setting it on PML4 entries is incorrect and would cause QEMU with KVM to crash (#5052).
- **PAGE_FLAGS_USER_ACCESSIBLE**: Privilege level is not changed.
- **PAGE_FLAGS_WRITE_THROUGH**: Cache is already disabled.

Closes: #5052

Author: Matheus Pecoraro 2024-06-22T17:00:59.614Z

Author: Matheus Pecoraro 2024-06-22T17:01:46.902Z

changed the description

Author: Sebastian Huber 2024-06-25T13:00:48.440Z

I guess this is one of the patches where not that many people have the expertise to review it. Formally the patch looks good.

Author: Sebastian Huber 2024-06-25T13:00:49.752Z

approved this merge request

Author: Sebastian Huber 2024-06-25T13:01:08.484Z

added 9 commits

- 8cb91b15...39da0b7f - 8 commits from branch `rtems/rtos:main`
- a6429d0c - amd64: Remove unneeded paging flags

Compare with previous version

Author: Kinsey Moore 2024-06-25T13:35:16.714Z

added 2 commits

- 19d8888a - 1 commit from branch `rtems/rtos:main`
- 263cbb94 - amd64: Remove unneeded paging flags

Compare with previous version

Author: Kinsey Moore 2024-06-25T13:35:29.701Z

approved this merge request

3.9.2.169 85 - cpukit/posix/aio*: Corrected aio_return() and aio_error() behaviour

Id	85
State	merged
Merged by	Amar Takhar
Merged at	2024-06-25T04:09:46.709Z
Reviewer(s)	Joel Sherrill
Created	2024-06-20T12:58:01.043Z
Updated	2024-08-10T00:40:28.314Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/85
Commit	cd4b6761ea2f504c993ba2b817f152ee0c0dadd4

Summary

cpukit/posix/aio*: Corrected aio_return() and aio_error() behaviour

Added field to the aio control block to track when a result is retrieved and modified code accordingly.

Updated documentation for aio_return() and aio_error(). Updated test psxaio01 to make it compatible with specifications.

Closes #5039

Author: Alessandro Nardin 2024-06-20T13:05:12.823Z

added 1 commit

- 260e80ee - cpukit/posix/aio*: Corrected aio_return() and aio_error() behaviour

Compare with previous version

Author: Joel Sherrill 2024-06-22T15:37:34.227Z

This definitely needs a comment. First because it doesn't have one but second because aio functions have the unique behaviour that errors returned BEFORE enqueuing including unable to enqueue are returned normally and directly. Errors from the asynchronous operations are returned via the aiocb and aio_return().

Errors in aio_fscync() aio_read(), and aio_read() before the aio_enqueue operation should just return -1 and set errno. This appears to be wrong in the current code and is not your error. You just need to fix it as you add aio_error(). Clearly aio_error() was not considered before. The special case of putting the return code in the aiocb is only after it is successfully enqueued. This is clear reading the POSIX standard and glibc implementation.

- POSIX standard for aio_fsync. See the Return Value and Error sections. https://pubs.opengroup.org/onlinepubs/9699919799/functions/aio_fsync.html
- GLIBC source code which implements what the POSIX standard specifies: https://codebrowser.dev/glibc/glibc/rt/aio_fsync.c.html

Author: Alessandro Nardin 2024-06-20T18:42:37.238Z

changed this line in version 3 of the diff

Author: Alessandro Nardin 2024-06-22T15:37:34.227Z

I pushed the corrections

Author: Joel Sherrill 2024-06-22T15:37:34.227Z

Code deleted for uncommented and now unused macro

Author: Joel Sherrill 2024-06-20T14:03:25.329Z

aio_read, aio_write, and aio_fsync should use the normal set errno and return -1. Only after enqueueing should the aio_return value kick in.

Also I think the aio*.c POSIX methods may be missing NULL checks on parameters. Again not your fault.

Author: Alessandro Nardin 2024-06-20T18:42:37.407Z

added 1 commit

- 7687a231 - cpukit/posix/aio: Corrected return of errors in aio functions

Compare with previous version

Author: Alessandro Nardin 2024-06-21T08:32:11.383Z

added 10 commits

- 7687a231...b48166b9 - 8 commits from branch `rtems/rtos:main`
- 74a992ee - cpukit/posix/aio*: Corrected aio_return() and aio_error() behaviour
- c55a6d89 - cpukit/posix/aio: Corrected return of errors in aio functions

Compare with previous version

Author: Joel Sherrill 2024-06-22T15:37:34.249Z

resolved all threads

Author: Joel Sherrill 2024-06-23T15:50:43.016Z

Delete this stray line. Check for double blanks and extra comment lines.

Author: Alessandro Nardin 2024-06-22T16:34:38.889Z

changed this line in version 5 of the diff

Author: Joel Sherrill 2024-06-22T22:35:50.913Z

Double blanks.

Author: Alessandro Nardin 2024-06-22T16:34:39.286Z

added 11 commits

- c55a6d89...2089f993 - 9 commits from branch `rtems/rtos:main`
- 39348958 - cpukit/posix/aio*: Corrected aio_return() and aio_error() behaviour
- 97b7cb2e - cpukit/posix/aio: Corrected return of errors in aio functions

Compare with previous version

Author: Alessandro Nardin 2024-06-22T19:48:28.510Z

added 1 commit

- b035d247 - cpukit/posix/aio: Corrected return of errors in aio functions

Compare with previous version

Author: Gedare Bloom 2024-06-24T16:45:25.773Z

think these comments should be different?

Author: Alessandro Nardin 2024-06-24T16:45:25.773Z

Yes my bad, i copied the message and forgot to delete the not.

Author: Joel Sherrill 2024-06-24T16:45:25.773Z

There should be a blank line between line 104 and 105.

Author: Gedare Bloom 2024-06-24T16:48:37.239Z

add space before `*/`

Author: Alessandro Nardin 2024-06-23T17:02:24.897Z

changed this line in version 7 of the diff

Author: Gedare Bloom 2024-06-24T16:48:51.104Z

I think just remove the print statements from the test.

Author: Alessandro Nardin 2024-06-24T16:48:51.104Z

What should i do with the scn file if i delete the prints? Do i leave it almost empty or should i remove it?

Author: Joel Sherrill 2024-06-24T16:48:51.104Z

They still have start and end messages if they follow the more quiet style.

Author: Alessandro Nardin 2024-06-23T17:02:25.544Z

changed this line in version 7 of the diff

Author: Joel Sherrill 2024-06-23T15:52:50.931Z

You should be close after resolving these to removing the draft state.

Author: Alessandro Nardin 2024-06-23T17:02:25.721Z

added 1 commit

- 30a850e4 - cpukit/posix/aio*: Corrected aio_return() and aio_error() behaviour

Compare with previous version

Author: Alessandro Nardin 2024-06-23T17:06:04.779Z

marked this merge request as **ready**

Author: Gedare Bloom 2024-06-24T16:48:51.122Z

resolved all threads

Author: Gedare Bloom 2024-06-24T16:49:06.839Z

approved this merge request

Author: Gedare Bloom 2024-06-24T16:49:06.930Z

requested review from @joel

Author: Amar Takhar 2024-06-25T04:03:11.377Z

added 7 commits

- 30a850e4...c4c3e687 - 6 commits from branch `rtems/rtos:main`
- cd4b6761 - cpukit/posix/aio*: Corrected aio_return() and aio_error() behaviour

Compare with previous version

Author: Amar Takhar 2024-06-25T04:03:21.357Z

approved this merge request

3.9.2.170 81 - x86_64: Fix interrupts being enabled during system initialization

Id	81
State	merged
Merged by	Gedare Bloom
Merged at	2024-06-20T15:25:38.849Z
Created	2024-06-19T07:37:38.072Z
Updated	2024-08-10T00:40:28.191Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/81
Commit	ef5ed795ec001cca1639da77bb766b82387838ea

Summary

Fixes two possible causes of interrupts being fired during system initialization: * The amd64 clock driver would enable interrupts during initialization; * The context restore routine would load RFLAGS before RSP making it possible for an interrupt to be fired while RSP still points to the ISR stack area

Author: Matheus Pecoraro 2024-06-19T07:42:23.930Z

Author: Sebastian Huber 2024-06-20T13:46:08.847Z

approved this merge request

Author: Gedare Bloom 2024-06-20T15:25:17.859Z

approved this merge request

Author: Gedare Bloom 2024-06-20T15:25:25.650Z

added 3 commits

- 2fe92099 - 1 commit from branch `rtems/rtos:main`
- 3ca279e5 - amd64: Use proper interrupt disable directive
- ef5ed795 - x86_64: Load rflags after rsp on context restore

Compare with previous version

3.9.2.171 91 - libtest/dl12: Fix build issue

Id	91
State	merged
Merged by	Kinsey Moore
Merged at	2024-06-25T13:31:42.485Z
Created	2024-06-24T21:52:14.594Z
Updated	2024-08-10T00:40:28.093Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/91
Commit	19d8888ac6ce2530243ab15267ca8e80b81a7fd5

Summary

libtest/dl12: Fix build issue

Updated from ld to gcc in the build script to ensure consistency in ABI flags during the creation of incrementally linked objects.

Update #5053

Author: Sebastian Huber 2024-06-25T06:42:43.845Z

I fixed this slightly different in !92.

Author: Chris Johns 2024-06-25T06:42:43.845Z

Thanks. This was on my list to review and was merged. Should this MR be closed?

Author: Sebastian Huber 2024-06-25T06:42:43.845Z

Yes, I think we should avoid custom commands in script files if possible.

Author: Chris Johns 2024-06-25T06:42:43.845Z

Could yo please resolve this thread and close. Thanks.

Author: Sebastian Huber 2024-06-25T06:42:43.862Z

resolved all threads

Author: Sebastian Huber 2024-06-25T06:43:03.797Z

Closed in favour of !92.

Author: Sebastian Huber 2024-06-25T13:26:01.647Z

mentioned in merge request !25

Author: Sebastian Huber 2024-06-25T13:27:34.070Z

mentioned in merge request !92

Author: Sebastian Huber 2024-06-25T13:30:08.425Z

approved this merge request

Author: Sebastian Huber 2024-06-25T13:30:42.457Z

With this change, the test works on the arm/tms570lc4357_hdk_sdram BSP.

Author: Kinsey Moore 2024-06-25T13:31:25.876Z

added 9 commits

- 746d79d6...39da0b7f - 8 commits from branch `rtems/rtos:main`
- 19d8888a - libtest/dl12: Fix build issue

Compare with previous version

Author: Kinsey Moore 2024-06-25T13:31:39.385Z

approved this merge request

3.9.2.172 87 - rtems: Fix typos in documentation

Id	87
State	merged
Merged by	Amar Takhar
Merged at	2024-06-21T18:04:25.447Z
Assignee(s)	Sebastian Huber
Created	2024-06-21T16:31:19.614Z
Updated	2024-08-10T00:40:27.982Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/87
Commit	2089f993c0d01126f6766f4d323be4b9a1b54c60

Summary

Author: Sebastian Huber 2024-06-21T16:31:19.711Z

assigned to @sebhub

Author: Kinsey Moore 2024-06-21T17:58:26.526Z

approved this merge request

Author: Amar Takhar 2024-06-21T18:04:22.078Z

approved this merge request

3.9.2.173 82 - amd64: Add rtemsrwset section to linker script

Id	82
State	merged
Merged by	Amar Takhar
Merged at	2024-06-19T22:48:24.156Z
Created	2024-06-19T07:40:34.178Z
Updated	2024-08-10T00:40:27.868Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/82
Commit	2fe9209971d03bd598105af9796946b6714f0ee8

Summary

Author: Matheus Pecoraro 2024-06-19T07:42:24.099Z

Author: Chris Johns 2024-06-19T22:46:34.821Z

approved this merge request

Author: Amar Takhar 2024-06-19T22:48:20.006Z

approved this merge request

3.9.2.174 83 - amd64: Add doxygen group

Id	83
State	merged
Merged by	Gedare Bloom
Merged at	2024-06-20T15:38:18.352Z
Created	2024-06-19T13:48:27.287Z
Updated	2024-08-10T00:40:27.677Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/83
Commit	e233b5c16a3f535cfca201125e9bf51544447a73

Summary

Closes #5032

Author: Matheus Pecoraro 2024-06-19T13:49:15.881Z

Author: Chris Johns 2024-06-19T22:49:40.070Z

added 3 commits

- 2fe92099 - 1 commit from branch `rtems/rtos:main`
- 79043b6d - amd64: Add amd64 doxygen group
- 79dc5ca8 - amd64efi: Add amd64efi doxygen group

Compare with previous version

Author: Sebastian Huber 2024-06-20T13:44:14.110Z

approved this merge request

Author: Gedare Bloom 2024-06-20T15:37:56.847Z

approved this merge request

Author: Gedare Bloom 2024-06-20T15:38:04.544Z

added 4 commits

- 79dc5ca8...ef5ed795 - 2 commits from branch `rtems/rtos:main`
- 5d90fc94 - amd64: Add amd64 doxygen group
- e233b5c1 - amd64efi: Add amd64efi doxygen group

Compare with previous version

3.9.2.175 71 - x86_64: Fix ISR handler macros

Id	71
State	merged
Merged by	Amar Takhar
Merged at	2024-07-01T17:49:02.849Z
Created	2024-06-13T19:14:57.901Z
Updated	2024-08-10T00:40:18.747Z
Milestone	6.1
Labels	arch:x86_64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/71
Commit	dd882e1291bb898a68a78350b2a958355a629dbc

Summary

x86_64: Fix ISR handler macros

Modify the ISR handler macros for the x86_64 arch to follow the behavior expected of them

Closes #5041

Author: Matheus Pecoraro 2024-06-13T19:15:09.738Z

changed the description

Author: Matheus Pecoraro 2024-06-13T19:15:26.553Z

changed the description

Author: Matheus Pecoraro 2024-06-13T19:26:09.103Z

Author: Kinsey Moore 2024-06-14T21:26:48.557Z

added 6 commits

- 17a59eef...20a663cc - 5 commits from branch `rtems/rtos:main`
- 0e032048 - x86_64: Fix ISR handler macros

Compare with previous version

Author: Matheus Pecoraro 2024-06-16T22:47:37.630Z

added 1 commit

- c4e8fc4c - x86_64: Fix ISR handler macros

Compare with previous version

Author: Gedare Bloom 2024-06-25T17:15:17.800Z

`if ( !_level )` whitespace, or more explicitly `if ( _level != 0 )`

Author: Matheus Pecoraro 2024-06-25T17:11:43.687Z

changed this line in version 8 of the diff

Author: Gedare Bloom 2024-07-01T15:36:01.574Z

ditto

Author: Sebastian Huber 2024-07-01T15:36:01.574Z

See intr_disable() in https://github.com/freebsd/freebsd-src/blob/main/sys/amd64/include/cpufunc.h#L814 how the interrupt disable/enable can be done efficiently.

Author: Matheus Pecoraro 2024-07-01T15:36:01.574Z

Considering “rtems_interrupt_level” is a typedef to uint32_t how could I make it so the upper 32 bits of RFLAGS aren’t lost if done that way? (I’m pretty sure those 32 bits are not used for anything nowadays but according to Intel they are reserved so I imagine it would be better to maintain them).

Author: Sebastian Huber 2024-07-01T15:36:01.574Z

Ok, then this is probably something for later. I think the interrupt level should use a CPU port provided type and not just an unsigned 32-bit integer.

Author: Gedare Bloom 2024-07-01T15:36:01.574Z

https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/5051

Author: Matheus Pecoraro 2024-07-01T15:36:01.574Z

I noticed that with the changes in this MR the test **tmfine01** can take way longer than expected in the “Obtain/Release Private <sys/lock.h> Mutex” section, I’m not really sure why (probably due to some QEMU emulation stuff though since it works with KVM enabled).

With the rflags method Sebastian linked (which is also used on i386) this issue doesn’t happen. Since the upper 32 bits aren’t used anyways (though this is a risky

assumption to make) we could maybe still use this method even before solving #5051?

Alternatively I found that adding a “nop” after “sti” in amd64_enable_interrupts also fixes whatever is happening so that could be the temporary solution?

Author: Sebastian Huber 2024-07-01T15:36:01.574Z

I would not drop the upper 32 bits, this could lead to some nasty debugging in the future if it is not fixed.

Author: Matheus Pecoraro 2024-06-25T17:11:45.405Z

changed this line in version 8 of the diff

Author: Matheus Pecoraro 2024-07-01T15:36:01.574Z

Then I think the way it’s currently done is fine for now. I just did the whitespace and syntax change Gedare had originally suggested.

Author: Joel Sherrill 2024-07-01T15:36:01.574Z

The interrupt disable is 32 bits to map cleanly from the public Classic APIs all the way down. As long as the CPU does not need more bits than that, we are ok.

Author: Kinsey Moore 2024-06-18T01:49:16.905Z

added 4 commits

- c4e8fc4c...7f2b904d - 3 commits from branch `rtems/rtos:main`
- 9398c45e - x86_64: Fix ISR handler macros

Compare with previous version

Author: Kinsey Moore 2024-06-18T23:02:41.742Z

added 2 commits

- 0bdeef72 - 1 commit from branch `rtems/rtos:main`
- a97a8ea9 - x86_64: Fix ISR handler macros

Compare with previous version

Author: Gedare Bloom 2024-06-20T15:36:09.165Z

mentioned in issue #5051

Author: Matheus Pecoraro 2024-06-20T17:53:50.700Z

added 6 commits

- a97a8ea9...e233b5c1 - 5 commits from branch `rtems/rtos:main`
- a151f365 - Merge branch rtems:main into x86_64-fix-isr-handler-macros

Compare with previous version

Author: Matheus Pecoraro 2024-06-20T17:55:05.761Z

added 1 commit

- 7ba5da11 - x86_64: Fix ISR handler macros

Compare with previous version

Author: Matheus Pecoraro 2024-06-25T17:11:45.788Z

added 25 commits

- 7ba5da11...e5b6fa02 - 24 commits from branch `rtems/rtos:main`
- 251c2a44 - x86_64: Fix ISR handler macros

Compare with previous version

Author: Sebastian Huber 2024-06-25T19:53:01.098Z

The warning suppression should be removed.

Author: Matheus Pecoraro 2024-06-25T19:52:47.313Z

changed this line in version 9 of the diff

Author: Matheus Pecoraro 2024-06-25T19:52:47.532Z

added 1 commit

- 8c1ab683 - x86_64: Fix ISR handler macros

Compare with previous version

Author: Sebastian Huber 2024-06-26T04:42:20.615Z

approved this merge request

Author: Joel Sherrill 2024-07-01T15:36:01.599Z

resolved all threads

Author: Joel Sherrill 2024-07-01T15:36:45.093Z

approved this merge request

Author: Amar Takhar 2024-07-01T17:48:49.945Z

added 4 commits

- 8c1ab683...e4613529 - 3 commits from branch `rtems/rtos:main`
- dd882e12 - x86_64: Fix ISR handler macros

Compare with previous version

3.9.2.176 105 - aarch64/xilinx-zynqmp: Fix BSP build

Id	105
State	merged
Merged by	Amar Takhar
Merged at	2024-07-08T03:43:04.238Z
Assignee(s)	Sebastian Huber
Created	2024-07-02T08:29:22.979Z
Updated	2024-08-10T00:40:18.638Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/105
Commit	2f299f7f88348241a99faa82a34d98c5a9e54dba

Summary

aarch64/xilinx-zynqmp: Fix BSP build

The build issue was introduced by b48166b9b6e845519d1eba8177b31d47c50c1794.

Author: Sebastian Huber 2024-07-02T08:29:23.092Z

assigned to @sebhub

Author: Kinsey Moore 2024-07-05T21:39:29.607Z

approved this merge request

Author: Kinsey Moore 2024-07-05T21:39:33.470Z

added 3 commits

- 527b2359...89e795a4 - 2 commits from branch `rtems/rtos:main`
- dbcabee2 - aarch64/xilinx-zynqmp: Fix BSP build

Compare with previous version

Author: Amar Takhar 2024-07-08T03:42:43.545Z

added 2 commits

- ffa6e268 - 1 commit from branch `rtems/rtos:main`
- 2f299f7f - aarch64/xilinx-zynqmp: Fix BSP build

Compare with previous version

Author: Amar Takhar 2024-07-08T03:42:58.817Z

approved this merge request

3.9.2.177 95 - x86_64: Enable and add support for FP tasks

Id	95
State	merged
Merged by	Amar Takhar
Merged at	2024-07-01T17:48:39.795Z
Created	2024-06-25T17:06:46.741Z
Updated	2024-08-10T00:40:18.508Z
Milestone	6.1
Labels	arch:x86_64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/95
Commit	e46135290abdf08f26b1d1dbefea2d63b004e44d

Summary

Heavily based off the i386 SSE code (SSE is a minimum requirement for x86_64 and is already initialized by the UEFI firmware)

Author: Kinsey Moore 2024-06-25T17:50:18.464Z

added 2 commits

- e5b6fa02 - 1 commit from branch `rtems/rtos:main`
- 51deacb5 - x86_64: Enable and add support for FP tasks

Compare with previous version

Author: Joel Sherrill 2024-07-01T15:31:02.367Z

I am assuming the formatting looks better in the source code. Please make sure this looks reasonably formatted.

Author: Matheus Pecoraro 2024-07-01T15:31:02.367Z

Unless I'm missing something the formatting looks fine for me even on gitlab.

Author: Joel Sherrill 2024-07-01T15:31:06.991Z

This alone implies that the ISR Stack size for x86_64 must be at least 512 bytes. Plus some more context saved and a little bit left for calling a driver, I would expect that anything less than 1K is very bad. Make sure there is a check for minimum ISR stack size. There likely is a check in confdefs about this.

Author: Matheus Pecoraro 2024-07-01T15:31:06.991Z

It currently defaults to 4K which is the port's **CPU_STACK_MINIMUM_SIZE** but I don't see any check under cpukit/include/rtems/confdefs/percpu.h to make sure **CONFIGURE_INTERRUPT_STACK_SIZE** isn't less than that.

Author: Joel Sherrill 2024-07-01T15:31:11.160Z

Is this guaranteed to be 16 byte aligned as required?

Author: Matheus Pecoraro 2024-07-01T15:31:11.160Z

Yeah, its aligned on line 110.

Author: Joel Sherrill 2024-07-01T15:31:38.705Z

I am not finding the number of cycles this save and the later restore can take. Is this a constant number of cycles or variable like the mc68881/2 were? It would be good to know this for some common CPU cores and document it.

Author: Matheus Pecoraro 2024-07-01T15:31:38.705Z

This was the only resource I could find and I don't think it's possible to determine a reliable number.

I think "Latency" would be the best metric to determine this and in the ones where it's reported for the 64 bit mode of the instruction it seems to average around ~65 for FXSAVE and ~80 for FXRSTOR.

Author: Joel Sherrill 2024-07-01T15:31:38.705Z

Maybe put that in the port documentation.

Author: Sebastian Huber 2024-07-01T15:31:43.873Z

I would like to get rid of the CPU_ALL_TASKS_ARE_FP at some point in time. Can't you simply add the FP context to Context_Control? This should be slightly more efficient.

Author: Matheus Pecoraro 2024-07-01T15:31:43.873Z

So **_CPU_Context_save_fp** and **_CPU_Context_restore_fp** would be empty and that process would be done on **_CPU_Context_switch** correct?

Author: Sebastian Huber 2024-07-01T15:31:43.873Z

Yes, it would be all handled by `_CPU_Context_switch()`.

Author: Matheus Pecoraro 2024-06-26T13:14:20.418Z

Author: Joel Sherrill 2024-07-01T15:31:43.891Z

resolved all threads

Author: Joel Sherrill 2024-07-01T15:32:02.368Z

approved this merge request

Author: Amar Takhar 2024-07-01T17:48:20.703Z

approved this merge request

Author: Amar Takhar 2024-07-01T17:48:30.707Z

added 3 commits

- 51deacb5...bba5a7a2 - 2 commits from branch `rtems/rtos:main`
- e4613529 - x86_64: Enable and add support for FP tasks

Compare with previous version

3.9.2.178 108 - bsps/arm/xilinx-zynq: Enable SMP for all variants

Id	108
State	merged
Merged by	Amar Takhar
Merged at	2024-07-08T03:44:19.556Z
Assignee(s)	Sebastian Huber
Created	2024-07-04T15:09:10.317Z
Updated	2024-08-10T00:40:18.399Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/108
Commit	6d65f2cff994d008a278b718d4b986cba6b233bf

Summary

Author: Sebastian Huber 2024-07-04T15:09:10.489Z

assigned to @sebhub

Author: Kinsey Moore 2024-07-05T21:17:12.950Z

added 2 commits

- 89e795a4 - 1 commit from branch `rtems/rtos:main`
- 77cba86d - bsps/arm/xilinx-zynq: Enable SMP for all variants

Compare with previous version

Author: Kinsey Moore 2024-07-05T21:18:12.728Z

approved this merge request

Author: Amar Takhar 2024-07-08T03:44:01.132Z

added 3 commits

- 77cba86d...2f299f7f - 2 commits from branch `rtems/rtos:main`
- 6d65f2cf - bsps/arm/xilinx-zynq: Enable SMP for all variants

Compare with previous version

Author: Amar Takhar 2024-07-08T03:44:16.355Z

approved this merge request

3.9.2.179 107 - amd64: Fix reference to wrong linkcmds in amd64 obj.yml

Id	107
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-03T17:30:39.262Z
Created	2024-07-03T17:07:29.232Z
Updated	2024-08-10T00:40:18.277Z
Milestone	6.1
Labels	arch:x86_64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/107
Commit	58748a3a7181111372cea4f28273c5a995fdeded

Summary

Fix path mistake that went unnoticed in !96

Author: Kinsey Moore 2024-07-03T17:20:38.218Z

approved this merge request

Author: Joel Sherrill 2024-07-03T17:30:16.779Z

changed title from **amd64: Fix {-typo-} in amd64 obj.yml** to **amd64: Fix {+reference to wrong linkcmds+} in amd64 obj.yml**

Author: Joel Sherrill 2024-07-03T17:30:32.278Z

approved this merge request

3.9.2.180 106 - dhrystone: Prevent procedure merging

Id	106
State	merged
Merged by	Amar Takhar
Merged at	2024-07-08T03:41:59.563Z
Assignee(s)	Sebastian Huber
Created	2024-07-02T09:52:45.895Z
Updated	2024-08-10T00:40:18.176Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/106
Commit	ffa6e268792e6e25017ec9b7820de755bf4d9879

Summary

dhrystone: Prevent procedure merging

From the Dhrystone RATIONALE:

o No procedure merging

Although Dhrystone contains some very short procedures where execution would benefit from procedure merging (inlining, macro expansion of procedures), procedure merging is not to be used. The reason is that the percentage of procedure and function calls is part of the "Dhrystone distribution" of statements contained in [1]. This restriction does not hold for the string functions of the C version since ANSI C allows an implementation to use inline code for these functions.

Close #5058.

Author: Sebastian Huber 2024-07-02T09:52:46.029Z

assigned to @sebhub

Author: Kinsey Moore 2024-07-05T21:18:55.841Z

approved this merge request

Author: Kinsey Moore 2024-07-05T21:19:00.987Z

added 3 commits

- 3a3157b4...89e795a4 - 2 commits from branch `rtems/rtos:main`
- ffa6e268 - dhrystone: Prevent procedure merging

Compare with previous version

Author: Amar Takhar 2024-07-08T03:41:52.887Z

approved this merge request

3.9.2.181 96 - amd64: Refactor amd64 and amd64efi spec files

Id	96
State	merged
Merged by	Amar Takhar
Merged at	2024-07-01T17:49:25.535Z
Created	2024-06-25T23:26:57.941Z
Updated	2024-08-10T00:40:18.044Z
Milestone	6.1
Labels	arch:x86_64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/96
Commit	087645e58f80f426758d9236af2c169e23c33522

Summary

Add a common group and object spec files for the amd64 and amd64efi BSPs

Closes: #5028

Author: Sebastian Huber 2024-06-26T12:40:12.503Z

The new files should have your own copyright.

Author: Matheus Pecoraro 2024-06-26T12:39:13.202Z

changed this line in version 2 of the diff

Author: Matheus Pecoraro 2024-06-26T12:40:12.503Z

Done.

Author: Matheus Pecoraro 2024-06-26T12:39:13.362Z

added 1 commit

- 5d8e5ff8 - amd64: Refactor amd64 and amd64efi spec files

Compare with previous version

Author: Matheus Pecoraro 2024-06-26T12:40:12.521Z

resolved all threads

Author: Sebastian Huber 2024-06-26T13:10:00.176Z

approved this merge request

Author: Matheus Pecoraro 2024-06-26T13:28:41.802Z

Author: Joel Sherrill 2024-07-01T15:33:37.497Z

approved this merge request

Author: Amar Takhar 2024-07-01T17:48:58.412Z

added 4 commits

- 5d8e5ff8...e4613529 - 3 commits from branch `rtems/rtos:main`

- e48070b3 - amd64: Refactor amd64 and amd64efi spec files

Compare with previous version

Author: Amar Takhar 2024-07-01T17:49:14.446Z

added 2 commits

- dd882e12 - 1 commit from branch `rtems/rtos:main`
- 087645e5 - amd64: Refactor amd64 and amd64efi spec files

Compare with previous version

Author: Matheus Pecoraro 2024-07-03T17:07:32.956Z

mentioned in merge request !107

3.9.2.182 97 - validation: Fix comment

Id	97
State	merged
Merged by	Kinsey Moore
Merged at	2024-06-27T23:31:56.706Z
Assignee(s)	Sebastian Huber
Created	2024-06-26T10:02:19.243Z
Updated	2024-08-10T00:40:17.924Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/97
Commit	c847f4c10161bebddec346ac38cd10c689dcc97b

Summary

validation: Fix comment

Update #5050.

Author: Sebastian Huber 2024-06-26T10:02:19.341Z

assigned to @sebhub

Author: Gedare Bloom 2024-06-27T22:10:44.318Z

approved this merge request

Author: Kinsey Moore 2024-06-27T23:31:46.852Z

approved this merge request

3.9.2.183 102 - psxfenv01: Use a floating-point task

Id	102
State	merged
Merged by	Amar Takhar
Merged at	2024-06-28T17:29:18.915Z
Assignee(s)	Sebastian Huber
Created	2024-06-28T12:29:26.761Z
Updated	2024-08-10T00:40:17.826Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/102
Commit	bba5a7a250fc34c1a6aaa30b5d4d9133af73cf90

Summary

Author: Sebastian Huber 2024-06-28T12:29:26.846Z

assigned to @sebhub

Author: Joel Sherrill 2024-06-28T13:51:15.641Z

approved this merge request

Author: Amar Takhar 2024-06-28T17:29:10.328Z

approved this merge request

3.9.2.184 51 - bsps/xilinx-versal: fix BSP_INTERRUPT_VECTOR_COUNT too large

Id	51
State	merged
Merged by	Amar Takhar
Merged at	2024-05-29T02:52:49.854Z
Created	2024-05-27T14:00:17.042Z
Updated	2024-08-10T00:40:17.703Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/51
Commit	4b45d42aeeb57421fce7cf1ddd85ffffdfcf824d

Summary

Author: Kinsey Moore 2024-05-28T17:13:48.902Z

approved this merge request

Author: Kinsey Moore 2024-05-28T17:13:53.146Z

added 2 commits

- b3a4f539 - 1 commit from branch `rtems/rtos:main`
- 505eb33a - bsps/xilinx-versal: fix BSP_INTERRUPT_VECTOR_COUNT too large

Compare with previous version

Author: Amar Takhar 2024-05-29T02:49:04.359Z

Hi @yangn0 can you explain in the body of your commit message why this change was necessary? For example what issue you had and what this resolves. It's good to keep this documented for historical reasons also in case we run into the same issue elsewhere it makes searching easier. Thank you.

Author: Ning Yang 2024-05-29T02:49:04.359Z

Understood.

Author: Ning Yang 2024-05-29T02:49:04.359Z

Done. Thank you for your comment.

Author: Ning Yang 2024-05-29T02:46:02.858Z

added 1 commit

- a8339580 - bsps/xilinx-versal: fix BSP_INTERRUPT_VECTOR_COUNT too large

Compare with previous version

Author: Ning Yang 2024-05-29T02:49:04.376Z

resolved all threads

Author: Amar Takhar 2024-05-29T02:52:25.596Z

Looks great!

Author: Amar Takhar 2024-05-29T02:52:33.618Z

added 3 commits

- a8339580...e63c8671 - 2 commits from branch `rtems/rtos:main`
- 4b45d42a - bsps/xilinx-versal: fix BSP_INTERRUPT_VECTOR_COUNT too large

Compare with previous version

Author: Amar Takhar 2024-05-29T02:52:39.246Z

approved this merge request

Author: Ning Yang 2024-07-05T03:57:31.579Z

3.9.2.185 100 - add rtems_counting_semaphore_wait_timed_ticks and rtems_counting_semaphore_try_wait for self-contained object counting semaphore

Id	100
State	merged
Merged by	Amar Takhar
Merged at	2024-07-02T01:49:25.458Z
Created	2024-06-28T08:51:48.817Z
Updated	2024-08-10T00:40:17.514Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/100
Commit	7ca22591da5f2f79e052908387b0c28fc0c4f9c2

Summary

add rtems_counting_semaphore_wait_timed_ticks and rtems_counting_semaphore_try_wait for self-contained object counting semaphore.

1. rtems_counting_semaphore_wait_timed_ticks(rtems_counting_semaphore *counting_semaphore,uint32_t ticks)
2. rtems_counting_semaphore_try_wait(rtems_counting_semaphore *counting_semaphore)

close issue #5055.

Author: Sebastian Huber 2024-06-28T13:22:41.497Z

The `ticks` should be aligned with `counting_semaphore`.

Author: xiaojun zheng 2024-06-28T13:21:26.672Z

changed this line in version 2 of the diff

Author: Sebastian Huber 2024-06-28T13:30:14.797Z

This needs also a documentation update:

https://gitlab.rtems.org/rtems/docs/rtems-docs/-/blob/main/c-user/self_contained_objects.rst?ref_type=heads

Author: xiaojun zheng 2024-06-28T13:30:14.797Z

Got it, I'll update it later.

Author: xiaojun zheng 2024-06-28T13:21:26.840Z

added 1 commit

- 8652491a - Update thread.h

Compare with previous version

Author: Sebastian Huber 2024-06-28T13:22:41.514Z

resolved all threads

Author: Sebastian Huber 2024-06-28T13:22:44.295Z

approved this merge request

Author: Sebastian Huber 2024-07-01T10:54:36.373Z

Could you please squash the commits together to have a single commit. Please use also the standard format for commit messages.

Author: xiaojun zheng 2024-07-01T10:54:36.373Z

OK, done.

Author: Sebastian Huber 2024-07-01T10:54:36.373Z

Thanks for the squashing, but could you please also use a standard format for commit messages.

Author: xiaojun zheng 2024-07-01T10:54:36.373Z

Sure, I'm learning the commit-message-guidance.

Author: Sebastian Huber 2024-06-28T13:30:12.563Z

unapproved this merge request

Author: Sebastian Huber 2024-06-28T13:30:14.815Z

resolved all threads

Author: xiaojun zheng 2024-07-01T09:40:23.999Z

added 1 commit

- f4c7211a - self-contained object: add timeout and try wait function for self-contained...

Compare with previous version

Author: Sebastian Huber 2024-07-01T09:46:39.476Z

Please reduce the line length of the commit message to the standard lengths (72 for the subject, 80 or so for the rest), see also https://docs.rtems.org/branches/master/eng/vc-users.html#commit-message-guidance.

Author: xiaojun zheng 2024-07-01T10:09:06.930Z

added 1 commit

- 358f8482 - self-contained object: add timeout/wait function for counting semaphore

Compare with previous version

Author: Sebastian Huber 2024-07-01T10:54:36.391Z

resolved all threads

Author: Sebastian Huber 2024-07-01T10:54:39.985Z

approved this merge request

Author: Kinsey Moore 2024-07-01T17:34:57.729Z

added 2 commits

- bba5a7a2 - 1 commit from branch `rtems/rtos:main`
- b9a3680c - self-contained object: add timeout/wait function for counting semaphore

Compare with previous version

Author: Amar Takhar 2024-07-02T01:49:10.374Z

approved this merge request

Author: Amar Takhar 2024-07-02T01:49:19.410Z

added 4 commits

- b9a3680c...087645e5 - 3 commits from branch `rtems/rtos:main`
- 7ca22591 - self-contained object: add timeout/wait function for counting semaphore

Compare with previous version

Author: Amar Takhar 2024-07-02T02:35:12.187Z

mentioned in issue administration/gitlab#64

3.9.2.186 101 - smptests/smpipi01: Fix more sporadic test failures

Id	101
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-19T12:53:18.430Z
Assignee(s)	Sebastian Huber
Created	2024-06-28T10:31:07.583Z
Updated	2024-08-10T00:40:05.432Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/101
Commit	a824ed6f7f4471a488daad611e49998ac770e378

Summary

smptests/smpipi01: Fix more sporadic test failures

The last fix in commit 70029fc7be6f5179cef99110b5922411b2d8b121 did not work on targets where you can have active and pending interrupts.

Author: Sebastian Huber 2024-06-28T10:31:09.621Z

assigned to @sebhub

Author: Kinsey Moore 2024-07-01T17:36:25.061Z

added 2 commits

- bba5a7a2 - 1 commit from branch `rtems/rtos:main`
- 80da0dd7 - smptests/smpipi01: Fix more sporadic test failures

Compare with previous version

Author: Kinsey Moore 2024-07-05T21:40:58.948Z

added 7 commits

- 80da0dd7...89e795a4 - 6 commits from branch `rtems/rtos:main`
- 04767c38 - smptests/smpipi01: Fix more sporadic test failures

Compare with previous version

Author: Gedare Bloom 2024-07-10T05:27:34.775Z

approved this merge request

Author: Kinsey Moore 2024-07-19T12:53:01.811Z

added 17 commits

- 04767c38...5c5b4b83 - 16 commits from branch `rtems/rtos:main`
- a824ed6f - smptests/smpipi01: Fix more sporadic test failures

Compare with previous version

Author: Kinsey Moore 2024-07-19T12:53:14.693Z

approved this merge request

3.9.2.187 115 - score: Add Doxygen file comment to bsd-tree.h

Id	115
State	merged
Merged by	Amar Takhar
Merged at	2024-07-18T00:09:27.460Z
Assignee(s)	Sebastian Huber
Created	2024-07-12T05:50:36.903Z
Updated	2024-08-10T00:40:05.336Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/115
Commit	1dd384bb1b317ff409eb11643cfbc3c48d461c12

Summary

score: Add Doxygen file comment to bsd-tree.h

Update #5049.

Author: Sebastian Huber 2024-07-12T05:50:37.027Z

assigned to @sebhub

Author: Gedare Bloom 2024-07-17T19:38:16.995Z

approved this merge request

Author: Amar Takhar 2024-07-18T00:09:24.560Z

approved this merge request

3.9.2.188 77 - cputkit/include: Add bsd-tree.h to RTEMS and update existing references.

Id	77
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-09T22:55:16.695Z
Assignee(s)	Gedare Bloom
Created	2024-06-18T02:24:47.876Z
Updated	2024-08-10T00:40:05.228Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/77
Commit	be8aa9b09d33243578a69f23ebe9c630a3032850

Summary

cputkit/include: Add bsd-tree.h to RTEMS and update existing references.

Closes #5049.

Author: Aaron Nyholm 2024-06-18T02:26:33.267Z

added 1 commit

- 4913d08f - cputkit/include: Add bsd-tree.h to RTEMS and update existing references.

Compare with previous version

Author: Aaron Nyholm 2024-06-18T02:26:50.931Z

changed the description

Author: Sebastian Huber 2024-06-18T06:21:25.027Z

I am not in favour of this change, see https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/5049#note_107555.

Author: Gedare Bloom 2024-06-18T15:54:09.825Z

requested review from @gedare

Author: Kinsey Moore 2024-06-18T18:08:09.087Z

added 2 commits

- 0bdeef72 - 1 commit from branch `rtems/rtos:main`
- 8b46dabe - cputkit/include: Add bsd-tree.h to RTEMS and update existing references.

Compare with previous version

Author: Chris Johns 2024-06-20T07:02:39.349Z

mentioned in issue #5049

Author: Sebastian Huber 2024-06-24T02:25:53.505Z

This file should move to <rtems/score/*.h>, for example <rtems/score/bsd-tree.h>. The file origin should be clearly stated at least in the commit message.

Author: Aaron Nyholm 2024-06-24T02:25:53.505Z

Good points, thanks. Updated.

Author: Sebastian Huber 2024-06-24T02:25:53.505Z

It helps if you put the last Newlib commit message of this file into the commit message.

Author: Aaron Nyholm 2024-06-24T02:25:53.505Z

Thanks, I've added it.

Author: Aaron Nyholm 2024-06-21T05:56:07.070Z

added 8 commits

- 8b46dabe...78afce5b - 7 commits from branch `rtems/rtos:main`
- 23978608 - cputkit/include: Add bsd-tree.h to RTEMS and update existing references.

Compare with previous version

Author: Kinsey Moore 2024-06-21T17:58:50.030Z

added 11 commits

- 23978608...7ce6667e - 10 commits from branch `rtems/rtos:main`
- 34c83527 - cputkit/include: Add bsd-tree.h to RTEMS and update existing references.

Compare with previous version

Author: Aaron Nyholm 2024-06-24T02:24:47.981Z

added 1 commit

- 38912b44 - cputkit/include: Add bsd-tree.h to RTEMS and update existing references.

Compare with previous version

Author: Aaron Nyholm 2024-06-24T02:25:53.523Z

resolved all threads

Author: Sebastian Huber 2024-06-24T07:47:28.927Z

What about a commit message like this:

```
score: Import <sys/tree.h> from Newlib

Import <sys/tree.h> from Newlib as <rtems/score/bsd-tree.h> using␣
↪Newlib commit:

commit eb03ac17f16f1bd354482148426353fd35cd879d
Author: Sebastian Huber <sebastian.huber@embedded-brains.de>
Date:   Tue Oct 5 15:53:47 2021 +0200

sys/tree.h: Red child with black sibling rotations

```

(continues on next page)

(continued from previous page)

```
Add specialized rotations RB_RED_ROTATE_LEFT() and RB_RED_ROTATE_
↪RIGHT() which
may be used if we rotate a red child which has a black sibling.  Such a␣
↪red
node must have at least two child nodes so that the following red-black␣
↪tree
invariant is fulfilled:

Every path from a given node to any of its descendant NULL nodes goes␣
↪through
the same number of black nodes.

PARENT
/      \\
BLACK     RED
/   \\
BLACK BLACK

Close #5049.
```

Author: Sebastian Huber 2024-07-09T22:39:36.140Z

It seems you modified the file. You should first import an unmodified file and then apply the changes.

The header guard no longer matches with the file name.

Author: Aaron Nyholm 2024-07-09T22:39:36.140Z

Updated the guard headers to reflect the moved file. I only changed the guards in the file to reflect the new file name and path as well as to maintain build-able merge requests.

Author: Aaron Nyholm 2024-06-25T01:04:04.538Z

changed this line in version 8 of the diff

Author: Sebastian Huber 2024-07-09T22:39:36.140Z

I have a lot of experience in maintaining third-party imports, so it would be nice if you don't dismiss my comments so lightly and instead learn best practices. You can:

1. Create one commit which just imports the file as is.
2. Create one commit which changes existing files to use the new file, updates the imported file, and adjusts the build system.

Author: Gedare Bloom 2024-07-09T22:39:36.140Z

I have split the commit, although in this case it doesn't really matter since we are apparently going to be 'owning' this file within score moving forward.

Author: Sebastian Huber 2024-07-09T22:28:17.445Z

What happens if you include <rtems/score/tree.h> and <sys/tree.h>?

Author: Aaron Nyholm 2024-07-09T22:28:17.445Z

If both <rtems/score/tree.h> and <sys/tree.h> are included the build is still successful.

Author: Sebastian Huber 2024-07-09T22:28:17.445Z

With this test file

```
#include <rtems/score/rbtree.h>
#include <sys/tree.h>
```

and <sys/tree.h> from FreeBSD 14 I get:

```
In file included from tree.c:2:
include/sys/tree.h:173: warning: "SPLAY_GENERATE" redefined
173 | #define SPLAY_GENERATE(name, type, field, cmp)                 ␣
 ↪      \\
|
In file included from /opt/rtems/6/sparc-rtems6/gr740/lib/include/rtems/
 ↪score/rbtree.h:41,
from tree.c:1:
/opt/rtems/6/sparc-rtems6/gr740/lib/include/rtems/score/bsd-tree.h:163:␣
 ↪note: this is the location of the previous definition
163 | #define SPLAY_GENERATE(name, type, field, cmp)                 ␣
 ↪      \\
|
include/sys/tree.h:320: warning: "RB_ENTRY" redefined
320 | #define RB_ENTRY(type)                                         ␣
 ↪      \\
|
/opt/rtems/6/sparc-rtems6/gr740/lib/include/rtems/score/bsd-tree.h:312:␣
 ↪note: this is the location of the previous definition
312 | #define RB_ENTRY(type)
...
```

Author: Aaron Nyholm 2024-07-09T22:28:17.445Z

What options did you build with to get these warnings? I don't get them when I build. These are just warnings and as far as I can tell shouldn't stop you from building (albeit with the warnings). Furthermore, the these warnings show to importance of pairing the removing `sys/tree.h` from newlib with this MR.

Author: Sebastian Huber 2024-07-09T22:28:17.445Z

These are not just warnings. They show that your patch didn't fix the problem.

Please read my comments more carefully. I said the `<sys/tree.h.>` from FreeBSD 14. This is not the version from Newlib.

Removing `sys/tree.h` from Newlib is an entirely different topic.

Author: Gedare Bloom 2024-07-09T22:13:00.405Z

changed this line in version 10 of the diff

Author: Gedare Bloom 2024-07-09T22:28:17.445Z

I have added this as a test case, and also fixed the problem.

Author: Sebastian Huber 2024-06-24T16:13:23.337Z

requested changes

Author: Chris Johns 2024-06-24T22:05:20.396Z

added 12 commits

- 38912b44...2089f993 - 11 commits from branch `rtems/rtos:main`
- 71716002 - cputkit/include: Add bsd-tree.h to RTEMS and update existing references.

Compare with previous version

Author: Aaron Nyholm 2024-06-25T01:04:05.148Z

added 1 commit

- 9a054c84 - score: Import <sys/tree.h> from Newlib

Compare with previous version

Author: Aaron Nyholm 2024-06-25T01:10:40.356Z

resolved all threads

Author: Aaron Nyholm 2024-06-25T01:10:59.874Z

resolved all threads

Author: Kinsey Moore 2024-06-26T19:28:41.843Z

added 12 commits

- 9a054c84...e5b6fa02 - 11 commits from branch `rtems/rtos:main`
- f263eb40 - score: Import <sys/tree.h> from Newlib

Compare with previous version

Author: Gedare Bloom 2024-07-09T22:13:00.679Z

added 4 commits

- 120d71d7 - score: Import <sys/tree.h> from Newlib
- 37e57560 - score/rbtree: install and use bsd-tree.h
- 246c6ad9 - cpukit/bsd-tree.h: prepend CPP with **RTEMS_** scoping
- 0e776bc0 - testsuites: regenerate tc-score-rbtree.c

Compare with previous version

Author: Gedare Bloom 2024-07-09T22:15:05.736Z

removed review request for @gedare

Author: Gedare Bloom 2024-07-09T22:27:03.307Z

assigned to @gedare

Author: Gedare Bloom 2024-07-09T22:34:48.525Z

mentioned in merge request rtems/prequal/rtems-central!3

Author: Joel Sherrill 2024-07-09T22:50:13.840Z

How about adding a comment indicating that all symbols have been prefixed by **RTEMS_** or **rtems_** to ensure no conflict with using the real tree.h.

Author: Gedare Bloom 2024-07-09T22:50:13.840Z

done, great idea

Author: Joel Sherrill 2024-07-09T22:48:55.943Z

Maybe a bit more about the relationship between sys/tree.h and bsd-tree.h.

Author: Gedare Bloom 2024-07-09T22:48:49.105Z

changed this line in version 12 of the diff

Author: Gedare Bloom 2024-07-09T22:48:55.943Z

done.

Author: Gedare Bloom 2024-07-09T22:45:39.037Z

added 1 commit

- aef3e22b - score/bsd-tree.h: Clarify the rationale for the file in a comment.

Compare with previous version

Author: Gedare Bloom 2024-07-09T22:48:49.317Z

added 1 commit

- 0b8e2c21 - sptests/sptree01: add more detail to sptree01.doc

Compare with previous version

Author: Joel Sherrill 2024-07-09T22:50:13.860Z

resolved all threads

Author: Gedare Bloom 2024-07-09T22:50:16.257Z

resolved all threads

Author: Joel Sherrill 2024-07-09T22:50:24.135Z

approved this merge request

Author: Chris Johns 2024-07-09T22:52:44.659Z

added 18 commits

- 0b8e2c21...34485ccd - 12 commits from branch `rtems/rtos:main`

- b68ef66b - score: Import <sys/tree.h> from Newlib
- c33ed552 - score/rbtree: install and use bsd-tree.h
- 88ca88f3 - cpukit/bsd-tree.h: prepend CPP with **RTEMS_** scoping
- 90e1a650 - testsuites: regenerate tc-score-rbtree.c
- ddbd0d57 - score/bsd-tree.h: Clarify the rationale for the file in a comment.
- be8aa9b0 - sptests/sptree01: add more detail to sptree01.doc

Compare with previous version

Author: Chris Johns 2024-07-09T22:54:30.413Z

approved this merge request

Author: Sebastian Huber 2024-07-10T06:48:24.909Z

Thanks for giving me a chance to review the updates.

The additional commits should have been squashed to have a consistent and atomic change in the repository. If you build commit 88ca88f3fd16768db694bc999e5f414bb58f94bb, you get:

```
[4192/4457] Compiling testsuites/unit/tc-score-rbtree.c
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c: In function 'Color':
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c:122:10: warning: implicit declaration of function 'RB_COLOR' [-Wimplicit-function-declaration]
122 |   return RB_COLOR( n, Node );
|          ^~~~~~~~
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c:122:10: warning: nested extern declaration of 'RB_COLOR' [-Wnested-externs]
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c:122:23: error: 'Node' undeclared (first use in this function)
122 |   return RB_COLOR( n, Node );
|                       ^~~~
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c:122:23: note: each undeclared identifier is reported only once for each function it appears in
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c: In function 'VerifyTree':
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c:162:22: error: 'RB_RED' undeclared (first use in this function)
162 |     Color( root ) == RB_RED &&
|                      ^~~~~~
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c:190:27: error: 'RB_BLACK' undeclared (first use in this function)
```

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```
190 |   return Color( root ) == RB_BLACK ? lh + 1 : lh;
|                            ^~~~~~~~
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c: At top level:
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c:242:26: error: 'RB_BLACK' undeclared here (not in a function)
242 |   { 0, NULL, NULL, NULL, RB_BLACK }
|                            ^~~~~~~~
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c:264:29: error: 'RB_RED' undeclared here (not in a function)
264 |   { 0, TN( 3 ), NULL, NULL, RB_RED },
|                              ^~~~~~
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c: In function 'Color':
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c:123:1: warning: control reaches end of non-void function [-Wreturn-type]
123 | }
| ^
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c: In function 'VerifyTree':
/home/EB/sebastian_h/src/rtems/testsuites/unit/tc-score-rbtree.c:191:1: warning: control reaches end of non-void function [-Wreturn-type]
191 | }
| ^
```

I would have placed an issue update in each commit message.

3.9.2.189 127 - cpukit/posix/src/aio_misc.c: Fix incorrect operator in condition

Id	127
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-25T17:48:26.307Z
Created	2024-07-25T15:28:39.499Z
Updated	2024-08-10T00:40:05.112Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/127
Commit	1fe3d396d320d2c12535734fc4ac8118c4d11a37

Summary

cpukit/posix/src/aio_misc.c: Fix incorrect operator in condition

Coverity Issue: CID 1615135 Control flow issues (DEADCODE)

Author: Alessandro Nardin	2024-07-25T15:29:39.021Z

changed the description

Author: Alessandro Nardin 2024-07-25T15:30:13.944Z

added 1 commit

- 1fe3d396 - cpukit/posix/src/aio_misc.c: Fix incorrect operator in condition

Compare with previous version

Author: Kinsey Moore 2024-07-25T15:44:35.709Z

approved this merge request

Author: Joel Sherrill 2024-07-25T17:48:20.605Z

approved this merge request

3.9.2.190 109 - libtest: Move parts to extra files

Id	109
State	merged
Merged by	Gedare Bloom
Merged at	2024-07-10T06:01:40.600Z
Assignee(s)	Sebastian Huber
Created	2024-07-08T06:35:26.808Z
Updated	2024-08-10T00:40:05.009Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/109
Commit	26b95e148cd7a7f9b39e225b904a00226ff721c0

Summary

libtest: Move parts to extra files

Move the RTEMS test printer and rtems_test_exit() to separate files, to remove dependencies from the begin/end test messsage support.

Update #4963.

Author: Sebastian Huber 2024-07-08T06:35:26.944Z

assigned to @sebhub

Author: Kinsey Moore 2024-07-08T13:41:14.528Z

approved this merge request

Author: Gedare Bloom 2024-07-10T06:01:19.129Z

approved this merge request

Author: Gedare Bloom 2024-07-10T06:01:30.502Z

added 8 commits

- 0a596791...be8aa9b0 - 7 commits from branch `rtems/rtos:main`
- 26b95e14 - libtest: Move parts to extra files

Compare with previous version

3.9.2.191 122 - libdl: Constify TLS offset table

Id	122
State	merged
Merged by	Amar Takhar
Merged at	2024-07-20T01:32:18.372Z
Assignee(s)	Sebastian Huber
Created	2024-07-19T06:11:23.223Z
Updated	2024-08-10T00:40:04.819Z
Milestone	6.1
Labels	cpukit::dl
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/122
Commit	7333afe0ae5935608ba882500491c2795eed9a9d

Summary

Author: Sebastian Huber 2024-07-19T06:11:23.317Z

assigned to @sebhub

Author: Chris Johns 2024-07-19T23:52:28.857Z

approved this merge request

Author: Amar Takhar 2024-07-20T01:32:00.828Z

added 3 commits

- 240519bf...b21abd3f - 2 commits from branch `rtems/rtos:main`
- 7333afe0 - libdl: Constify TLS offset table

Compare with previous version

Author: Amar Takhar 2024-07-20T01:32:14.675Z

approved this merge request

3.9.2.192 170 - bsps/shared/arm-gicv3: Calculate cpu_count correctly

Id	170
State	merged
Merged by	Amar Takhar
Merged at	2024-08-08T01:55:39.707Z
Created	2024-08-07T07:19:43.253Z
Updated	2024-08-10T00:39:50.187Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/170
Commit	3211cba9f91f396c4681387416230e145c8ebeed

Summary

bbsps/shared/arm-gicv3: Calculate cpu_count correctly.

cpu_count should be increased before exit condition.

Author: Kinsey Moore 2024-08-07T14:11:24.521Z

The change itself looks fine. The commit summary could use some improvement. How about:

bsps/shared/arm-gicv3: Calculate cpu_count correctly

Author: xiaojun zheng 2024-08-07T14:11:24.521Z

ok, I have changed it.

Author: xiaojun zheng 2024-08-07T13:55:31.042Z

added 1 commit

- 82efb6ea - bbsps/shared/arm-gicv3: Calculate cpu_count correctly

Compare with previous version

Author: xiaojun zheng 2024-08-07T14:00:51.867Z

added 1 commit

- 34273825 - bbsps/shared/arm-gicv3: Calculate cpu_count correctly

Compare with previous version

Author: xiaojun zheng 2024-08-07T14:03:30.791Z

changed title from **bsps/shared/{-dev/irq:fix-} cpu_count c{-alculation.-}** to **{+b+}bsps/shared/{+arm-gicv3: Calculate+} cpu_count c{+orrectly+}**

Author: xiaojun zheng 2024-08-07T14:03:30.820Z

changed the description

Author: Kinsey Moore 2024-08-07T14:11:21.366Z

approved this merge request

Author: Kinsey Moore 2024-08-07T14:11:24.540Z

resolved all threads

Author: Kinsey Moore 2024-08-07T14:11:45.472Z

Thanks!

Author: Joel Sherrill 2024-08-07T15:07:21.236Z

changed title from **{-b-}bsps/shared/arm-gicv3: Calculate cpu_count correctly** to **bsps/shared/arm-gicv3: Calculate cpu_count correctly**

Author: Amar Takhar 2024-08-08T01:55:29.086Z

added 4 commits

- 34273825...cc345584 - 3 commits from branch `rtems/rtos:main`
- 3211cba9 - bbsps/shared/arm-gicv3: Calculate cpu_count correctly

Compare with previous version

Author: Amar Takhar 2024-08-08T01:55:34.097Z

approved this merge request

3.9.2.193 160 - disp_hmsc29xx.c: Address Coverity flagged negative shift

Id	160
State	merged
Merged by	Chris Johns
Merged at	2024-08-07T02:47:18.502Z
Assignee(s)	Joel Sherrill
Created	2024-08-02T16:32:37.595Z
Updated	2024-08-10T00:39:50.080Z
Milestone	6.1
Labels	rtems::testing, scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/160
Commit	5580f70bbd991e39dc15aad12d280ddfe06eb65e

Summary

disp_hmsc29xx.c: Address Coverity flagged negative shift

Coverity CID 1512508

Closes #5084.

Author: Joel Sherrill 2024-08-02T16:32:37.874Z

assigned to @joel

Author: Amar Takhar 2024-08-02T16:55:02.314Z

approved this merge request

Author: Chris Johns 2024-08-07T02:47:01.781Z

added 54 commits

- 6c60cdc8...02a89356 - 53 commits from branch `rtems/rtos:main`
- 5580f70b - disp_hmsc29xx.c: Address Coverity flagged negative shift

Compare with previous version

Author: Chris Johns 2024-08-07T02:47:14.567Z

approved this merge request

Author: Joel Sherrill 2024-08-07T13:14:33.671Z

mentioned in issue #5084

3.9.2.194 162 - testsuites: Update list of excluded testcases for targets without JFFS2 and RFS

Id	162
State	merged
Merged by	Amar Takhar
Merged at	2024-08-05T06:23:48.966Z
Created	2024-08-05T04:51:57.867Z
Updated	2024-08-10T00:39:49.983Z
Milestone	6.1
Labels	filesystem, rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/162
Commit	44d17106490dd6a99826990de32eead6725ff41c

Summary

testsuites: Update list of excluded testcases for targets without JFFS2 and RFS Update the list of testcases that should not be compiled for targets that explicitly do not compile JFFS2 and RFS testcases

Closes #5097

Author: Loris Nardo 2024-08-05T05:13:12.107Z

added 1 commit

- 44d17106 - testsuites: Update list of excluded testcases for targets without JFFS2 and RFS

Compare with previous version

Author: Chris Johns 2024-08-05T05:34:37.900Z

approved this merge request

Author: Amar Takhar 2024-08-05T06:23:44.216Z

approved this merge request

3.9.2.195 119 - Add ACPICA support to the amd64 BSP

Id	119
State	merged
Merged by	Amar Takhar
Merged at	2024-08-06T22:08:45.897Z
Created	2024-07-16T23:27:29.904Z
Updated	2024-08-10T00:39:49.595Z
Milestone	6.1
Labels	arch:x86_64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/119
Commit	02a89356985b05da21baad3e4e579547020d570f

Summary

Import ACPICA and implement support for it on the amd64 BSP.

The ACPICA code was imported from the GitHub repo. A script will be created in rtems-tools for allowing future commits to the ACPICA code to be applied to the RTEMS source tree ([Issue #11](https://gitlab.rtems.org/rtems/tools/rtems-tools/-/issues/11))

Author: Matheus Pecoraro 2024-07-22T19:56:59.163Z

Author: Matheus Pecoraro 2024-07-22T20:04:55.147Z

added 1 commit

- 427f4b34 - x86_64/amd64: ACPI support for the AMD64 BSP

Compare with previous version

Author: Matheus Pecoraro 2024-07-23T04:51:46.809Z

added 2 commits

- 84f82a17 - bsps/acpi: Shared ACPICA OSL methods and spec file
- a3d2f244 - x86_64/amd64: ACPI support for the AMD64 BSP

Compare with previous version

Author: Joel Sherrill 2024-08-06T19:35:45.857Z

Is all of this code from Intel? And unmodified as imported?

Author: Matheus Pecoraro 2024-08-06T19:35:45.857Z

On commit 128336ebebbadfdb8e452ad9c49acd77317d744c it is all unmodified code from the commit (a8b050df914875839b717a51e1b32d6c6b86ae96) on the

ACPICA tree. Then on 87e80b723efaa5ebe59a4a36640658de66557f51 there's a single change to add the RTEMS specific include.

Author: Joel Sherrill 2024-08-06T19:30:49.415Z

I have a question of whether we need to add something somewhere to note we choose the BSD permissive style license – not the proprietary or GPL.

Author: Amar Takhar 2024-08-06T19:30:49.415Z

Intel offers two different downloads here:

- https://www.intel.com/content/www/us/en/developer/articles/license/acpica-licensing.html

With the BSD/GPL download here:

- https://www.intel.com/content/www/us/en/download/776307/acpi-component-architecture-downloads-unix-format-source-code-and-build-environment-with-a-html

The GitHub source code here:

- https://github.com/acpica/acpica

Offers three licenses.

We should create a `LICENSE.md` file that states we choose the 2nd or BSD license for the source code license. Just a simple statement:

```
The RTEMS Project chooses the 2nd or BSD license as per:

https://www.intel.com/content/www/us/en/developer/articles/license/
↪acpica-licensing.html
```

Author: Joel Sherrill 2024-08-06T19:30:49.415Z

I am OK with this. Just want to be clear to an end user.

Author: Matheus Pecoraro 2024-08-06T19:30:49.415Z

I'm not sure if it's necessary but I agree it's best to have it. Should there be a copy of that file in both bsps/include/acpi/acpica and bsps/shared/acpi/acpica ?

Author: Amar Takhar 2024-08-06T19:30:49.415Z

It states we have to choose so there is no way around it we have to state it somewhere. I would put it in `bsps/shared/acpi/acpica`.

Author: Matheus Pecoraro 2024-08-06T19:30:49.415Z

File added.

Author: Matheus Pecoraro 2024-08-06T19:30:16.215Z

added 79 commits

- a3d2f244...8f0c0bc3 - 74 commits from branch `rtems/rtos:main`
- 815ef4fc - ACPICA: Initial ACPICA code import
- 27c747d7 - ACPICA: Add acrtems.h include in acenv.h
- b0fba399 - bsps/acpi: Shared ACPICA OSL methods and spec file
- b9245b2e - x86_64/amd64: ACPI support for the AMD64 BSP
- 3daf36a8 - ACPICA: Add file for chosen ACPICA license

Compare with previous version

Author: Joel Sherrill 2024-08-06T19:35:45.879Z

resolved all threads

Author: Matheus Pecoraro 2024-08-06T19:52:38.795Z

mentioned in merge request !168

Author: Matheus Pecoraro 2024-08-06T21:07:23.258Z

mentioned in merge request !169

Author: Joel Sherrill 2024-08-06T21:28:11.235Z

approved this merge request

Author: Joel Sherrill 2024-08-06T21:28:19.965Z

added 6 commits

- 6ab27bb5 - 1 commit from branch `rtems/rtos:main`
- 5d6094c4 - ACPICA: Initial ACPICA code import
- c4bae407 - ACPICA: Add acrtems.h include in acenv.h
- bd12e6f0 - bsps/acpi: Shared ACPICA OSL methods and spec file

- bb950bd7 - x86_64/amd64: ACPI support for the AMD64 BSP
- 02a89356 - ACPICA: Add file for chosen ACPICA license

Compare with previous version

Author: Amar Takhar 2024-08-06T22:07:48.821Z

approved this merge request

3.9.2.196 182 - bsps/stm32h7: Fix typo causing crash on USB 2 initialization

Id	182
State	merged
Merged by	Kinsey Moore
Merged at	2024-08-09T14:28:59.707Z
Created	2024-08-09T14:01:17.261Z
Updated	2024-08-10T00:39:49.474Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/182
Commit	e8172c8651fa5a6148212bcd84c5130d9f719ccf

Summary

bsps/stm32h7: Fix typo causing crash on USB 2 initialization

There is certainly no USB 20 TG while there is a known USB 2 OTG tech. The crash caused by this is well observed from media01.exe from libbsd compiled for H7 and run on the board.

Author: Joel Sherrill 2024-08-09T14:25:19.150Z

approved this merge request

Author: Kinsey Moore 2024-08-09T14:28:43.202Z

added 3 commits

- 3598e604...5eaf6595 - 2 commits from branch `rtems/rtos:main`
- e8172c86 - bsps/stm32h7: Fix typo causing crash on USB 2 initialization

Compare with previous version

Author: Kinsey Moore 2024-08-09T14:28:44.330Z

approved this merge request

3.9.2.197 103 - aarch64/raspberrypi: Add SPI support

Id	103
State	merged
Merged by	Amar Takhar
Merged at	2024-08-05T22:58:54.945Z
Created	2024-06-30T06:07:29.664Z
Updated	2024-08-10T00:39:49.129Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/103
Commit	8f0c0bc37957fd8fee3c8dd17b9a4a8544d473e6

aarch64/raspberrypi: Add SPI support

- Standard SPI master mode.
- Polling mode.
- Interrupt mode.

Close #5056

Author: Ning Yang 2024-06-30T06:09:32.598Z

added 1 commit

- 17911f60 - aarch64/raspberrypi: Add SPI support

Compare with previous version

Author: Ning Yang 2024-06-30T06:09:59.430Z

changed title from **{-bsp-}/raspberrypi: Add SPI support** to **{+aarch64+}/raspberrypi: Add SPI support**

Author: Ning Yang 2024-06-30T06:09:59.454Z

changed the description

Author: Ning Yang 2024-06-30T06:22:42.952Z

Author: Kinsey Moore 2024-07-01T17:35:34.000Z

added 23 commits

- 17911f60...bba5a7a2 - 22 commits from branch `rtems/rtos:main`
- 09ed98c3 - aarch64/raspberrypi: Add SPI support

Compare with previous version

Author: Kinsey Moore 2024-07-05T21:41:49.614Z

added 7 commits

- 09ed98c3...89e795a4 - 6 commits from branch `rtems/rtos:main`
- 81d5786f - aarch64/raspberrypi: Add SPI support

Compare with previous version

Author: Utkarsh Verma 2024-07-10T04:36:42.720Z

Align macros

Author: Ning Yang 2024-07-09T12:16:32.377Z

changed this line in version 6 of the diff

Author: Utkarsh Verma 2024-07-17T14:50:00.008Z

This depends on the System hence should not be handcoded here. How did you account for the system - clock?

Author: Ning Yang 2024-07-09T12:16:32.926Z

changed this line in version 6 of the diff

Author: Ning Yang 2024-07-17T14:50:00.008Z

!`image <https://gitlab.rtems.org/-/project/uploads/a5ee2f882d2d1c9566f95ccd68f973d0/image.png>`_ https://www.raspberrypi.com/documentation/computers/config_txt.html#overclocking

I got the core rate through the raspberrypi documentation.

I also set `core_freq=500` in config.txt.

Author: Utkarsh Verma 2024-07-10T04:36:49.696Z

Stray C99 comments.

Author: Ning Yang 2024-07-09T12:16:33.655Z

changed this line in version 6 of the diff

Author: Kinsey Moore 2024-07-08T13:43:51.658Z

added 4 commits

- 81d5786f...6d65f2cf - 3 commits from branch `rtems/rtos:main`
- 3057ff18 - aarch64/raspberrypi: Add SPI support

Compare with previous version

Author: Ning Yang 2024-07-09T12:16:33.876Z

added 1 commit

- 7ce6811d - aarch64/raspberrypi: Add SPI support

Compare with previous version

Author: Ning Yang 2024-07-10T04:36:49.713Z

resolved all threads

Author: Ning Yang 2024-07-17T14:50:00.026Z

resolved all threads

Author: Ning Yang 2024-07-23T12:51:51.999Z

changed the description

Author: Ning Yang 2024-07-23T12:54:18.503Z

added 1 commit

- 0dbf6fde - aarch64/raspberrypi: Add SPI support

Compare with previous version

Author: Ning Yang 2024-07-23T12:55:50.674Z

added 1 commit

- 7e16ee72 - aarch64/raspberrypi: Add Interrupt mode for SPI driver

Compare with previous version

Author: Ning Yang 2024-07-23T16:32:30.911Z

added 1 commit

- feb98ed5 - aarch64/raspberrypi: Add Interrupt mode for SPI driver

Compare with previous version

Author: Ning Yang 2024-07-24T12:47:45.466Z

added 1 commit

- bc337ce3 - aarch64/raspberrypi: Add Interrupt mode for SPI driver

Compare with previous version

Author: Ning Yang 2024-07-24T13:18:52.742Z

added 1 commit

- 4ac23bd9 - aarch64/raspberrypi: Add Interrupt mode for SPI driver

Compare with previous version

Author: Ning Yang 2024-07-24T13:27:29.614Z

added 1 commit

- 415aa78a - aarch64/raspberrypi: Add Interrupt mode for SPI driver

Compare with previous version

Author: Kinsey Moore 2024-07-24T14:30:21.747Z

added 20 commits

- 415aa78a...3b96aadd - 18 commits from branch `rtems/rtos:main`
- 69d488b3 - aarch64/raspberrypi: Add SPI support
- f71d2fc6 - aarch64/raspberrypi: Add Interrupt mode for SPI driver

Compare with previous version

Author: Kinsey Moore 2024-07-26T06:42:49.412Z

There appears to be quite a bit of file renaming, code reformatting, code movement, and configuration movement that I'd qualify as fixups in the second patch that really should just be in the first patch since that's where the non-fixed-up version is introduced. It makes the second patch significantly harder to read for functional content. It would be easier (and perfectly acceptable) to squash the patches together than to extract and move the non-functional changes.

Author: Kinsey Moore 2024-07-25T23:56:07.798Z

added 7 commits

- f71d2fc6...07bd3871 - 5 commits from branch `rtems/rtos:main`
- 330e49e8 - aarch64/raspberrypi: Add SPI support
- 9531b7c4 - aarch64/raspberrypi: Add Interrupt mode for SPI driver

Compare with previous version

Author: Ning Yang 2024-07-26T06:41:44.267Z

added 1 commit

- a712b677 - aarch64/raspberrypi: Add SPI support

Compare with previous version

Author: Ning Yang 2024-07-26T06:42:19.438Z

changed the description

Author: Ning Yang 2024-07-26T06:42:49.431Z

resolved all threads

Author: Kinsey Moore 2024-08-02T15:00:36.341Z

added 13 commits

- a712b677...a0eecb52 - 12 commits from branch `rtems/rtos:main`
- 9ba8522b - aarch64/raspberrypi: Add SPI support

Compare with previous version

Author: Kinsey Moore 2024-08-05T22:45:46.642Z

added 47 commits

- 9ba8522b...cb78150d - 46 commits from branch `rtems/rtos:main`
- 8f0c0bc3 - aarch64/raspberrypi: Add SPI support

Compare with previous version

Author: Kinsey Moore 2024-08-05T22:50:08.434Z

approved this merge request

Author: Amar Takhar 2024-08-05T22:58:47.486Z

approved this merge request

3.9.2.198 126 - Set default UART on Microzed to UART1

Id	126
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-05T21:43:27.210Z
Created	2024-07-25T06:41:33.540Z
Updated	2024-08-10T00:39:49.023Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/126
Commit	1fd373a2863e914c24351c196fa624c2acfbb031

The reference schematic for the Microzed board set USB UART to UART1. This change brings the default inline with the reference design.

Author: Kinsey Moore 2024-07-25T12:59:22.603Z

added 2 commits

- 43fd756f - 1 commit from branch `rtems/rtos:main`
- 26eaade5 - Set default UART on Microzed to UART1

Compare with previous version

Author: Kinsey Moore 2024-07-28T23:22:47.659Z

The commit summary should have a tag at the beginning such as “spec/arm/zynq:”.

Author: Kinsey Moore 2024-07-25T13:04:14.907Z

approved this merge request

Author: Aaron Nyholm 2024-07-28T23:22:35.096Z

added 1 commit

- 4020643b - spec/arm/zynq: Set default UART on Microzed to UART1

Compare with previous version

Author: Aaron Nyholm 2024-07-28T23:22:47.677Z

resolved all threads

Author: Joel Sherrill 2024-08-05T21:39:16.950Z

approved this merge request

Author: Joel Sherrill 2024-08-05T21:42:06.793Z

added 59 commits

- 4020643b...a5370d18 - 58 commits from branch `rtems/rtos:main`
- 1fd373a2 - spec/arm/zynq: Set default UART on Microzed to UART1

Compare with previous version

3.9.2.199 164 - fix waf install

Id	164
State	merged
Merged by	Kinsey Moore
Merged at	2024-08-05T13:44:55.196Z
Assignee(s)	Amar Takhar, Karel Gardas
Created	2024-08-05T08:22:32.413Z
Updated	2024-08-10T00:39:48.917Z
Milestone	6.1
Labels	doc, rtems::build
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/164
Commit	a69269da7d58350162728a9499f1143cc1e43329

Summary

Closes #5099

Author: Karel Gardas 2024-08-05T08:24:07.763Z

mentioned in issue #5099

Author: Amar Takhar 2024-08-05T08:24:12.670Z

You were faster than me, thanks.

Author: Amar Takhar 2024-08-05T08:24:14.311Z

approved this merge request

Author: Amar Takhar 2024-08-05T08:24:19.287Z

assigned to @amar and @kgardas

Author: Chris Johns 2024-08-05T12:12:02.389Z

Please caps the commit message and explain what is fixed

Author: Karel Gardas 2024-08-05T12:12:02.389Z

Hopefully done.

Author: Karel Gardas 2024-08-05T12:08:27.531Z

added 1 commit

- 94279633 - fix waf install of make subdirectory README.md

Compare with previous version

Author: Karel Gardas 2024-08-05T12:10:37.196Z

added 1 commit

- a69269da - make: Fix waf install of README.md

Compare with previous version

Author: Karel Gardas 2024-08-05T12:12:02.409Z

resolved all threads

Author: Kinsey Moore 2024-08-05T13:44:49.250Z

approved this merge request

3.9.2.200 136 - objectgetinfo.c: Add test case for API field too high

Id	136
State	merged
Merged by	Amar Takhar
Merged at	2024-07-27T20:34:23.603Z
Reviewer(s)	Chris Johns
Created	2024-07-27T15:31:54.048Z
Updated	2024-08-10T00:39:48.820Z
Milestone	6.1
Labels	rtems::score, scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/136
Commit	807070a696a93c1dae09f527efd2a516b01d7277

Summary

objectgetinfo.c: Add test case for API field too high

This was spotted by Coverity as CID 1592935.

Closes #5076.

Author: Joel Sherrill 2024-07-27T15:31:54.253Z

requested review from @chris

Author: Chris Johns 2024-07-27T20:23:37.773Z

approved this merge request

Author: Amar Takhar 2024-07-27T20:34:18.060Z

approved this merge request

3.9.2.201 154 - bsps/stm32h7: update STM32 H7 HAL

Id	154
State	merged
Merged by	Amar Takhar
Merged at	2024-08-05T22:43:10.690Z
Created	2024-07-30T19:03:54.688Z
Updated	2024-08-10T00:39:48.698Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/154
Commit	cb78150d868f9d4eaa0a10318b99b5b1a1fa1b3f

Summary

bsps/stm32h7: update STM32 H7 HAL

This patch updates STM32 H7 HAL source files. The files are taken from two STM projects from their github.com repositories:

(i) https://github.com/STMicroelectronics/stm32h7xx_hal_driver.git

The project files are still available under BSD-3 license and the version/commit used is:

fec141ce999da655a48e1a15db83a72d564a1312

which represents Release v1.11.3 exactly.

(ii) https://github.com/STMicroelectronics/cmsis_device_h7.git

The project files are available under Apache 2.0 license. Fortunately the project does not contain NOTICE file so no need to do anything special when used in RTEMS.

The project version/commit imported is:

faccfec37f82f7a1319c21638111b0f7335de7fe

which represents Release v1.10.4 exactly.

Closes #5075

Author: Karel Gardas 2024-07-30T19:04:43.147Z

added 4 commits

- 0a9a4dd3...4c2e5ad9 - 3 commits from branch `rtems/rtos:main`
- 2aa75cd4 - bsps/stm32h7: update STM32 H7 HAL

Compare with previous version

Author: Karel Gardas 2024-08-01T07:12:11.787Z

added 2 commits

- 30ae3ef9 - 1 commit from branch `rtems/rtos:main`
- 2991b612 - bsps/stm32h7: update STM32 H7 HAL

Compare with previous version

Author: Karel Gardas 2024-08-05T07:37:16.564Z

added 16 commits

- 2991b612...44d17106 - 15 commits from branch `rtems/rtos:main`
- b6ae3184 - bsps/stm32h7: update STM32 H7 HAL

Compare with previous version

Author: Joel Sherrill 2024-08-05T22:18:30.241Z

approved this merge request

Author: Amar Takhar 2024-08-05T22:42:57.801Z

added 32 commits

- b6ae3184...7109dfde - 31 commits from branch `rtems/rtos:main`
- cb78150d - bsps/stm32h7: update STM32 H7 HAL

Compare with previous version

Author: Amar Takhar 2024-08-05T22:43:05.285Z

approved this merge request

3.9.2.202 129 - getdents: hold the IOP while performing the operation

Id	129
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-26T20:02:26.057Z
Created	2024-07-25T16:51:03.446Z
Updated	2024-08-10T00:39:48.243Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/129
Commit	b35408733853f16d5806797e64c97ad87607041e

Summary

getdents: hold the IOP while performing the operation

As all the other functions about file descriptor, `getdents` should hold the IOP of the file descriptor it is working on.

Closes #5074

Author: Chris Johns 2024-07-25T20:13:19.520Z

approved this merge request

Author: Chris Johns 2024-07-25T20:20:52.798Z

added 5 commits

- b2612ba0...07bd3871 - 4 commits from branch `rtems/rtos:main`
- 22175ec7 - getdents: hold the IOP while performing the operation

Compare with previous version

Author: Kinsey Moore 2024-07-26T03:37:00.715Z

Single letter variable names are strongly discouraged outside of simple loop indices. This should be at least “ret”.

Author: Loris Nardo 2024-07-26T03:36:12.253Z

changed this line in version 3 of the diff

Author: Loris Nardo 2024-07-26T03:36:12.436Z

added 1 commit

- db7596b9 - getdents: hold the IOP while performing the operation

Compare with previous version

Author: Loris Nardo 2024-07-26T03:36:24.122Z

reset approvals from @chris by pushing to the branch

Author: Loris Nardo 2024-07-26T03:37:00.733Z

resolved all threads

Author: Loris Nardo 2024-07-26T19:23:19.791Z

added 2 commits

- 8fd3ed26 - 1 commit from branch `rtems/rtos:main`
- 78b9f9d8 - getdents: hold the IOP while performing the operation

Compare with previous version

Author: Joel Sherrill 2024-07-26T20:01:35.715Z

approved this merge request

Author: Joel Sherrill 2024-07-26T20:01:43.194Z

added 4 commits

- 78b9f9d8...5c5ccbcc - 3 commits from branch `rtems/rtos:main`
- b3540873 - getdents: hold the IOP while performing the operation

Compare with previous version

Author: Kinsey Moore 2024-07-26T20:02:22.338Z

approved this merge request

3.9.2.203 158 - fix system fatal error caused by imperfect user input commands, e.g. “rtl sym -u”

Id	158
State	merged
Merged by	Kinsey Moore
Merged at	2024-08-02T14:24:13.960Z
Created	2024-08-02T05:59:57.484Z
Updated	2024-08-10T00:39:48.145Z
Milestone	6.1
Labels	cpukit::shell
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/158
Commit	a0eecb52bc2861656019ee14fe4ee3ae211dc134

Summary

I found that ,when i input “rtl sym -u “,the system will fatal error “fatal source: 9 (RTEMS_FATAL_SOURCE_EXCEPTION)”,and i check the code,found “rtems_rtl_parse_arg_index” have a bug.

Author: Joel Sherrill 2024-08-02T14:15:40.236Z

approved this merge request

Author: Kinsey Moore 2024-08-02T14:24:10.837Z

approved this merge request

Author: Amar Takhar 2024-08-02T19:15:02.619Z

changed the description

3.9.2.204 161 - libtests/stackchk04: Add a new testsuite for the detailed reporter

Id	161
State	merged
Merged by	Kinsey Moore
Merged at	2024-08-06T19:56:36.113Z
Created	2024-08-03T22:23:08.564Z
Updated	2024-08-10T00:39:47.998Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/161
Commit	6ab27bb54e5c056ca7ef605f79fffc7869d1ce9b

Summary

libtests/stackchk04: Add a new testsuite for the detailed reporter

Now as the default reporter is set to be a quiet reporter, we have stackchk test case for the default quiet reporter, stackchk03 for a custom user-defined reporter and stackchk04 for the detailed reporter function

Author: Joel Sherrill 2024-08-06T18:23:19.692Z

No end of line.

Author: Mohamed Hassan 2024-08-06T18:23:19.692Z

sorry, newline will be added.

Author: Mohamed Hassan 2024-08-06T18:03:23.200Z

changed this line in version 3 of the diff

Author: Joel Sherrill 2024-08-05T19:28:42.281Z

That's all I saw.

Author: Joel Sherrill 2024-08-05T19:29:08.156Z

approved this merge request

Author: Kinsey Moore 2024-08-06T18:16:32.147Z

The commit message needs to explain why the default reporter is being changed.

As far as the contents of the change, wouldn't the stackchk.scn file need to be changed since its behavior is changing with this patch? I wouldn't expect the stackchk03.scn output example to change at all since it's still defining the same custom reporter.

Author: Kinsey Moore 2024-08-06T18:16:32.147Z

Would stackchk.doc need to change as well?

Author: Joel Sherrill 2024-08-06T18:16:32.147Z

Yes. To reflect that it is using a non-default reporter if the output didn't change.

Author: Mohamed Hassan 2024-08-06T18:16:32.147Z

- Regarding the `stackhck.scn` file, yes, it needs to be updated due to the use of a more basic quiet reporter.
- The `stackchk03.scn` output was previously inaccurate because I didn't fully understand the SCN files. I have now corrected it with an example of the actual output.
- stackchk04.doc will be revised and changed.

Author: Kinsey Moore 2024-08-06T18:16:34.138Z

Doesn't this test explicitly define the detailed reporter function?

Author: Mohamed Hassan 2024-08-06T18:16:34.138Z

Alright will be changed.

Author: Kinsey Moore 2024-08-05T19:56:21.717Z

added 3 commits

- df59f342...a69269da - 2 commits from branch `rtems/rtos:main`
- adf6080a - libtests/stackchk04: Add a new testsuite for the detailed reporter

Compare with previous version

Author: Mohamed Hassan 2024-08-06T18:03:23.889Z

added 33 commits

- adf6080a...8f0c0bc3 - 32 commits from branch `rtems/rtos:main`
- 03dc0169 - libtests/stackchk04: Add a new testsuite for the detailed reporter

Compare with previous version

Author: Mohamed Hassan 2024-08-06T18:03:35.490Z

reset approvals from @joel by pushing to the branch

Author: Kinsey Moore 2024-08-06T18:22:47.311Z

approved this merge request

Author: Kinsey Moore 2024-08-06T18:23:19.716Z

resolved all threads

Author: Joel Sherrill 2024-08-06T19:48:42.089Z

Remove extra blank line

Author: Mohamed Hassan 2024-08-06T19:42:38.384Z

changed this line in version 4 of the diff

Author: Mohamed Hassan 2024-08-06T19:48:42.089Z

Done

Author: Mohamed Hassan 2024-08-06T19:42:38.648Z

added 1 commit

- 6ab27bb5 - libtests/stackchk04: Add a new testsuite for the detailed reporter

Compare with previous version

Author: Mohamed Hassan 2024-08-06T19:42:53.410Z

reset approvals from @opticron by pushing to the branch

Author: Joel Sherrill 2024-08-06T19:48:42.112Z

resolved all threads

Author: Joel Sherrill 2024-08-06T19:48:48.306Z

approved this merge request

Author: Mohamed Hassan 2024-08-06T19:51:16.751Z

marked this merge request as **ready**

Author: Kinsey Moore 2024-08-06T19:56:23.091Z

approved this merge request

3.9.2.205 137 - testsuites: Fix fstests/fsrmdirparent testcase

Id	137
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-02T21:04:24.540Z
Created	2024-07-28T06:08:19.419Z
Updated	2024-08-10T00:39:47.654Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/137
Commit	bd7e02d96b5e22487656f95cfad8c078ce20c7c5

Summary

testsuites: Fix fstests/fsrmdirparent testcase

The testcase failed because the `rmdir` call in that case had two possibilities to fail and the implementation of `rmdir` checked the other possibility first.

Closes #5071

Author: Kinsey Moore 2024-07-29T17:15:39.096Z

approved this merge request

Author: Loris Nardo 2024-08-01T05:05:14.985Z

added 3 commits

- 7e8c4165...30ae3ef9 - 2 commits from branch `rtems/rtos:main`
- 9df45eb9 - testsuites: Fix fstests/fsrmdirparent testcase

Compare with previous version

Author: Loris Nardo 2024-08-01T05:05:27.682Z

reset approvals from @opticron by pushing to the branch

Author: Kinsey Moore 2024-08-02T14:25:20.592Z

added 2 commits

- a0eecb52 - 1 commit from branch `rtems/rtos:main`
- 469c8782 - testsuites: Fix fstests/fsrmdirparent testcase

Compare with previous version

Author: Kinsey Moore 2024-08-02T14:26:34.840Z

approved this merge request

Author: Joel Sherrill 2024-08-02T20:58:26.137Z

approved this merge request

Author: Joel Sherrill 2024-08-02T20:58:37.354Z

added 8 commits

- 469c8782...4c3d5058 - 7 commits from branch `rtems/rtos:main`
- bd7e02d9 - testsuites: Fix fstests/fsrmdirparent testcase

Compare with previous version

3.9.2.206 167 - bsps: Convert README and other file to MarkDown

Id	167
State	merged
Merged by	Kinsey Moore
Merged at	2024-08-08T23:32:24.182Z
Assignee(s)	Amar Takhar
Created	2024-08-05T22:49:46.427Z
Updated	2024-08-08T23:32:27.160Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/167
Commit	5eaf65953cfc3efc9f0324d121f4d8561e358c82

Summary

bsps: Convert README and other file to MarkDown

These were missed in the last pass.

Author: Amar Takhar 2024-08-05T22:49:46.599Z

assigned to @amar

Author: Joel Sherrill 2024-08-06T18:09:35.751Z

approved this merge request

Author: Joel Sherrill 2024-08-06T18:09:44.016Z

added 6 commits

- aca9f953...8f0c0bc3 - 5 commits from branch `rtems/rtos:main`
- 93baff3a - bsps: Convert README and other file to MarkDown

Compare with previous version

Author: Joel Sherrill 2024-08-06T21:30:43.663Z

added 2 commits

- 6ab27bb5 - 1 commit from branch `rtems/rtos:main`
- 8fc69fa0 - bsps: Convert README and other file to MarkDown

Compare with previous version

Author: Kinsey Moore 2024-08-08T23:31:54.720Z

added 14 commits

- 8fc69fa0...89002394 - 13 commits from branch `rtems/rtos:main`
- 5eaf6595 - bsps: Convert README and other file to MarkDown

Compare with previous version

Author: Kinsey Moore 2024-08-08T23:32:16.905Z

approved this merge request

3.9.2.207 176 - bsp/gen5200: Add section for GDB pretty-printing

Id	176
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-08T23:20:18.195Z
Assignee(s)	Sebastian Huber
Created	2024-08-08T03:38:08.283Z
Updated	2024-08-08T23:20:23.038Z
Milestone	6.1
Labels	arch:powerpc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/176
Commit	89002394dd8d0e81b3e8d4efa863bcf838b1f484

Summary

Author: Sebastian Huber 2024-08-08T03:38:08.376Z

assigned to @sebhub

Author: Chris Johns 2024-08-08T04:56:20.748Z

Is this a case of this file being missed?

Author: Sebastian Huber 2024-08-08T04:59:54.095Z

Yes, this file was left out.

Author: Chris Johns 2024-08-08T05:04:29.730Z

approved this merge request

Author: Amar Takhar 2024-08-08T05:09:06.816Z

@the.m3chanic is there a way to know if other files were missed? Thanks.

Author: Amar Takhar 2024-08-08T05:09:11.580Z

approved this merge request

Author: Amar Takhar 2024-08-08T05:09:36.796Z

@joel this will need you.

Author: Suraj Kumar 2024-08-08T05:55:28.310Z

@sebhub Was the build breaking without this inclusion to the linker script?

When making the changes, I added this snippet to those linker scripts that needed it since it was being added automatically without issues for some Architecture/BSPs.

Author: Suraj Kumar 2024-08-08T23:19:31.407Z

@amar Not sure, like I said above I had added the snippet to those linker scripts whose builds were breaking (which was across the newer architectures), the older ones built fine for me without this inclusion.

Author: Amar Takhar 2024-08-08T23:19:31.407Z

Well, wait to see what @sebhub says and maybe we'll have to figure out how to add it to all of them if there was any kind of breakage. It's no big deal these things happen

Author: Suraj Kumar 2024-08-08T23:19:31.407Z

Yeah if the build is breaking I can run through all the architectures once more and do another sweep to make sure everything works, no worries.

Author: Sebastian Huber 2024-08-08T23:19:31.407Z

I did build all BSPs to test my system termination changes in !121. It seems this BSP was the only one with a broken linker script.

Author: Suraj Kumar 2024-08-08T23:19:31.407Z

Okay, thank you for catching this. If all other BSPs built fine then no issues, right?

Author: Amar Takhar 2024-08-08T23:19:31.407Z

Yes that is what he was implying that this was the only one that broke so that's great!

Author: Amar Takhar 2024-08-08T23:19:31.431Z

resolved all threads

Author: Joel Sherrill 2024-08-08T23:20:11.399Z

approved this merge request

3.9.2.208 165 - aio_fsync.c: Address Coverity dead code issue

Id	165
State	merged
Merged by	Amar Takhar
Merged at	2024-08-07T03:07:24.269Z
Assignee(s)	Joel Sherrill
Created	2024-08-05T14:40:04.015Z
Updated	2024-08-07T03:07:26.980Z
Milestone	6.1
Labels	api::posix
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/165
Commit	f29986391dbc9cda88ec0f90699a00857391ef7e

Summary

aio_fsync.c: Address Coverity dead code issue

Coverity CID 1616018

O_SYNC and O_DSYNC have the same value which led Coverity to note that checking for both values in if's or switches leads to dead code. The solution is to add a cpp check that they are equal and enough commentary so if they ever are not the same, there is a hint as to why the cpp check got tripped.

Closes #5100.

Author: Joel Sherrill 2024-08-05T14:40:04.301Z

assigned to @joel

Author: Chris Johns 2024-08-07T03:05:53.248Z

added 41 commits

- 6dc3bba5...8611d3d9 - 40 commits from branch `rtems/rtos:main`
- f2998639 - aio_fsync.c: Address Coverity dead code issue

Compare with previous version

Author: Chris Johns 2024-08-07T03:06:34.538Z

approved this merge request

Author: Amar Takhar 2024-08-07T03:07:19.590Z

approved this merge request

3.9.2.209 124 - bsps/aarch64: Homogenize ZynqMP ECC info structs

Id	124
State	merged
Merged by	Amar Takhar
Merged at	2024-08-07T02:53:51.867Z
Assignee(s)	Kinsey Moore
Created	2024-07-24T20:17:47.988Z
Updated	2024-08-07T02:53:53.783Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/124
Commit	8611d3d91f141a999aa876dfec4674e63b9be0aa

Summary

bsps/aarch64: Homogenize ZynqMP ECC info structs

This fixes the ECC info struct naming such that they all use the _Info suffix. This also adds comments describing which structures are paired with which event types.

Author: Kinsey Moore 2024-07-24T20:17:48.155Z

assigned to @opticron

Author: Kinsey Moore 2024-07-24T20:17:57.013Z

added 3 commits

- 7b8ec89f...3b96aadd - 2 commits from branch `rtems/rtos:main`
- 23db7d60 - bsps/aarch64: Homogenize ZynqMP ECC info structs

Compare with previous version

Author: Chris Johns 2024-08-07T02:50:26.224Z

added 72 commits

- 23db7d60...5580f70b - 71 commits from branch `rtems/rtos:main`
- 8611d3d9 - bsps/aarch64: Homogenize ZynqMP ECC info structs

Compare with previous version

Author: Chris Johns 2024-08-07T02:50:37.099Z

approved this merge request

Author: Amar Takhar 2024-08-07T02:53:46.114Z

approved this merge request

3.9.2.210 166 - bsps/m68k/uC5282/README.md: Delete timing results

Id	166
State	merged
Merged by	Amar Takhar
Merged at	2024-08-05T22:01:17.041Z
Assignee(s)	Joel Sherrill
Created	2024-08-05T15:29:38.615Z
Updated	2024-08-05T22:01:21.349Z
Milestone	6.1
Labels	arch:m68k, doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/166
Commit	7109dfdea19f8d0ebbc2532e2cc563dea9bc62b9

Summary

bsps/m68k/uC5282/README.md: Delete timing results

Closes #5096.

Author: Joel Sherrill 2024-08-05T15:29:38.794Z

assigned to @joel

Author: Amar Takhar 2024-08-05T20:40:12.283Z

approved this merge request

Author: Kinsey Moore 2024-08-05T20:51:21.841Z

approved this merge request

Author: Amar Takhar 2024-08-05T21:42:19.394Z

added 27 commits

- 250ae3dd...a5370d18 - 26 commits from branch `rtems/rtos:main`
- 4ceaad26 - bsps/m68k/uC5282/README.md: Delete timing results

Compare with previous version

Author: Joel Sherrill 2024-08-05T21:44:50.703Z

added 3 commits

- 4ceaad26...81e81d16 - 2 commits from branch `rtems/rtos:main`
- f2d655d3 - bsps/m68k/uC5282/README.md: Delete timing results

Compare with previous version

Author: Amar Takhar 2024-08-05T22:01:03.621Z

added 2 commits

- 83b380ef - 1 commit from branch `rtems/rtos:main`
- 7109dfde - bsps/m68k/uC5282/README.md: Delete timing results

Compare with previous version

3.9.2.211 153 - Convert LICENSE to LICENSE.md

Id	153
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-05T21:44:05.786Z
Assignee(s)	Amar Takhar
Created	2024-07-30T04:09:20.428Z
Updated	2024-08-05T21:44:09.124Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/153
Commit	81e81d165038f61998ca5d59c10e13666377aa03

Summary

Author: Amar Takhar 2024-07-30T04:09:20.601Z

assigned to @amar

Author: Amar Takhar 2024-07-30T04:12:22.305Z

added 1 commit

- b318719e - Convert LICENSE to LICENSE.md

Compare with previous version

Author: Kinsey Moore 2024-07-30T14:16:39.653Z

approved this merge request

Author: Joel Sherrill 2024-08-05T21:43:04.457Z

approved this merge request

Author: Joel Sherrill 2024-08-05T21:43:40.075Z

added 45 commits

- b318719e...1fd373a2 - 44 commits from branch `rtems/rtos:main`
- 81e81d16 - Convert LICENSE to LICENSE.md

Compare with previous version

3.9.2.212 157 - bsps: Fold various files into README.md

Id	157
State	merged
Merged by	Amar Takhar
Merged at	2024-08-05T21:41:49.879Z
Assignee(s)	Amar Takhar
Created	2024-07-30T23:59:22.617Z
Updated	2024-08-05T21:41:52.276Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/157
Commit	a5370d187009f2c51ee610a35cbf255b47b1e816

Summary

Author: Amar Takhar 2024-07-30T23:59:22.857Z

assigned to @amar

Author: Kinsey Moore 2024-08-02T14:53:20.817Z

added 5 commits

- ae986716...a0eecb52 - 3 commits from branch `rtems/rtos:main`
- 59631986 - bsps: Convert README to MarkDown
- 2ed392fc - bsps: Fold various files into README.md

Compare with previous version

Author: Kinsey Moore 2024-08-02T14:59:45.142Z

approved this merge request

Author: Joel Sherrill 2024-08-02T19:45:41.269Z

Networking is no longer in the tree. Rewrite to mention support in rtems-legacy and rtems-libbsd.

Author: Joel Sherrill 2024-08-02T19:45:41.463Z

created #5085 to continue this discussion

Author: Joel Sherrill 2024-08-02T19:49:32.762Z

@chris Are these “Known Problems” still around after 17 years? Can this section be deleted?

Resolve with issue.

Author: Joel Sherrill 2024-08-02T19:49:33.129Z

created #5087 to continue this discussion

Author: Joel Sherrill 2024-08-02T19:47:00.417Z

@joel merged this into gdb in 2008. Update.

Resolve with issue.

Author: Joel Sherrill 2024-08-02T19:47:00.688Z

created #5086 to continue this discussion

Author: Joel Sherrill 2024-08-02T19:57:39.095Z

It looks like a LOT of these need reviewing for being current. I think we should consider migrating those that survive the upcoming deprecation to the Users Guide. That’s where this type of information is now.

Author: Amar Takhar 2024-08-02T19:57:39.095Z

Yep this is a big reason why this move is good it will make them front and center on GitLab when people browse to directories and make them indexed by search engines it will encourage us to fix them.

Author: Joel Sherrill 2024-08-02T19:45:41.545Z

mentioned in issue #5085

Author: Joel Sherrill 2024-08-02T19:47:00.723Z

mentioned in issue #5086

Author: Joel Sherrill 2024-08-02T19:49:32.784Z

resolved all threads

Author: Joel Sherrill 2024-08-02T19:49:33.070Z

mentioned in issue #5087

Author: Joel Sherrill 2024-08-02T19:52:11.276Z

approved this merge request

Author: Amar Takhar 2024-08-02T19:57:39.115Z

resolved all threads

Author: Amar Takhar 2024-08-05T21:41:40.482Z

added 41 commits

- 2ed392fc...02068177 - 40 commits from branch `rtems/rtos:main`
- a5370d18 - bsps: Fold various files into README.md

Compare with previous version

3.9.2.213 146 - cpukit: Convert cpukit/*/README to MarkDown

Id	146
State	merged
Merged by	Amar Takhar
Merged at	2024-08-05T21:41:10.056Z
Assignee(s)	Amar Takhar
Created	2024-07-29T08:07:06.281Z
Updated	2024-08-05T21:41:13.043Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/146
Commit	020681779dc4568f2010e7925b26dd2170cb4283

Summary

cpukit: Convert cpukit/*/README to MarkDown

There are a lot of README files this is just a cursory glance to convert but will render fine online. If they don't we can make changes.

Author: Amar Takhar 2024-07-29T08:07:06.447Z

assigned to @amar

Author: Kinsey Moore 2024-07-29T13:18:28.908Z

approved this merge request

Author: Kinsey Moore 2024-07-29T16:59:31.687Z

The merge request check improperly detects a merge ~~request~~ commit where there is none

Author: Amar Takhar 2024-07-29T16:59:01.900Z

What do you mean? I see it there it's open !138

Author: Kinsey Moore 2024-07-29T16:59:01.900Z

My bad, I misread it and thought you had implemented the merge commit detector.

Author: Amar Takhar 2024-07-29T16:42:23.434Z

Look under the checks there is a box that says 'Depends on 1 merge request being merged'. Once that one is merged the 1st change in this one will go away.

Author: Kinsey Moore 2024-07-29T16:59:01.920Z

resolved all threads

Author: Amar Takhar 2024-07-30T05:02:42.454Z

added 3 commits

- 4c2e5ad9 - 1 commit from branch `rtems/rtos:main`
- d14096f6 - cpukit: Convert cpukit/*/README to MarkDown
- 25f0be6b - cpukit/libcsupport: merge TODO and CASES into README

Compare with previous version

Author: Joel Sherrill 2024-08-02T21:00:56.607Z

Review this TODO. At first glance, all issues appear to be resolved.

Author: Joel Sherrill 2024-08-02T21:00:56.944Z

created #5095 to continue this discussion

Author: Joel Sherrill 2024-08-02T21:00:56.628Z

resolved all threads

Author: Joel Sherrill 2024-08-02T21:00:56.906Z

mentioned in issue #5095

Author: Joel Sherrill 2024-08-02T21:01:06.884Z

approved this merge request

Author: Joel Sherrill 2024-08-02T21:02:08.492Z

added 11 commits

- 25f0be6b...4c3d5058 - 9 commits from branch `rtems/rtos:main`
- 9b568a98 - cpukit: Convert cpukit/*/README to MarkDown
- 7a4cc74b - cpukit/libcsupport: merge TODO and CASES into README

Compare with previous version

Author: Joel Sherrill 2024-08-02T21:04:48.429Z

added 3 commits

- bd7e02d9 - 1 commit from branch `rtems/rtos:main`
- 43f9127c - cpukit: Convert cpukit/*/README to MarkDown
- ca67cf8e - cpukit/libcsupport: merge TODO and CASES into README

Compare with previous version

Author: Amar Takhar 2024-08-05T21:41:02.442Z

added 32 commits

- ca67cf8e...fd491849 - 31 commits from branch `rtems/rtos:main`
- 02068177 - cpukit/libcsupport: merge TODO and CASES into README

Compare with previous version

3.9.2.214 150 - bsps/sh/gensh2: Fold README.EVB7045F into README.md

Id	150
State	merged
Merged by	Amar Takhar
Merged at	2024-08-05T21:40:51.669Z
Assignee(s)	Amar Takhar
Created	2024-07-30T01:06:18.762Z
Updated	2024-08-05T21:40:54.117Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/150
Commit	fd4918493472f74b2d72730b04562fb4cc15e43b

Summary

Author: Amar Takhar 2024-07-30T01:06:18.939Z

assigned to @amar

Author: Amar Takhar 2024-07-30T01:06:54.497Z

changed title from **{-B-}sps{- -}gensh2** to **{+b+}sps{+/sh/+}gensh2{+: Fold README.EVB7045F into README.md+}**

Author: Amar Takhar 2024-07-30T01:55:57.675Z

added 1 commit

- e1f837af - bsps/sh/gensh2: Fold README.EVB7045F into README.md

Compare with previous version

Author: Kinsey Moore 2024-07-30T03:27:36.590Z

approved this merge request

Author: Joel Sherrill 2024-08-02T21:12:35.597Z

approved this merge request

Author: Amar Takhar 2024-08-05T21:40:43.666Z

added 41 commits

- e1f837af...28180a1f - 40 commits from branch `rtems/rtos:main`
- fd491849 - bsps/sh/gensh2: Fold README.EVB7045F into README.md

Compare with previous version

3.9.2.215 141 - bsps: Convert README to MarkDown

Id	141
State	merged
Merged by	Amar Takhar
Merged at	2024-08-05T21:37:54.570Z
Assignee(s)	Amar Takhar
Created	2024-07-28T22:19:48.711Z
Updated	2024-08-05T21:37:56.905Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/141
Commit	28180a1fa9ac4149bebc461e7c630d7611646933

Summary

Author: Amar Takhar 2024-07-28T22:19:48.884Z

assigned to @amar

Author: Kinsey Moore 2024-07-29T15:38:58.094Z

approved this merge request

Author: Amar Takhar 2024-07-30T01:00:41.951Z

added 2 commits

- 4c2e5ad9 - 1 commit from branch `rtems/rtos:main`
- 772b306b - Merge branch rtems:main into bsps_md3

Compare with previous version

Author: Amar Takhar 2024-07-30T01:02:04.223Z

added 2 commits

- 4c2e5ad9 - 1 commit from branch `rtems/rtos:main`
- dae37ea1 - bsps: Convert README to MarkDown

Compare with previous version

Author: Joel Sherrill 2024-08-02T20:33:21.980Z

approved this merge request

Author: Joel Sherrill 2024-08-02T20:33:28.501Z

added 8 commits

- dae37ea1...1b430bdf - 7 commits from branch `rtems/rtos:main`
- d52d2caf - bsps: Convert README to MarkDown

Compare with previous version

Author: Amar Takhar 2024-08-05T21:37:47.151Z

added 33 commits

- d52d2caf...3139d381 - 32 commits from branch `rtems/rtos:main`
- 28180a1f - bsps: Convert README to MarkDown

Compare with previous version

3.9.2.216 138 - cpukit: Convert cpukit/*/README to MarkDown

Id	138
State	merged
Merged by	Amar Takhar
Merged at	2024-08-05T21:37:29.438Z
Assignee(s)	Amar Takhar
Created	2024-07-28T06:28:13.965Z
Updated	2024-08-05T21:37:32.281Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/138
Commit	3139d381372b8ce633e7e2e17bdeb70e0c3b1426

Summary

Convert cpukit/*/README to MarkDown

There are a lot of README files this is just a cursory glance to convert but will render fine online. If they don't we can make changes.

Author: Amar Takhar 2024-07-28T06:28:14.117Z

assigned to @amar

Author: Amar Takhar 2024-07-28T07:29:00.186Z

added 1 commit

- 74d87912 - cpukit: Convert cpukit/*/README to MarkDown

Compare with previous version

Author: Amar Takhar 2024-07-28T07:29:22.067Z

changed title from **Convert cpukit/*/README to MarkDown** to **{+cpukit: +}Convert cpukit/*/README to MarkDown**

Author: Kinsey Moore 2024-07-29T15:43:12.887Z

approved this merge request

Author: Amar Takhar 2024-07-29T16:41:41.150Z

mentioned in merge request !146

Author: Joel Sherrill 2024-08-02T20:06:58.366Z

approved this merge request

Author: Joel Sherrill 2024-08-02T20:07:09.240Z

added 6 commits

- 74d87912...adce3801 - 5 commits from branch `rtems/rtos:main`
- c7dae5a1 - cpukit: Convert cpukit/*/README to MarkDown

Compare with previous version

Author: Amar Takhar 2024-08-05T21:37:19.505Z

added 35 commits

- c7dae5a1...e1323612 - 34 commits from branch `rtems/rtos:main`
- 3139d381 - cpukit: Convert cpukit/*/README to MarkDown

Compare with previous version

3.9.2.217 80 - msdos: update inode during rename

Id	80
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-25T20:13:39.890Z
Assignee(s)	Loris Nardo
Created	2024-06-18T17:46:33.576Z
Updated	2024-08-05T04:49:17.741Z
Milestone	6.1
Labels	filesystem::fat
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/80
Commit	07bd3871ab2c409c836f596a529fde643e4b6210

Summary

msdos: update inode during rename

rename now actively changes the inode of the file being renamed. This change has been done to fix an issue when the file being renamed is already opened before the rename, in particular failing to update the inode number (and the two lookup tables) could cause at least two problems: 1) A new file created in the same source folder of the file being renamed may get the same fat file descriptor of the renamed file 2) An open to the renamed file opens a new fat file descriptor, thus putting out of sync the operations on the file (two distinct fat file descriptor working on the same clusters and entries)

Previously the inode was in any case changed once the file was closed.

Another possible solution would have been to separate the inode number from the lookup table, but this solution would have required much more memory because it needed to keep track of all files seen in the file system up to the last operation and not only the opened ones.

Closes #5044

Author: Amar Takhar 2024-06-18T17:50:27.657Z

assigned to @loris.nardo

Author: Amar Takhar 2024-06-18T17:50:55.069Z

marked this merge request as **draft**

Author: Amar Takhar 2024-06-18T17:51:42.024Z

Hi there @loris.nardo thank you for the submission. Your merge request has a merge commit in it please rebase your changes instead to remove the merge commit. Thank you!

Author: Loris Nardo 2024-06-18T19:06:33.663Z

added 1 commit

- 627af88d - msdos: update inode during rename

Compare with previous version

Author: Loris Nardo 2024-06-18T19:07:33.581Z

marked this merge request as **ready**

Author: Amar Takhar 2024-06-19T05:32:56.655Z

Sorry I just noticed now but can you add the ``Closes #5044``to the commit message at the bottom. This way we can see the issue that the commit is related to in the repo history. Via GitLab is gets lost in the MRs. Thanks!

Author: Loris Nardo 2024-06-19T05:32:56.655Z

I've added the line at the end of the commit message

Author: Amar Takhar 2024-06-19T05:32:56.655Z

Sorry that \ wasn't supposed to be there I thought that's how you stop it from showing up as a reference. It's just supposed to be:

- `Closes` #5044

See, unfortunately it makes it a reference, sorry for the trouble.

Author: Loris Nardo 2024-06-19T05:32:56.655Z

No problem, it is the first time I'm contributing

Author: Chris Johns 2024-07-25T18:01:17.258Z

Should there be a test case for this?

Author: Sebastian Huber 2024-07-25T18:01:17.258Z

Yes, there should be a test case for this.

Author: Loris Nardo 2024-07-25T18:01:17.258Z

I've followed the hint of @chris and added the code in the fsrename test but I'm almost sure that the test is never run on FAT file system, so I've added it in `spec/build/testsuites/fstests/grp,yml` (not committed here) and I have created a file

for the test (also not committed), however there are a lot of tests that fails (with or without the changes of the merge request), I can fix some of them but then the issue and the merge request become more broad. This is the list of test cases that fails: * Rename file with directory fails (wrong errno) * Rename directory with file fails (wrong errno) * Rename same file fails * Rename empty directory with another empty directory fails * Rename directory with ancestor directory fails (wrong errno) * Testing empty filepath fails (wrong errno) * Symlinks tests fail, but this is expected because FAT does not handle them * The tests that deal with permissions (I guess also these are expected failures)

Author: Joel Sherrill 2024-07-25T18:01:17.258Z

That's a long list of challenges. Let's see if we can narrow them down. Sorry this changes the order but hopefully this is easy to follow.

These are probably just a matter of changing the error return code that is used by dosfs and should be one line changes:

- Rename file with directory fails (wrong errno)
- Rename directory with file fails (wrong errno)
- Rename directory with ancestor directory fails (wrong errno)
- Testing empty filepath fails (wrong errno)

The following test cases should be split out to a separate executable or moved if there is another test where they could go that is already not run on the dosfs. Somehow they just get included in an executable that makes sense.

- Symlinks tests fail, but this is expected because FAT does not handle them
- The tests that deal with permissions (I guess also these are expected failures)

That leaves these which "feel" harder to fix.

- Rename same file fails
- Rename empty directory with another empty directory fails

If you can address the first two groups which seems manageable, that leaves the two last rename ones. Any idea what these two need to be checking for? It just seems like these are missing a check.

Disclaimer: I haven't worked on the dosfs.

Author: Loris Nardo 2024-07-25T18:01:17.258Z

From the last time I've written a message here, I've checked better the testcases, the issue about the failing test cases is more broad than the FAT file system, it is related to #2169, in fact the fsrename test for every filesystem fails on the same points (except for maybe symlinks and permissions which I have already moved from the fsrename testcases). All the failures are from the `_rename_r` implementation that evaluates the paths with the exclusive flag, thus failing all the testcases with EEXIST. I have almost completed a proof of concept that should pass all the testcases for the FAT filesystem except for the ones already moved and one related to the EMLINK

errno. Right now I have to think on how to check for the case where the old path is an ancestor of the new path.

Still, about the testcases if I run them with rtems-test I see that all are passed even though running them with `--log-mode=all` shows the FAIL messages, maybe I am missing some points here I am not familiar with the testsuite or the expected results

Author: Joel Sherrill 2024-07-25T18:01:17.258Z

If you have all possible cases passing except those due to #2169, perhaps moving those test cases into their own executable would allow them to be marked as XFAIL with a pointer to #2169. I am more asking than telling. I am just trying to find you an exit point on this issue and have issues filed for any remaining failures.

If #2169 is happening in your application, it still may make sense to wrap up what makes sense here and work on the rename issues under that issue.

Sometimes it is good just to fix a few things and file tickets for the next set. If you can find a clean exit on this issue. I hope that makes sense.

Author: Loris Nardo 2024-07-25T18:01:17.258Z

For our use case #2169 is not important, even if it is not aligned with POSIX it still is a well defined behavior, it is just the reason why the test fails.

I've pushed a new commit where I've made some changes to the fstests, there are still two testcases missing both inside fsrenamelimits: * One is related to `ENAMETOOLONG` which on some filesystem (RFS for instance) fails * The other is related to `LINK_MAX` which fails on some filesystem

Should I make two separate tests? Regarding the expected failures of the test cases I've placed the `set-test-state` inside `spec/build/bsps/tst.yml` is it the correct place?

Author: Joel Sherrill 2024-07-25T18:01:17.258Z

Sure create separate test for those. File issues.

@opticron @chris Is he doing the test state right?

Author: Kinsey Moore 2024-07-25T18:01:17.258Z

The test state additions look mostly correct. Each section needs a reason and should have a linked issue referenced in that reason as to why the group of tests is failing. That last one has "null" as a reason and that's especially bad.

Author: Loris Nardo 2024-07-25T18:01:17.258Z

I've checked the reason why the tests failed on the "null" group, here is the list: * jffs2fsrenamelongname and jffs2nandfsrenamelongname fails because the rename

succeed * rfsfsrenamelongname fails because the limit on the name is mostly related to the block size and in the case of the test the block size is twice the NAME_MAX, however when testing with a filename longer than the block size then the operation fails after having allocated all the blocks to try to find a suitable empty directory (which will never happen) with ENOSPC * *fsrenamemaxlinks I'm not quite sure if the test is valid, it makes an assumption that every file in a directory holds a reference to the folder itself and this counts toward the LINK_MAX value. * mdosfsfsrenamemaxlinks fails because LINK_MAX is set to 5, but FAT cannot have links to files and the number of files a directory can hold depends on how many entries have been used for long file names (rename succeed) * jffs2fsrenamemaxlinks and jffs2nandfsrenamemaxlinks fails because rename succeed * mimfsfsrenamemaxlinks fails because rename succeed, LINK_MAX applies only to linked files and not to the parent directory * mrfsfsrenamemaxlinks fails because rename succeed

Moreover for the *fsrenamemaxlinks I've only found IMFS_link that sets the errno to EMLINK. I can add this explaination to the set-test-state

Author: Amar Takhar 2024-07-25T18:01:17.258Z

FYI to the right of the resolve thread button there is another one that says 'create issue to resolve thread'. That will take the context here into the issue to have a larger discussion and fix there so this one doesn't get too far out of scope.

Author: Loris Nardo 2024-07-25T18:01:17.258Z

Thanks didn't notice the button, I was also under the impression that this was going out of scope. I can leave the merge request with just the first two commit, without touching all the fstest cases, and then once merged I can make an issue and a merge request with the changes to the fstest cases (just the third commit). Tell me what is the preferred way

Author: Joel Sherrill 2024-07-25T18:01:17.258Z

I think there is no need to undo things as long as you have filed issues for failure cases and disabled them or set the expected test state for those filesystems.

Cite the issue numbers back to me and I will close this thread and let this proceed.

Author: Loris Nardo 2024-07-25T18:01:17.258Z

@joel I've created the issues #5069, #5070 and #5071 to cover the failing test cases, it is missing only the one related to JFFS2 long file name I'm not sure how to proceed for that case, I can create another issue and say that the test case fails and write that it is probably due to JFFS2 not having an hard limit on file names but I'm not sure about it; I tried to search online for some limits of JFFS2 but I've not found any.

I've updated the reasons for the expected to fail testcases also.

Author: Kinsey Moore 2024-07-25T18:01:17.258Z

Go ahead and create another issue for JFFS2 so that it can be addressed later.

Author: Loris Nardo 2024-07-25T18:01:17.258Z

I've created issue #5073, I've also rebased the commits and updated the `tst.yml` with the new issue number

Author: Loris Nardo 2024-06-19T04:44:38.510Z

added 1 commit

- 076cffae - msdos: update inode during rename

Compare with previous version

Author: Loris Nardo 2024-06-19T05:01:07.933Z

resolved all threads

Author: Loris Nardo 2024-06-19T05:30:18.328Z

added 1 commit

- 929c85ec - msdos: update inode during rename

Compare with previous version

Author: Loris Nardo 2024-06-19T05:32:56.675Z

resolved all threads

Author: Loris Nardo 2024-06-20T18:49:45.224Z

added 1 commit

- b4bf1124 - msdos: update inode during rename

Compare with previous version

Author: Loris Nardo 2024-06-20T18:51:53.223Z

added 6 commits

- b4bf1124...e233b5c1 - 5 commits from branch `rtems/rtos:main`
- b10db102 - msdos: update inode during rename

Compare with previous version

Author: Joel Sherrill 2024-06-20T22:47:19.553Z

First, thanks for digging into this and making submissions.

You probably have noticed that the fstests are setup so that the same "test C file" is linked against support for various file systems. The rename test.c is only currently associated with tests for the mimfs (mounted IMFS) and mrfs (mounted RTEMS File System) file systems. The shared "test C files" contain cases that should work on all file systems. In this case, sym links are not supported on FAT file systems. The test C file includes some symlink test cases which really should be in a different test. There is an fssymlink so maybe it can just be moved there. If not, a new "shared test C file" needs to be created and a new set of appropriate executables. Highlights in recap:

- Shared test sets are (.c -> .o) are used with various file system specific initialisation to create file system specific executables.
- This allows exactly the same file system test cases to be used on different file systems as appropriate.
- Sometimes, a file system capability is not universally supported and those cases need to be arranged to be easy to avoid where they are known to be broken. I recall something with access or modify time is also an issue on FAT file systems.
- For this case, symlink tests should not be attempted on FAT FS tests.

I hope this helps and gives you an idea of how we quickly increased test coverage on file system implementations by reusing the test code as much as possible.

Author: Loris Nardo 2024-06-21T05:44:49.697Z

added 4 commits

- b10db102...78afce5b - 2 commits from branch `rtems/rtos:main`
- 264a7719 - msdos: update inode during rename
- 377dd643 - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...

Compare with previous version

Author: Loris Nardo 2024-06-21T05:48:04.786Z

I've moved some test functions over fssymlink and fspermission. The test of fsrename now proceed on FAT, still there are all the other failures but I think that some are common to all the filesystem as rename does not allow the destination file to exists.

If it is fine I'll resolve the thread

Author: Loris Nardo 2024-06-22T05:18:56.526Z

added 4 commits

- 377dd643...b48166b9 - 2 commits from branch `rtems/rtos:main`
- 2fba48c3 - msdos: update inode during rename
- 5016aafc - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...

Compare with previous version

Author: Loris Nardo 2024-06-22T05:22:46.655Z

added 11 commits

- 5016aafc...2089f993 - 9 commits from branch `rtems/rtos:main`
- 45add48d - msdos: update inode during rename
- da6f5b48 - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...

Compare with previous version

Author: Loris Nardo 2024-06-25T04:18:08.329Z

added 9 commits

- da6f5b48...cd4b6761 - 7 commits from branch `rtems/rtos:main`
- 6db671d5 - msdos: update inode during rename
- 8b1bcb2b - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...

Compare with previous version

Author: Loris Nardo 2024-06-26T05:07:12.094Z

added 6 commits

- 8b1bcb2b...e5b6fa02 - 4 commits from branch `rtems/rtos:main`
- 8e725f7b - msdos: update inode during rename
- 311e50cf - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...

Compare with previous version

Author: Loris Nardo 2024-06-28T04:50:21.162Z

added 3 commits

- c847f4c1 - 1 commit from branch `rtems/rtos:main`
- 5d05994e - msdos: update inode during rename
- 5eef359e - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...

Compare with previous version

Author: Loris Nardo 2024-06-28T19:01:50.181Z

added 3 commits

- bba5a7a2 - 1 commit from branch `rtems/rtos:main`
- 309b154a - msdos: update inode during rename
- 736aca02 - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...

Compare with previous version

Author: Loris Nardo 2024-07-06T04:21:21.369Z

added 9 commits

- 736aca02...89e795a4 - 6 commits from branch `rtems/rtos:main`
- 3d75cc84 - msdos: update inode during rename
- 666a4490 - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...
- f31bc350 - testsuite: Allow finer control on the fstest result

Compare with previous version

Author: Loris Nardo 2024-07-06T16:47:49.616Z

added 3 commits

- 1bcf11cb - msdos: update inode during rename
- b368a40d - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...
- 4ece3187 - testsuites: Allow finer control on the fstest result

Compare with previous version

Author: Loris Nardo 2024-07-10T04:47:58.768Z

added 13 commits

- 4ece3187...be8aa9b0 - 10 commits from branch `rtems/rtos:main`
- b0a9679a - msdos: update inode during rename

- 4857a3de - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...
- 043bbf1f - testsuites: Allow finer control on the fstest result

Compare with previous version

Author: Amar Takhar 2024-07-18T18:47:42.081Z

See #5069 and #5070

Author: Amar Takhar 2024-07-19T03:51:09.729Z

mentioned in issue #5071

Author: Loris Nardo 2024-07-19T04:06:11.483Z

added 9 commits

- 043bbf1f...5c5b4b83 - 6 commits from branch `rtems/rtos:main`
- 1cca7504 - msdos: update inode during rename
- 0f196606 - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...
- cab439a3 - testsuites: Allow finer control on the fstest result

Compare with previous version

Author: Loris Nardo 2024-07-19T04:13:57.055Z

added 1 commit

- 4c7815fb - testsuites: Allow finer control on the fstest result

Compare with previous version

Author: Loris Nardo 2024-07-20T06:57:49.838Z

added 6 commits

- 4c7815fb...7333afe0 - 3 commits from branch `rtems/rtos:main`
- 8eb21c4f - msdos: update inode during rename
- 14175d53 - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...
- 7e78d615 - testsuites: Allow finer control on the fstest result

Compare with previous version

Author: Loris Nardo 2024-07-25T16:32:53.993Z

mentioned in issue #5073

Author: Loris Nardo 2024-07-25T16:38:17.713Z

added 6 commits

- 7e78d615...43fd756f - 3 commits from branch `rtems/rtos:main`
- 96a75c74 - msdos: update inode during rename
- 6771600c - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...
- 1252b97f - testsuites: Allow finer control on the fstest result

Compare with previous version

Author: Joel Sherrill 2024-07-25T18:01:17.280Z

resolved all threads

Author: Kinsey Moore 2024-07-25T18:22:50.209Z

added 4 commits

- 1fe3d396 - 1 commit from branch `rtems/rtos:main`
- a558c96c - msdos: update inode during rename
- d7d1bec4 - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...
- 9c21a128 - testsuites: Allow finer control on the fstest result

Compare with previous version

Author: Joel Sherrill 2024-07-25T19:07:50.018Z

approved this merge request

Author: Kinsey Moore 2024-07-25T20:10:10.875Z

These added lines should be removed.

Author: Loris Nardo 2024-07-25T20:09:29.025Z

changed this line in version 24 of the diff

Author: Kinsey Moore 2024-07-25T20:10:42.245Z

These control flow statements should use braces.

Author: Kinsey Moore 2024-07-25T20:10:50.018Z

This should be a blank line.

Author: Loris Nardo 2024-07-25T20:09:30.133Z

changed this line in version 24 of the diff

Author: Kinsey Moore 2024-07-25T20:11:04.868Z

Remove this line.

Author: Loris Nardo 2024-07-25T20:09:30.592Z

changed this line in version 24 of the diff

Author: Kinsey Moore 2024-07-25T20:10:17.690Z

This needs braces.

Author: Kinsey Moore 2024-07-25T20:10:27.811Z

Braces.

Author: Kinsey Moore 2024-07-25T20:10:33.252Z

Braces, look for this elsewhere.

Author: Kinsey Moore 2024-07-25T19:23:28.378Z

requested changes

Author: Loris Nardo 2024-07-25T19:30:32.569Z

added 4 commits

- 96a75c74 - msdos: update inode during rename

- 6771600c - testsuites: Move some testcases of fsrename into fspermission and fssymlink so...
- 1252b97f - testsuites: Allow finer control on the fstest result
- 43cfe28c - Merge branch 'fat32-open-after-rename' of...

Compare with previous version

Author: Loris Nardo 2024-07-25T19:49:26.327Z

added 1 commit

- 3efd6a4f - testsuites: Allow finer control on the fstest result

Compare with previous version

Author: Loris Nardo 2024-07-25T20:09:31.352Z

added 1 commit

- 07bd3871 - testsuites: Allow finer control on the fstest result

Compare with previous version

Author: Loris Nardo 2024-07-25T20:09:45.576Z

reset approvals from @joel by pushing to the branch

Author: Loris Nardo 2024-07-25T20:11:04.895Z

resolved all threads

Author: Kinsey Moore 2024-07-25T20:12:09.279Z

approved this merge request

Author: Joel Sherrill 2024-07-25T20:12:50.771Z

approved this merge request

Author: Amar Takhar 2024-07-25T20:32:11.171Z

Great to see this merged thanks @loris.nardo and everyone else who helped!

Author: Loris Nardo 2024-08-05T04:49:17.622Z

mentioned in issue #5097

3.9.2.218 149 - cpukit: Convert files to README.md MarkDown

Id	149
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-02T21:44:08.446Z
Assignee(s)	Amar Takhar
Created	2024-07-30T00:32:45.615Z
Updated	2024-08-02T21:44:10.303Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/149
Commit	55a0356d7c3101164820aca386a984862c90a127

Summary

Author: Amar Takhar 2024-07-30T00:32:45.770Z

assigned to @amar

Author: Amar Takhar 2024-07-30T00:55:32.463Z

added 1 commit

- 7c6335e0 - cpukit: Convert files to README.md MarkDown

Compare with previous version

Author: Amar Takhar 2024-07-30T00:56:28.307Z

That is so strange I used `git mv` for the files then edited them but it left the moved files behind but recorded the move on commit? I had to 'git add' them and include them after and squash. Strange.

Author: Kinsey Moore 2024-07-30T03:28:12.796Z

approved this merge request

Author: Joel Sherrill 2024-08-02T21:43:35.254Z

approved this merge request

Author: Joel Sherrill 2024-08-02T21:43:41.882Z

added 15 commits

- 7c6335e0...9b4ac0aa - 14 commits from branch `rtems/rtos:main`
- 55a0356d - cpukit: Convert files to README.md MarkDown

Compare with previous version

3.9.2.219 155 - bsps: Fold external documentation into README.md

Id	155
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-02T21:22:01.860Z
Assignee(s)	Amar Takhar
Created	2024-07-30T19:52:06.073Z
Updated	2024-08-02T21:22:03.763Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/155
Commit	9b4ac0aa64258e2dede6451547bdf4a01db4f33f

Summary

Convert bsps/*/README to MarkDown

Some of this content is really old we will have to go through it.

Author: Amar Takhar 2024-07-30T19:52:06.323Z

assigned to @amar

Author: Amar Takhar 2024-07-30T22:15:49.208Z

changed title from **{-Convert bsps/*/README to MarkDown-}** to **{+bsps: Fold external documentation into README.md+}**

Author: Amar Takhar 2024-07-30T22:16:27.793Z

That is so annoying when you set a depend it doesn't realise what the merge order is and doesn't realise to exclude that title.

Author: Kinsey Moore 2024-08-02T14:56:50.474Z

added 4 commits

- 488505f0...a0eecb52 - 2 commits from branch `rtems/rtos:main`
- c0590754 - Convert bsps/*/README to MarkDown
- 39f24c85 - bsps: Fold external documentation into README.md

Compare with previous version

Author: Kinsey Moore 2024-08-02T14:57:37.717Z

approved this merge request

Author: Joel Sherrill 2024-08-02T21:21:27.385Z

Delete timing test results

Author: Joel Sherrill 2024-08-02T21:21:27.741Z

created #5096 to continue this discussion

Author: Joel Sherrill 2024-08-02T21:21:27.406Z

resolved all threads

Author: Joel Sherrill 2024-08-02T21:21:27.659Z

mentioned in issue #5096

Author: Joel Sherrill 2024-08-02T21:21:34.507Z

approved this merge request

Author: Joel Sherrill 2024-08-02T21:21:46.319Z

added 12 commits

- 39f24c85...cfdd4093 - 11 commits from branch `rtems/rtos:main`
- 9b4ac0aa - bsps: Fold external documentation into README.md

Compare with previous version

3.9.2.220 147 - testsuites/benchmarks/dhrystone: Convert documents to single README.md

Id	147
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-02T21:19:28.095Z
Assignee(s)	Amar Takhar
Created	2024-07-29T19:33:06.252Z
Updated	2024-08-02T21:19:30.858Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/147
Commit	cfdd40935d45baa25d65e81c05a92cc7dabe5e58

Summary

Author: Amar Takhar 2024-07-29T19:33:06.458Z

assigned to @amar

Author: Kinsey Moore 2024-07-29T21:20:00.302Z

approved this merge request

Author: Kinsey Moore 2024-07-29T21:20:15.893Z

added 2 commits

- 4c2e5ad9 - 1 commit from branch `rtems/rtos:main`
- 6a401696 - testsuites/benchmarks/dhrystone: Convert documents to single README.md

Compare with previous version

Author: Joel Sherrill 2024-08-02T21:19:05.901Z

approved this merge request

Author: Joel Sherrill 2024-08-02T21:19:14.059Z

added 13 commits

- 6a401696...52a9fdec - 12 commits from branch `rtems/rtos:main`
- cfdd4093 - testsuites/benchmarks/dhrystone: Convert documents to single README.md

Compare with previous version

3.9.2.221 152 - Convert various files to README.md MarkDown

Id	152
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-02T21:14:09.692Z
Assignee(s)	Amar Takhar
Created	2024-07-30T04:04:32.128Z
Updated	2024-08-02T21:14:11.665Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/152
Commit	52a9fdec5ca5b4632207b76bc83a60aea52ac1a5

Summary

Author: Amar Takhar 2024-07-30T04:04:32.279Z

assigned to @amar

Author: Kinsey Moore 2024-08-02T14:53:32.464Z

added 3 commits

- 90e5c641...a0eecb52 - 2 commits from branch `rtems/rtos:main`
- c32281bd - Convert various files to README.md MarkDown

Compare with previous version

Author: Kinsey Moore 2024-08-02T14:55:03.331Z

approved this merge request

Author: Joel Sherrill 2024-08-02T21:13:31.092Z

approved this merge request

Author: Joel Sherrill 2024-08-02T21:13:38.685Z

added 10 commits

- c32281bd...f16de5fa - 9 commits from branch `rtems/rtos:main`
- 52a9fdec - Convert various files to README.md MarkDown

Compare with previous version

3.9.2.222 151 - rtc: Convert STATUS and README.* to MarkDown

Id	151
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-02T21:11:39.740Z
Assignee(s)	Amar Takhar
Created	2024-07-30T02:01:17.184Z
Updated	2024-08-02T21:11:42.033Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/151
Commit	f16de5fae9ab1d336d7c9712db27d57399a4058e

Summary

Author: Amar Takhar 2024-07-30T02:01:17.361Z

assigned to @amar

Author: Kinsey Moore 2024-07-30T03:26:29.398Z

approved this merge request

Author: Joel Sherrill 2024-08-02T21:07:21.031Z

approved this merge request

Author: Joel Sherrill 2024-08-02T21:07:30.701Z

added 11 commits

- a93187f8...bd7e02d9 - 10 commits from branch `rtems/rtos:main`
- f16de5fa - rtc: Convert STATUS and README.* to MarkDown

Compare with previous version

3.9.2.223 145 - testsuites: Convert */README to MarkDown

Id	145
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-02T20:43:39.651Z
Assignee(s)	Amar Takhar
Created	2024-07-28T22:50:02.288Z
Updated	2024-08-02T20:43:42.143Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/145
Commit	4c3d505811d9cfb29ed01e9cb6c67c7443a8ae4b

Summary

Author: Amar Takhar 2024-07-28T22:50:02.537Z

assigned to @amar

Author: Kinsey Moore 2024-07-29T15:33:22.610Z

approved this merge request

Author: Amar Takhar 2024-07-30T05:02:39.252Z

added 2 commits

- 4c2e5ad9 - 1 commit from branch `rtems/rtos:main`
- a0eb4b83 - testsuites: Convert */README to MarkDown

Compare with previous version

Author: Joel Sherrill 2024-08-02T20:42:16.371Z

This license section needs to be deleted.

Author: Joel Sherrill 2024-08-02T20:42:16.716Z

created #5094 to continue this discussion

Author: Joel Sherrill 2024-08-02T20:41:59.618Z

This license section needs to be deleted.

Author: Joel Sherrill 2024-08-02T20:41:59.852Z

created #5093 to continue this discussion

Author: Joel Sherrill 2024-08-02T20:41:59.903Z

mentioned in issue #5093

Author: Joel Sherrill 2024-08-02T20:42:16.392Z

resolved all threads

Author: Joel Sherrill 2024-08-02T20:42:16.670Z

mentioned in issue #5094

Author: Joel Sherrill 2024-08-02T20:42:25.820Z

approved this merge request

Author: Joel Sherrill 2024-08-02T20:43:05.588Z

added 9 commits

- a0eb4b83...e8e099d5 - 8 commits from branch `rtems/rtos:main`
- 4c3d5058 - testsuites: Convert */README to MarkDown

Compare with previous version

3.9.2.224 144 - testsuites: Convert README to MarkDown

Id	144
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-02T20:39:41.605Z
Assignee(s)	Amar Takhar
Created	2024-07-28T22:43:19.856Z
Updated	2024-08-02T20:39:43.680Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/144
Commit	e8e099d5f8c9c02e7cfba0b8ae5e3e15766a596c

Summary

testsuites: Convert README to MarkDown

This also merges PROBLEMS and README.testdata into a single README so it displays nicely in the parent directory.

Author: Amar Takhar 2024-07-28T22:43:20.009Z

assigned to @amar

Author: Kinsey Moore 2024-07-29T15:34:28.122Z

approved this merge request

Author: Amar Takhar 2024-07-30T05:02:36.412Z

added 2 commits

- 4c2e5ad9 - 1 commit from branch `rtems/rtos:main`
- eafb2bb5 - testsuites: Convert README to MarkDown

Compare with previous version

Author: Joel Sherrill 2024-08-02T20:38:13.809Z

This list of testsuites is missing a few. Update.

Author: Joel Sherrill 2024-08-02T20:38:14.062Z

created #5091 to continue this discussion

Author: Joel Sherrill 2024-08-02T20:38:57.167Z

This is horribly out of date. The tests always run with a polled version of the console driver. Tests which require a clock tick, etc are accounted for. This is old and crusty. There is likely nothing in here to salvage.

Author: Joel Sherrill 2024-08-02T20:38:40.109Z

created #5092 to continue this discussion

Author: Amar Takhar 2024-08-02T20:38:57.167Z

Which is the whole point of this exercise to bring these docs to somewhere where they are visible and not left in random file names to die.

Author: Joel Sherrill 2024-08-02T20:38:14.113Z

mentioned in issue #5091

Author: Joel Sherrill 2024-08-02T20:38:39.772Z

resolved all threads

Author: Joel Sherrill 2024-08-02T20:38:40.026Z

mentioned in issue #5092

Author: Joel Sherrill 2024-08-02T20:38:47.086Z

approved this merge request

Author: Amar Takhar 2024-08-02T20:38:57.187Z

resolved all threads

Author: Amar Takhar 2024-08-02T20:39:17.793Z

added 8 commits

- eafb2bb5...1b430bdf - 7 commits from branch `rtems/rtos:main`
- e8e099d5 - testsuites: Convert README to MarkDown

Compare with previous version

3.9.2.225 142 - Remove ACKNOWLEDGEMENTS file.

Id	142
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-02T20:32:23.577Z
Assignee(s)	Amar Takhar
Created	2024-07-28T22:27:31.507Z
Updated	2024-08-02T20:32:25.434Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/142
Commit	1b430bdff82c2eeb5984479042ea0ceee0ee47f7

Summary

Remove ACKNOWLEDGEMENTS file.

This file is ancient and there have been many, many contributors to RTEMS that deserve equal acknowledgement.

I have opened an issue to create a new contributors section in the documentation in the docs projects:

- rtems/docs/rtems-docs#21

I have linked this version of the file there but this file should not ship with the next version of RTEMS given the GitLab migration it will not be converted to MarkDown.

Joel: Let's see if it is possible to include a short overview of the pre-1995 history and what the original "public" source contained.

Author: Amar Takhar 2024-07-28T22:27:31.691Z

assigned to @amar

Author: Kinsey Moore 2024-07-29T17:13:19.159Z

approved this merge request

Author: Amar Takhar 2024-07-30T05:02:24.901Z

added 2 commits

- 4c2e5ad9 - 1 commit from branch `rtems/rtos:main`
- ed0afd72 - Remove ACKNOWLEDGEMENTS file.

Compare with previous version

Author: Joel Sherrill 2024-08-02T20:29:46.493Z

changed the description

Author: Joel Sherrill 2024-08-02T20:31:30.354Z

changed the description

Author: Joel Sherrill 2024-08-02T20:31:35.413Z

approved this merge request

Author: Joel Sherrill 2024-08-02T20:31:42.398Z

added 7 commits

- ed0afd72...a661cb7a - 6 commits from branch `rtems/rtos:main`
- 1b430bdf - Remove ACKNOWLEDGEMENTS file.

Compare with previous version

3.9.2.226 143 - make: Convert README to MarkDown

Id	143
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-02T20:29:12.638Z
Assignee(s)	Amar Takhar
Created	2024-07-28T22:37:26.030Z
Updated	2024-08-02T20:29:14.992Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/143
Commit	a661cb7a343324e3ec18ab52fc3f55074fba9903

Summary

Author: Amar Takhar 2024-07-28T22:37:26.177Z

assigned to @amar

Author: Kinsey Moore 2024-07-29T15:37:14.550Z

approved this merge request

Author: Amar Takhar 2024-07-30T05:02:32.438Z

added 2 commits

- 4c2e5ad9 - 1 commit from branch `rtems/rtos:main`
- dfe066dd - make: Convert README to MarkDown

Compare with previous version

Author: Joel Sherrill 2024-08-02T20:28:18.403Z

This needs to not discuss RTEMS build system and stick to the application side of this.

Author: Joel Sherrill 2024-08-02T20:28:18.764Z

created #5090 to continue this discussion

Author: Joel Sherrill	2024-08-02T20:28:18.425Z

resolved all threads

Author: Joel Sherrill	2024-08-02T20:28:18.731Z

mentioned in issue #5090

Author: Joel Sherrill	2024-08-02T20:28:30.966Z

approved this merge request

Author: Joel Sherrill	2024-08-02T20:28:54.837Z

added 6 commits

- dfe066dd...a7f2cb45 - 5 commits from branch `rtems/rtos:main`
- a661cb7a - make: Convert README to MarkDown

Compare with previous version

3.9.2.227 139 - bsps: Convert bsps/*/README to MarkDown

Id	139
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-02T20:25:18.806Z
Assignee(s)	Amar Takhar
Created	2024-07-28T07:28:39.239Z
Updated	2024-08-02T20:25:22.374Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/139
Commit	a7f2cb45629f4fc40e56ad458e2bb71f146ce16e

Summary

Convert bsps/*/README to MarkDown

Some of this content is really old we will have to go through it.

Author: Amar Takhar	2024-07-28T07:28:39.394Z

assigned to @amar

Author: Kinsey Moore 2024-07-29T15:58:57.910Z

approved this merge request

Author: Amar Takhar 2024-07-30T05:01:59.912Z

added 2 commits

- 4c2e5ad9 - 1 commit from branch `rtems/rtos:main`
- 159e64e4 - Convert bsps/*/README to MarkDown

Compare with previous version

Author: Joel Sherrill 2024-08-02T20:21:18.677Z

Update this from configure to waf

Author: Joel Sherrill 2024-08-02T20:21:19.203Z

created #5089 to continue this discussion

Author: Joel Sherrill 2024-08-02T20:21:18.715Z

resolved all threads

Author: Joel Sherrill 2024-08-02T20:21:18.957Z

mentioned in issue #5089

Author: Joel Sherrill 2024-08-02T20:21:33.842Z

approved this merge request

Author: Joel Sherrill 2024-08-02T20:21:42.886Z

added 5 commits

- 159e64e4...adce3801 - 4 commits from branch `rtems/rtos:main`
- a7f2cb45 - Convert bsps/*/README to MarkDown

Compare with previous version

3.9.2.228 156 - Revert “objectgetinfo.c: Add test case for API field too high”

Id	156
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-30T23:03:33.055Z
Assignee(s)	Joel Sherrill
Created	2024-07-30T20:34:07.502Z
Updated	2024-08-02T19:20:47.726Z
Milestone	6.1
Labels	rtems::testing, scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/156
Commit	30ae3ef9dae36d6bfce650567af55000ca018650

Summary

Revert “objectgetinfo.c: Add test case for API field too high”

This reverts commit 807070a696a93c1dae09f527efd2a516b01d7277

The Coverity CID cited was determined to be a false positive.

Author: Joel Sherrill 2024-07-30T20:34:07.671Z

assigned to @joel

Author: Amar Takhar 2024-07-30T20:40:40.547Z

approved this merge request

Author: Kinsey Moore 2024-07-30T23:03:29.217Z

approved this merge request

3.9.2.229 140 - bsps: Convert README to MarkDown

Id	140
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-29T19:35:52.630Z
Assignee(s)	Amar Takhar
Created	2024-07-28T20:40:23.423Z
Updated	2024-07-29T19:35:55.278Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/140
Commit	4c2e5ad988b94d7f85f762d76d3c1bea709b812b

Summary

Author: Amar Takhar 2024-07-28T20:40:23.577Z

assigned to @amar

Author: Joel Sherrill 2024-07-28T20:58:28.150Z

Delete the timing test results. The dedicated files with this in it were deleted already. The times were impossible to keep up to date.

Author: Amar Takhar 2024-07-28T20:58:28.396Z

created #5077 to continue this discussion

Author: Joel Sherrill 2024-07-28T20:58:28.551Z

Embedded Brains has given permission to go to 2-BSD. This license notice got missed.

Author: Amar Takhar 2024-07-28T20:58:28.717Z

created #5077 to continue this discussion

Author: Joel Sherrill 2024-07-28T20:58:28.861Z

Is this file in the license collection? I have a recollection of an issue related to this

Author: Amar Takhar 2024-07-28T20:58:28.880Z

created #5077 to continue this discussion

Author: Joel Sherrill 2024-07-28T20:58:29.020Z

Clearly this reference to the old build system needs deleting.

Author: Amar Takhar 2024-07-28T20:58:29.180Z

created #5077 to continue this discussion

Author: Joel Sherrill 2024-07-28T20:58:29.315Z

Delete per rationale given earlier.

Author: Amar Takhar 2024-07-28T20:58:29.333Z

created #5077 to continue this discussion

Author: Joel Sherrill 2024-07-28T20:58:29.472Z

Delete timing tests.

Author: Amar Takhar 2024-07-28T20:58:29.625Z

created #5077 to continue this discussion

Author: Joel Sherrill 2024-07-28T20:58:02.222Z

This review is incomplete. I did it using my phone in moving vehicle. I am not sure all comments posted and I didn't get to the bottom

Author: Amar Takhar 2024-07-28T20:58:02.222Z

So I am converting these to MarkDown you're free to edit them after but I'm not doing any content modifications, sorry it's way too much to do at once and the markdown.

As per @joel via chat I'm resolving all of these with an issue we can deal with them later.

Author: Amar Takhar 2024-07-28T20:58:28.423Z

mentioned in issue #5077

Author: Kinsey Moore 2024-07-29T17:09:04.029Z

This has mismatched quotes.

Author: Amar Takhar 2024-07-29T17:08:25.401Z

changed this line in version 2 of the diff

Author: Amar Takhar 2024-07-29T17:09:04.029Z

I fixed this but I'm not policing content it's too much to do at once. Plus there are going to be some rendering issues after, anyway.

Author: Kinsey Moore 2024-07-29T17:09:07.578Z

Mismatched quotes.

Author: Amar Takhar 2024-07-29T17:08:26.168Z

changed this line in version 2 of the diff

Author: Amar Takhar 2024-07-29T17:09:07.578Z

I fixed this but I'm not policing content it's too much to do at once. Plus there are going to be some rendering issues after, anyway.

Author: Kinsey Moore 2024-07-29T15:42:25.612Z

approved this merge request

Author: Amar Takhar 2024-07-29T17:08:26.391Z

added 1 commit

- 4c2e5ad9 - bsps: Convert README to MarkDown

Compare with previous version

Author: Amar Takhar 2024-07-29T17:08:37.646Z

reset approvals from @opticron by pushing to the branch

Author: Amar Takhar 2024-07-29T17:09:07.598Z

resolved all threads

Author: Kinsey Moore 2024-07-29T17:09:39.340Z

approved this merge request

Author: Joel Sherrill 2024-07-29T19:35:48.082Z

approved this merge request

3.9.2.230 134 - Move old devel links to GitLab

Id	134
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-26T21:48:10.052Z
Assignee(s)	Amar Takhar
Created	2024-07-26T08:19:28.855Z
Updated	2024-07-26T21:48:12.035Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/134
Commit	0bd9737e582eb2d2a9fcb495a2da98fb12025192

Summary

Author: Amar Takhar 2024-07-26T08:19:29.001Z

assigned to @amar

Author: Amar Takhar 2024-07-26T08:23:35.722Z

mentioned in merge request !135

Author: Kinsey Moore 2024-07-26T13:37:19.037Z

approved this merge request

Author: Amar Takhar 2024-07-26T20:34:30.186Z

added 7 commits

- aa592226...2ba94118 - 6 commits from branch `rtems/rtos:main`
- 983692c8 - Move old devel links to GitLab

Compare with previous version

Author: Joel Sherrill 2024-07-26T20:49:11.179Z

Remove this comment. Per functions are clearly enabled in the arguments. That is an 8 year old ticket and is closed.

Author: Amar Takhar 2024-07-26T20:49:11.179Z

I removed it but it really should have been it's own MR not in the scope of what I'm trying to do here.

Author: Joel Sherrill 2024-07-26T20:49:27.362Z

This is closed. Can the comment be “See .. for explanation”?

Sorry to push clarifying comments while updating URLs but when I see a comment like that, I expect an open issue – not a link to a long closed issue that explains what this is doing. :(

Author: Amar Takhar 2024-07-26T20:48:52.505Z

changed this line in version 3 of the diff

Author: Amar Takhar 2024-07-26T20:49:27.362Z

I fixed it but it really should have been it’s own MR not in the scope of what I’m trying to do here.

Author: Joel Sherrill 2024-07-26T21:48:01.220Z

We probably need to have some rules on linking to issues in the code. FIXME types are probably ok but when an issue is closed and the comment links to it with no clarifying text, then it looks like an open issue instead of a reference for details. Not your problem but pretty clear we need some guidance in the SW Engineering Guide.

Author: Amar Takhar 2024-07-26T21:48:01.220Z

Should open an issue for this in rtems-docs so it doesn’t get forgotten. There is a ton of inconsistency everywhere about this. I wouldn’t expect an open issue because there is a 0% chance anyone is going back to fix any references once it’s been created.

Author: Joel Sherrill 2024-07-26T21:48:01.220Z

Issue 23 filed in rtems-docs

Author: Amar Takhar 2024-07-26T20:48:52.691Z

added 1 commit

- 0fb31b6e - Move old devel links to GitLab

Compare with previous version

Author: Amar Takhar 2024-07-26T20:49:08.059Z

reset approvals from @opticron by pushing to the branch

Author: Amar Takhar 2024-07-26T20:49:27.395Z

resolved all threads

Author: Kinsey Moore 2024-07-26T21:37:47.897Z

added 7 commits

- 0fb31b6e...2ba94118 - 6 commits from branch `rtems/rtos:main`
- 0bd9737e - Move old devel links to GitLab

Compare with previous version

Author: Kinsey Moore 2024-07-26T21:38:49.387Z

approved this merge request

Author: Joel Sherrill 2024-07-26T21:48:01.246Z

resolved all threads

Author: Joel Sherrill 2024-07-26T21:48:05.537Z

approved this merge request

3.9.2.231 131 - Remove MAINTAINERS file

Id	131
State	merged
Merged by	Chris Johns
Merged at	2024-07-26T20:23:31.578Z
Assignee(s)	Amar Takhar
Created	2024-07-26T01:56:19.055Z
Updated	2024-07-26T20:23:33.602Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/131
Commit	2ba94118a0867a1cae543af7d85603d8074cd6c6

Summary

Remove MAINTAINERS file

This file is now obsolete now that we have moved to GitLab. A ticket has been opened in ` rtems/docs/rtems-docs#21 <https://gitlab.rtems.org/amar/rtems/-/merge_requests/new?

merge_request%5Bsource_branch%5D=maintainer>`_ to discuss adding a contributors section.

GitLab lists who the 'Code Owners' are on top of every file in the web source browser this is the canonical way to find out who maintainers are of those files or directories.

Even with knowing who the maintainers are the best way to figure out who is looking after what is to open an issue or an MR. This way we can keep a group level of maintainership over the code base and have CODEOWNERS enforce approvals before merging.

Author: Amar Takhar 2024-07-26T01:56:19.238Z

assigned to @amar

Author: Kinsey Moore 2024-07-26T20:16:35.043Z

Should we point people looking for this information to the locations where GitLab stores it?

Author: Amar Takhar 2024-07-26T20:16:35.043Z

It's funny you bring that up I was going to point it out but I deliberately left it out with the 3rd paragraph as an explanation. That list while it's there really doesn't tell anyone much. What if we're all busy?? Everyone on GitLab is invited to comment on MRs and issues not just a maintainer.

I don't think specifically targeting developers is the way to do it anymore. But..that's just my opinion if you think we should add it then we should have the caveat above. Either way it's going to be "open an MR/Issue" and maybe they can @ someone in the description?

Author: Kinsey Moore 2024-07-26T20:16:35.043Z

I was thinking more as a way to convert those that typically hunt for the MAINTAINERS file to the GitLab way of doing things.

Author: Amar Takhar 2024-07-26T20:16:35.043Z

Is there anywhere to put it other than in a MAINTAINERS file?

As devops tools have changed they're no longer relevant. Approvers aren't always maintainers just the person who knows the area / code the best the maintainer can be an entirely different person so who do you contact? Best way is to open an issue or MR. That's why I don't think it's worth it to have any mention of the concept anymore.

I think anyone seeking a MAINTAINERS file will be able to sort themselves out because not every project has had one, anyway.

Author: Joel Sherrill 2024-07-26T20:16:35.043Z

Like @opticron, I wonder if a pointer can go here. But OTOH, it seems like someone who got this far should be able to fend for themselves. We had this because GNU projects did this. It doesn't make much sense any longer.

I'd be ok removing it.

Author: Amar Takhar 2024-07-26T18:19:12.272Z

mentioned in commit amar/rtems-docs@39ef166585c7d867bf710abfe85c2e93d3b4e939

Author: Amar Takhar 2024-07-26T18:19:32.371Z

mentioned in merge request rtems/docs/rtems-docs!34

Author: Joel Sherrill 2024-07-26T20:16:26.040Z

Executive decision reached. I haven't use the power of BDFL in a long time. :)

Author: Joel Sherrill 2024-07-26T20:16:35.061Z

resolved all threads

Author: Joel Sherrill 2024-07-26T20:16:39.731Z

approved this merge request

Author: Chris Johns 2024-07-26T20:21:57.967Z

approved this merge request

Author: Chris Johns 2024-07-26T20:23:01.740Z

added 6 commits

- 2afa5527...9dce0426 - 5 commits from branch `rtems/rtos:main`
- 2ba94118 - Remove MAINTAINERS file

Compare with previous version

3.9.2.232 130 - Remove INSTALL file.

Id	130
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-26T20:17:58.882Z
Assignee(s)	Amar Takhar
Created	2024-07-26T01:42:54.630Z
Updated	2024-07-26T20:18:00.566Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/130
Commit	9dce0426d42adac532a3610e899e9d6665755d77

Summary

Remove INSTALL file.

All this does is points to the README. The README points to the docs website as it should.

INSTALL files are falling out of favour since sites show README.* by default over an INSTALL file.

Author: Amar Takhar 2024-07-26T01:42:54.776Z

assigned to @amar

Author: Kinsey Moore 2024-07-26T02:35:55.889Z

approved this merge request

Author: Joel Sherrill 2024-07-26T20:17:44.741Z

added 5 commits

- 7500e63e...b3540873 - 4 commits from branch `rtems/rtos:main`
- 9dce0426 - Remove INSTALL file.

Compare with previous version

Author: Joel Sherrill 2024-07-26T20:17:55.505Z

approved this merge request

3.9.2.233 135 - Remove errant URL.

Id	135
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-26T19:54:19.241Z
Assignee(s)	Amar Takhar
Created	2024-07-26T08:23:31.263Z
Updated	2024-07-26T19:54:20.877Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/135
Commit	5c5ccbcc575b90d73f2cd1d6f6f527a73a8b54be

Summary

Remove errant URL.

Not sure what this is doing here found it during !134 Since there is nowhere to point it to remove it.

Author: Amar Takhar 2024-07-26T08:23:31.765Z

assigned to @amar

Author: Amar Takhar 2024-07-26T08:24:10.017Z

@joel you created this file was there any plan with that URL?

Author: Kinsey Moore 2024-07-26T13:36:38.698Z

approved this merge request

Author: Joel Sherrill 2024-07-26T19:53:47.647Z

I wrote this and have no idea how that URL ended up there.

Author: Joel Sherrill 2024-07-26T19:53:54.614Z

approved this merge request

Author: Joel Sherrill 2024-07-26T19:54:06.025Z

added 3 commits

- 6ab48639...84b56d69 - 2 commits from branch `rtems/rtos:main`

- 5c5ccbcc - Remove errant URL.

Compare with previous version

3.9.2.234 132 - Remove Makefile.maint

Id	132
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-26T19:51:44.831Z
Assignee(s)	Amar Takhar
Created	2024-07-26T02:41:52.659Z
Updated	2024-07-26T19:51:46.470Z
Milestone	6.1
Labels	doc, rtems::build
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/132
Commit	84b56d69daab328b178de892b11ffa5793835f56

Summary

Remove Makefile.maint

This file has not been relevant in at least 8 years and even then only for texinfo? The file calls itself Experimental and relies on CVS. It was used for cutting old RTEMS releases.

Author: Amar Takhar 2024-07-26T02:41:52.833Z

assigned to @amar

Author: Kinsey Moore 2024-07-26T13:42:22.430Z

Wow, this file is crusty.

Author: Kinsey Moore 2024-07-26T13:42:25.149Z

approved this merge request

Author: Joel Sherrill 2024-07-26T19:49:10.972Z

approved this merge request

Author: Joel Sherrill 2024-07-26T19:49:18.971Z

added 2 commits

- de8452e3 - 1 commit from branch `rtems/rtos:main`
- 84b56d69 - Remove Makefile.maint

Compare with previous version

3.9.2.235 133 - Update Doxygen to point to GitLab.

Id	133
State	merged
Merged by	Joel Sherrill
Merged at	2024-07-26T19:48:30.530Z
Assignee(s)	Amar Takhar
Created	2024-07-26T08:07:05.661Z
Updated	2024-07-26T19:48:32.263Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/133
Commit	de8452e32cd1e2216579aed525c107e80251f9b7

Summary

Update Doxygen to point to GitLab.

These are git.rtems.org links.

Author: Amar Takhar 2024-07-26T08:07:05.823Z

assigned to @amar

Author: Kinsey Moore 2024-07-26T13:38:16.723Z

approved this merge request

Author: Amar Takhar 2024-07-26T18:26:46.972Z

added 1 commit

- de8452e3 - Update Doxygen to point to GitLab.

Compare with previous version

Author: Amar Takhar 2024-07-26T18:27:02.447Z

reset approvals from @opticron by pushing to the branch

Author: Kinsey Moore 2024-07-26T19:36:59.486Z

approved this merge request

Author: Joel Sherrill 2024-07-26T19:48:26.504Z

approved this merge request

3.9.2.236 125 - testsuite/libiofdopen: Add missing spec file

Id	125
State	merged
Merged by	Amar Takhar
Merged at	2024-07-25T04:31:18.907Z
Assignee(s)	Chris Johns
Created	2024-07-25T02:35:21.564Z
Updated	2024-07-25T04:31:21.119Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/125
Commit	43fd756f6d4432273ae785b89b9ebbd5dea86449

The MR !117 did not have the spec file. This MR adds the missing file.

Sorry about the breakage

Author: Chris Johns 2024-07-25T02:35:21.741Z

assigned to @chris

Author: Amar Takhar 2024-07-25T02:42:42.779Z

approved this merge request

Author: Joel Sherrill 2024-07-25T04:21:23.391Z

approved this merge request

3.9.2.237 117 - libcsupport/libio: Add rtems_libio_count_open_iops to return open descriptors

Id	117
State	merged
Merged by	Amar Takhar
Merged at	2024-07-24T03:23:32.592Z
Assignee(s)	Chris Johns
Created	2024-07-16T06:15:23.364Z
Updated	2024-07-25T02:35:24.992Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/117
Commit	e58ff8984c2082a627da486ae784c8af9ab52f4c

Summary

Add `rtems_libio_count_open_iops` to return open descriptors. This call moved code that accesses internal structs from EPICS's `iocStats` module.

Close #5063

Author: Chris Johns 2024-07-16T06:15:23.522Z

assigned to @chris

Author: Gedare Bloom 2024-07-18T02:36:47.812Z

The name seems wrong/confusing, as there are several `rtems_libio_iop_xxx( *iop )` functions that manipulate iops. Perhaps `rtems_libio_count_open_iops` or `rtems_libio_count_open_descriptors`?

Author: Chris Johns 2024-07-18T02:36:47.812Z

Yeah sure, please choose one?

Author: Chris Johns 2024-07-18T02:36:47.812Z

I will change to `rtems_libio_count_open_iops`

Author: Chris Johns 2024-07-18T03:23:17.218Z

changed this line in version 2 of the diff

Author: Gedare Bloom 2024-07-18T02:33:37.236Z

Return type is questionable: `size_t` should only be used for something in the units of bytes.

Author: Chris Johns 2024-07-18T02:33:37.236Z

The reference here https://en.cppreference.com/w/cpp/types/size_t says it is:

> the maximum size of a theoretically possible object of any type (including array)
>
> so I am not sure your comment about bytes is right? Ah it says "size".
>
> So what type would you prefer be used?

Author: Chris Johns 2024-07-18T02:33:37.236Z

I will use `int`

Author: Chris Johns 2024-07-18T03:23:17.823Z

changed this line in version 2 of the diff

Author: Gedare Bloom 2024-07-18T02:40:01.964Z

ditto

Author: Chris Johns 2024-07-18T02:40:01.964Z

Is this about the `size_t`? I suppose it makes sense but the list in the MR overview makes it harder to track.

Author: Chris Johns 2024-07-18T02:40:01.964Z

Changed to `int`.

Author: Chris Johns 2024-07-18T03:23:18.545Z

changed this line in version 2 of the diff

Author: Gedare Bloom 2024-07-18T02:39:45.571Z

ditto

Author: Chris Johns 2024-07-18T02:39:45.571Z

Sorry, what is this in relation to?

Author: Chris Johns 2024-07-18T02:39:45.571Z

Fixed.

Author: Chris Johns 2024-07-18T03:23:19.269Z

changed this line in version 2 of the diff

Author: Gedare Bloom 2024-07-18T02:39:28.893Z

avoid unnecessary `printf` in tests

Author: Chris Johns 2024-07-18T02:39:28.893Z

I was not aware of this. It can be removed.

BSPs can have different numbers of `fd` open.

Author: Chris Johns 2024-07-18T02:39:28.893Z

Print removed.

Author: Chris Johns 2024-07-18T03:23:19.856Z

changed this line in version 2 of the diff

Author: Gedare Bloom 2024-07-17T20:46:21.427Z

requested changes

Author: Chris Johns 2024-07-18T02:40:01.991Z

resolved all threads

Author: Chris Johns 2024-07-18T02:41:20.636Z

changed title from **libcsupport/libio: Add rtems_libio_{-iop_descriptors_open-} to return open descriptors** to **libcsupport/libio: Add rtems_libio_{+count_open_iops+} to return open descriptors**

Author: Chris Johns 2024-07-18T02:41:20.660Z

changed the description

Author: Chris Johns 2024-07-18T03:23:20.076Z

added 6 commits

- 36c014a1...5c5b4b83 - 5 commits from branch `rtems/rtos:main`
- 5a685bf6 - libcsupport/libio: Add rtems_libio_count_open_iops to return open descriptors

Compare with previous version

Author: Chris Johns 2024-07-18T03:24:48.282Z

added 1 commit

- e95201a2 - libcsupport/libio: Add rtems_libio_count_open_iops to return open descriptors

Compare with previous version

Author: Chris Johns 2024-07-18T03:26:12.203Z

added 1 commit

- 243418c9 - libcsupport/libio: Add rtems_libio_count_open_iops to return open descriptors

Compare with previous version

Author: Gedare Bloom 2024-07-24T03:18:26.234Z

approved this merge request

Author: Amar Takhar 2024-07-24T03:23:10.395Z

added 4 commits

- 243418c9...7333afe0 - 3 commits from branch `rtems/rtos:main`
- e58ff898 - libcsupport/libio: Add rtems_libio_count_open_iops to return open descriptors

Compare with previous version

Author: Amar Takhar 2024-07-24T03:23:27.611Z

approved this merge request

Author: Chris Johns 2024-07-25T02:35:24.837Z

mentioned in merge request !125

3.9.2.238 116 - libcsupport/getrusage: Return task and idle time using getrusage

Id	116
State	merged
Merged by	Amar Takhar
Merged at	2024-07-18T00:11:22.458Z
Assignee(s)	Chris Johns
Created	2024-07-16T05:42:13.766Z
Updated	2024-07-18T04:57:24.741Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/116
Commit	cc034e7d2ffe330b2a45e5ca65254fea108960a8

Return task and idle time using `getrusage`. This has been tested with an updated `iocStats`.

Add support for `RUSAGE_THREAD` if the user builds with the `_GNU_SOURCE` macro defined.

Close #5062

Author: Chris Johns 2024-07-16T05:42:13.949Z

assigned to @chris

Author: Chris Johns 2024-07-16T05:42:29.179Z

added 2 commits

- 26b95e14 - 1 commit from branch `rtems/rtos:main`
- f0bb64e2 - libcsupport/getrusage: Return task and idle time using getrusage

Compare with previous version

Author: Gedare Bloom 2024-07-17T20:33:27.624Z

Please submit a doc MR

Author: Gedare Bloom 2024-07-17T20:33:30.287Z

approved this merge request

Author: Amar Takhar 2024-07-18T00:11:12.431Z

added 4 commits

- f0bb64e2...174b69af - 3 commits from branch `rtems/rtos:main`
- cc034e7d - libcsupport/getrusage: Return task and idle time using getrusage

Compare with previous version

Author: Amar Takhar 2024-07-18T00:11:19.268Z

approved this merge request

Author: Chris Johns 2024-07-18T04:57:24.717Z

mentioned in merge request rtems/docs/rtems-docs!31

3.9.2.239 114 - cpukit/shell: Account for tick rate in timeouts

Id	114
State	merged
Merged by	Amar Takhar
Merged at	2024-07-18T00:10:33.042Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Chris Johns
Created	2024-07-12T02:38:47.636Z
Updated	2024-07-18T00:10:35.196Z
Milestone	6.1
Labels	cpukit, cpukit::misc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/114
Commit	174b69afd6f2e2220620ffd572025ca2291cf533

Summary

cpukit/shell: Account for tick rate in timeouts

On systems that don't provide a proper terminal or have broken window size detection, the RTEMS shell can take a long time execute commands if the kernel tick interval is longer than 1ms. This updates the shell window size retrieval timeout code to account for the kernel tick interval bringing the experienced timeout from 12.5ms to 1.25ms when using the default kernel tick interval (10ms).

Author: Kinsey Moore 2024-07-12T02:38:48.237Z

assigned to @opticron

Author: Chris Johns 2024-07-12T13:04:30.457Z

I would move this into a static function so the logic can be shared between here and below.

Does the time cal need a +1 if the time is less than the tick period?

Author: Kinsey Moore 2024-07-12T13:04:30.457Z

Sounds appropriate, I'll make sure the timeout is at minimum 1 tick.

Author: Kinsey Moore 2024-07-12T13:04:25.009Z

changed this line in version 2 of the diff

Author: Chris Johns 2024-07-12T19:42:13.646Z

I think adding `TERM_SIZE_DETECT` or something like that would be a good idea. If you do not want to do this I can add an MR after.

Author: Kinsey Moore 2024-07-12T19:42:13.646Z

It has been added in the second patch along with functionality to automatically disable window size retrieval on failure.

Author: Chris Johns 2024-07-12T03:36:20.255Z

requested changes

Author: Kinsey Moore 2024-07-12T13:04:25.266Z

added 1 commit

- 67865228 - cpukit/shell: Account for tick rate in timeouts

Compare with previous version

Author: Kinsey Moore 2024-07-12T13:04:30.478Z

resolved all threads

Author: Kinsey Moore 2024-07-12T13:32:51.133Z

added 1 commit

- d319b25e - cpukit/shell: Add window size retrieval control

Compare with previous version

Author: Kinsey Moore 2024-07-12T19:42:13.665Z

resolved all threads

Author: Kinsey Moore 2024-07-12T19:42:46.924Z

requested review from @chris

Author: Gedare Bloom 2024-07-17T20:25:19.355Z

approved this merge request

Author: Amar Takhar 2024-07-18T00:10:19.977Z

added 3 commits

- 1dd384bb - 1 commit from branch `rtems/rtos:main`
- 8eb4932b - cpukit/shell: Account for tick rate in timeouts
- 174b69af - cpukit/shell: Add window size retrieval control

Compare with previous version

Author: Amar Takhar 2024-07-18T00:10:28.972Z

approved this merge request

3.9.2.240 112 - x: Remove junk file

Id	112
State	merged
Merged by	Chris Johns
Merged at	2024-07-09T20:47:23.461Z
Assignee(s)	Joel Sherrill
Created	2024-07-09T20:40:48.058Z
Updated	2024-07-09T20:47:25.423Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/112
Commit	34485ccd92b793476f381a26a7e91661e60c9e65

This file never should have been pushed.

Author: Joel Sherrill 2024-07-09T20:40:48.228Z

assigned to @joel

Author: Joel Sherrill 2024-07-09T20:42:09.078Z

added 6 commits

- 7e30810d...6d65f2cf - 5 commits from branch `rtems/rtos:main`
- 34485ccd - x: Remove junk file

Compare with previous version

Author: Gedare Bloom 2024-07-09T20:46:10.069Z

approved this merge request

Author: Chris Johns 2024-07-09T20:47:19.300Z

approved this merge request

3.9.2.241 99 - validation: Fix bad thread dispatch validation

Id	99
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-05T21:16:53.731Z
Assignee(s)	Sebastian Huber
Created	2024-06-28T05:49:47.783Z
Updated	2024-07-05T21:16:56.054Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/99
Commit	89e795a42a534a7ddae702a2fb0e1a64a6e7ae7f

Summary

validation: Fix bad thread dispatch validation

Where the robust thread dispatching is disabled, the ISRDisabledOnDemandThreadDispatch-Task() has to exit.

Update #3716.

Author: Sebastian Huber 2024-06-28T05:49:47.897Z

assigned to @sebhub

Author: Sebastian Huber 2024-06-28T05:52:28.724Z

added 1 commit

- df111abc - validation: Fix bad thread dispatch validation

Compare with previous version

Author: Sebastian Huber 2024-06-28T05:54:30.401Z

changed the description

Author: Gedare Bloom 2024-07-05T20:58:06.035Z

approved this merge request

Author: Kinsey Moore 2024-07-05T21:16:07.331Z

added 7 commits

- df111abc...58748a3a - 6 commits from branch `rtems/rtos:main`
- 89e795a4 - validation: Fix bad thread dispatch validation

Compare with previous version

Author: Kinsey Moore 2024-07-05T21:16:49.484Z

approved this merge request

3.9.2.242 64 - dev/pl011: Fix incorrect macro definition

Id	64
State	merged
Merged by	Amar Takhar
Merged at	2024-06-13T19:54:54.912Z
Created	2024-06-07T14:44:14.282Z
Updated	2024-07-05T03:57:32.011Z
Milestone	6.1
Labels	library
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/64
Commit	2d5a85f7d270aa669c922ab08def9287aaf80c38

I checked the pl011 datasheet and it is a bug. #5036

Author: Ning Yang 2024-06-10T03:28:08.665Z

mentioned in merge request !47

Author: Gedare Bloom 2024-06-11T13:46:59.349Z

Please open an Issue for this, and close it in the commit message.

Author: Ning Yang 2024-06-11T13:46:59.349Z

Done.

Author: Gedare Bloom 2024-06-10T17:41:29.128Z

This bug exists on release branches.

Author: Ning Yang 2024-06-11T13:45:59.107Z

added 1 commit

- 2f3ec98b - dev/pl011: Fix incorrect macro definition

Compare with previous version

Author: Ning Yang 2024-06-11T13:46:35.880Z

changed the description

Author: Ning Yang 2024-06-11T13:46:59.365Z

resolved all threads

Author: Kinsey Moore 2024-06-11T14:12:22.256Z

added 35 commits

- 2f3ec98b...28c7475b - 34 commits from branch `rtems/rtos:main`
- 53e61255 - dev/pl011: Fix incorrect macro definition

Compare with previous version

Author: Kinsey Moore 2024-06-12T22:25:28.587Z

added 4 commits

- 53e61255...20939b21 - 3 commits from branch `rtems/rtos:main`
- a8517c7c - dev/pl011: Fix incorrect macro definition

Compare with previous version

Author: Kinsey Moore 2024-06-12T22:33:12.297Z

approved this merge request

Author: Kinsey Moore 2024-06-13T12:41:52.902Z

added 2 commits

- 1d997f33 - 1 commit from branch `rtems/rtos:main`
- 3cfeed72 - dev/pl011: Fix incorrect macro definition

Compare with previous version

Author: Amar Takhar 2024-06-13T19:54:22.628Z

added 8 commits

- 3cfeed72...d773df1d - 7 commits from branch `rtems/rtos:main`
- 2d5a85f7 - dev/pl011: Fix incorrect macro definition

Compare with previous version

Author: Amar Takhar 2024-06-13T19:54:45.390Z

approved this merge request

Author: Ning Yang 2024-07-05T03:57:31.837Z

3.9.2.243 29 - bsps/aarch64/a72: Avoid use of reserved INTIDs

Id	29
State	merged
Merged by	Chris Johns
Merged at	2024-05-21T23:26:57.217Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Sebastian Huber
Created	2024-05-09T14:06:10.190Z
Updated	2024-07-05T03:57:31.484Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/29
Commit	f0944277080c62f8a3ff1d5660b4c3e775e9be9c

Summary

bsps/aarch64/a72: Avoid use of reserved INTIDs

Interrupt IDs 1020, 1021, 1022, and 1023 are reserved as special INTIDs and should be ignored for normal RTEMS operation as they signal internal changes in the interrupt controller that RTEMS itself is directly causing.

Author: Kinsey Moore 2024-05-09T14:06:10.308Z

requested review from @sebhub

Author: Kinsey Moore 2024-05-09T14:06:10.334Z

assigned to @opticron

Author: Joel Sherrill 2024-05-09T16:35:10.586Z

I am ok with this change pending confirmation that it solves the problem

Author: Ning Yang 2024-05-09T16:22:33.274Z

it fixes my issue. Thanks!

Author: Kinsey Moore 2024-05-09T16:35:10.604Z

resolved all threads

Author: Sebastian Huber 2024-05-12T19:26:57.758Z

I think we should also add something like this to arm-gicv3.c similar to arm-gicv2.c:

```
diff --git a/bsps/shared/dev/irq/arm-gicv3.c b/bsps/shared/dev/irq/arm-gicv3.c
index dcfada6cd0..60801e6c50 100644
--- a/bsps/shared/dev/irq/arm-gicv3.c
+++ b/bsps/shared/dev/irq/arm-gicv3.c
@@ -40,6 +40,14 @@
 #include <bsp/start.h>
 #include <rtems/score/processormaskimpl.h>

+/*
+ * The GIC architecture reserves interrupt ID numbers 1020 to 1023 for special
+ * purposes.
+ */
+#if BSP_INTERRUPT_VECTOR_COUNT >= 1020
+#error "BSP_INTERRUPT_VECTOR_COUNT is too large"
+#endif
+
 void bsp_interrupt_dispatch(void)
 {
 while (true) {
```

Author: Kinsey Moore 2024-05-12T19:26:57.758Z

I have added a patch with updated commentary and limits that accomplishes this.

Author: Kinsey Moore 2024-05-11T21:11:41.279Z

added 12 commits

- ae48e176...ab8817ca - 11 commits from branch `rtems/rtos:main`
- 97a529dd - Merge branch rtems:main into a72-intid-fix

Compare with previous version

Author: Kinsey Moore 2024-05-11T21:18:49.325Z

added 2 commits

- 3da97d79 - bsps/aarch64/a72: Avoid use of reserved INTIDs
- 37874902 - bsps/shared/gicv3: Validate BSP vector count

Compare with previous version

Author: Kinsey Moore 2024-05-12T19:26:57.777Z

resolved all threads

Author: Sebastian Huber 2024-05-13T13:11:06.155Z

Looks good, however, I can't approve or merge it.

Author: Amar Takhar 2024-05-14T22:23:04.948Z

Closing this to test if approvals change. I will re-open

Author: Gedare Bloom 2024-05-15T22:13:35.529Z

approved this merge request

Author: Kinsey Moore 2024-05-18T13:44:59.975Z

added 6 commits

- 37874902...d4923b09 - 4 commits from branch `rtems/rtos:main`
- bf47ce7a - bsps/aarch64/a72: Avoid use of reserved INTIDs

- d6622547 - bsps/shared/gicv3: Validate BSP vector count

Compare with previous version

Author: Kinsey Moore 2024-05-21T17:38:05.648Z

added 4 commits

- d6622547...79b385c8 - 2 commits from branch `rtems/rtos:main`
- d2195cb0 - bsps/aarch64/a72: Avoid use of reserved INTIDs
- 0d6e07c6 - bsps/shared/gicv3: Validate BSP vector count

Compare with previous version

Author: Kinsey Moore 2024-05-21T20:17:09.857Z

added 3 commits

- cfb9f96c - 1 commit from branch `rtems/rtos:main`
- 1997c3d1 - bsps/aarch64/a72: Avoid use of reserved INTIDs
- c942e9d8 - bsps/shared/gicv3: Validate BSP vector count

Compare with previous version

Author: Chris Johns 2024-05-21T23:26:33.906Z

approved this merge request

Author: Chris Johns 2024-05-21T23:26:39.660Z

added 4 commits

- c942e9d8...7eb3ef09 - 2 commits from branch `rtems/rtos:main`
- ba1f92fc - bsps/aarch64/a72: Avoid use of reserved INTIDs
- f0944277 - bsps/shared/gicv3: Validate BSP vector count

Compare with previous version

Author: Ning Yang 2024-07-05T03:57:31.406Z

3.9.2.244 25 - testsuites/libtest/dl12: add DL test for incrementally linked objects

Id	25
State	merged
Merged by	Amar Takhar
Merged at	2024-06-21T03:31:44.724Z
Reviewer(s)	Chris Johns
Created	2024-05-07T21:32:59.337Z
Updated	2024-06-25T13:26:01.093Z
Milestone	6.1
Labels	cpukit::dl, rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/25
Commit	78afce5bf297a42809553c4845f7c84598557a72

Summary

testsuites/libtest/dl12: add DL test for incrementally linked objects

This commit adds a test to validate the incremental linking functionality in RTL. The test is related to issue #3740.

Author: Ranulfo Raphael 2024-05-07T21:44:05.612Z

mentioned in merge request !19

Author: Kinsey Moore 2024-05-07T23:47:42.357Z

added 2 commits

- 40ddcf95 - 1 commit from branch `rtems/rtos:main`
- 72ae9c8e - testsuites/libtest/dl12: add DL test for incrementally linked objects

Compare with previous version

Author: Ranulfo Raphael 2024-05-17T01:11:20.125Z

@chris this merge request is the same as !19. I closed that due the issue of a merge commit on the main branch and opened it in a new fork.

Author: Kinsey Moore 2024-05-17T14:19:32.644Z

added 13 commits

- 72ae9c8e...ab8817ca - 12 commits from branch `rtems/rtos:main`
- 6e4fb7ac - testsuites/libtest/dl12: add DL test for incrementally linked objects

Compare with previous version

Author: Chris Johns 2024-05-22T02:03:20.137Z

requested review from @chris

Author: Chris Johns 2024-05-22T02:03:50.822Z

added 15 commits

- 6e4fb7ac...e74cea41 - 14 commits from branch `rtems/rtos:main`
- 4161be5d - testsuites/libtest/dl12: add DL test for incrementally linked objects

Compare with previous version

Author: Chris Johns 2024-05-26T00:02:29.780Z

I have this MR in my queue to look at for %6.1

Author: Kinsey Moore 2024-06-12T22:17:30.195Z

added 48 commits

- 4161be5d...20939b21 - 47 commits from branch `rtems/rtos:main`
- c8539d21 - testsuites/libtest/dl12: add DL test for incrementally linked objects

Compare with previous version

Author: Kinsey Moore 2024-06-12T22:20:51.281Z

Please limit your commit subject line to 50 characters. This might be a better formulation: testsuites/libtest: Add DL incremental link test

Author: Kinsey Moore 2024-06-13T12:34:43.775Z

This copyright is not accurate and needs to be replaced.

Author: Ranulfo Raphael 2024-06-13T12:34:43.775Z

The copyrights came from another dl test on which this test case was based. Would it be better to append a new copyright message or replace it?

Author: Kinsey Moore 2024-06-13T12:34:43.775Z

If the majority of the copied content is boilerplate that the project requires, then you should assert your own copyright. Otherwise, you should add your own since presumably it's not an exact copy. For exact copies, you could reference the original or leave the copyright intact in the copy.

Author: Ranulfo Raphael 2024-06-13T11:37:49.028Z

changed this line in version 6 of the diff

Author: Kinsey Moore 2024-06-13T12:34:21.173Z

These copyrights are not accurate. All .c and .h files need to be reviewed to ensure correct copyright information.

Author: Kinsey Moore 2024-06-12T22:24:56.010Z

requested changes

Author: Ranulfo Raphael 2024-06-12T22:38:54.801Z

changed title from **testsuites/libtest{-/dl12-}: {-a-}dd DL {-test for -}incremental{-ly-} link{-ed objects-}** to **testsuites/libtest: {+A+}dd DL incremental link{+ test+}**

Author: Kinsey Moore 2024-06-13T12:33:32.895Z

You need to change the subject of the commit itself, not the MR.

Author: Ranulfo Raphael 2024-06-13T11:37:49.570Z

added 1 commit

- cb84b6ba - testsuites/libtest: Add DL incremental link test

Compare with previous version

Author: Ranulfo Raphael 2024-06-13T11:52:14.950Z

changed title from **testsuites/libtest: {-A-}dd DL incremental link{- test-}** to **testsuites/libtest{+/dl12+}: {+a+}dd DL {+test for +}incremental{+ly+} link{+ed objects+}**

Author: Kinsey Moore 2024-06-13T12:34:39.316Z

added 2 commits

- 1d997f33 - 1 commit from branch `rtems/rtos:main`
- 84004be8 - testsuites/libtest: Add DL incremental link test

Compare with previous version

Author: Kinsey Moore 2024-06-13T12:34:43.792Z

resolved all threads

Author: Kinsey Moore 2024-06-13T22:35:58.269Z

added 9 commits

- 84004be8...2d5a85f7 - 8 commits from branch `rtems/rtos:main`
- 9f3b9129 - testsuites/libtest: Add DL incremental link test

Compare with previous version

Author: Kinsey Moore 2024-06-14T15:25:50.353Z

approved this merge request

Author: Kinsey Moore 2024-06-14T15:25:55.386Z

added 3 commits

- 9f3b9129...0951e4e6 - 2 commits from branch `rtems/rtos:main`
- d5558903 - testsuites/libtest: Add DL incremental link test

Compare with previous version

Author: Kinsey Moore 2024-06-14T21:30:20.443Z

added 2 commits

- 20a663cc - 1 commit from branch `rtems/rtos:main`
- 190f5c59 - testsuites/libtest: Add DL incremental link test

Compare with previous version

Author: Kinsey Moore 2024-06-18T01:49:36.607Z

added 4 commits

- 190f5c59...7f2b904d - 3 commits from branch `rtems/rtos:main`
- 3647c0ec - testsuites/libtest: Add DL incremental link test

Compare with previous version

Author: Amar Takhar 2024-06-21T03:31:33.346Z

added 8 commits

- 3647c0ec...dff15a82 - 7 commits from branch `rtems/rtos:main`
- 78afce5b - testsuites/libtest: Add DL incremental link test

Compare with previous version

Author: Amar Takhar 2024-06-21T03:31:41.272Z

approved this merge request

Author: Amar Takhar 2024-06-21T06:02:53.265Z

FYI for anyone else: @chris was a reviewer on this but it wasn't set as draft I didn't notice. I am working on a way to block MRs from happening if all the reviewers haven't approved it.

Author: Amar Takhar 2024-06-21T06:26:57.180Z

This is the issue to track the status check to stop this from happening: https://gitlab.rtems.org/administration/gitlab/-/issues/61

Author: Amar Takhar 2024-06-21T19:46:33.628Z

mentioned in issue administration/gitlab#61

Author: Sebastian Huber 2024-06-24T19:11:54.119Z

This causes a build error for the arm/tms570lc4357_hdk_sdram BSP:

```
/opt/rtems-6-tms570-1/bin/arm-rtems6-ld: testsuites/libtests/dl12/dl12-o1.o: compiled for a big endian system and target is little endian
/opt/rtems-6-tms570-1/bin/arm-rtems6-ld: failed to merge target specific data of file testsuites/libtests/dl12/dl12-o1.o
/opt/rtems-6-tms570-1/bin/arm-rtems6-ld: testsuites/libtests/dl12/dl12-o2.o: compiled for a big endian system and target is little endian
/opt/rtems-6-tms570-1/bin/arm-rtems6-ld: failed to merge target specific data of file testsuites/libtests/dl12/dl12-o2.o
```

Author: Ranulfo Raphael 2024-06-24T21:40:36.031Z

mentioned in issue #5053

Author: Sebastian Huber 2024-06-25T13:24:29.629Z

On which BSP was this tested? With the fix from !92, the test fails on the `arm/tms570lc4357_hdk_sdram` BSP with an out of memory error:

```
rtl: rel tramp: sym: G:_RTEMS_tasks_Information(455)=80028b54 type:2 off:000000dc'
rtl: rel tramp: sym: G:rtems_libio_iop_free_head(531)=80029e08 type:2 off:000000f8'
rtl: rel tramp: sym: G:WorkAreaBase(400)=8002b8c0 type:2 off:000000fc'
rtl: rel tramp: sym: G:WorkAreaBase(400)=8002b8c0 type:2 off:00000100'
rtl: rel tramp: sym: G:RamEnd(370)=80800000 type:2 off:00000104'
rtl: alloc: lock'
rtl: alloc: new: READ_WRITE addr=0x80038468 size=268'
rtl: alloc: new: READ_WRITE addr=0 size=8380257'
```

The RAM size is 8MiB on this target.

Author: Ranulfo Raphael 2024-06-25T13:24:29.592Z

I think I answered that on https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/92#note_108044

Author: Sebastian Huber 2024-06-25T13:26:01.068Z

Ok, thanks. Then !91 is the way to go.

3.9.2.245 44 - bsps/arm: Fix L2C-310 cache disable

Id	44
State	merged
Merged by	Amar Takhar
Merged at	2024-06-25T03:59:05.226Z
Created	2024-05-22T15:51:02.686Z
Updated	2024-06-25T03:59:07.787Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/44
Commit	c4c3e687903dccbb3679e3bd5babb87b95c507dc

Summary

bsps/arm: Fix L2C-310 cache disable

For the rtems_cache_disable_instruction(), just disable the L1 instruction cache and keep the L2 cache enabled. In SMP configurations, disable the L1 instruction cache on all online processors.

For the rtems_cache_disable_data(), disable the L1 data cache in assembly to make sure that no memory accesses are used in the procedure. In SMP configurations, disable the L1 data cache

on all online processors and make sure that the L2 cache is flushed and disabled by exactly one processor at the right time.

Author: Sebastian Huber 2024-05-22T15:56:45.726Z

added 2 commits

- 848bcef7 - score: Add _SMP_barrier_Wait_for_all_other()
- b47df27c - bsps/arm: Fix L2C-310 cache disable

Compare with previous version

Author: Sebastian Huber 2024-05-23T10:03:08.831Z

This version still depends on code optimizations.

Author: Chris Johns 2024-05-23T22:22:50.967Z

One of the commit messages says:

> For the rtems_cache_disable_instruction(), just disable the L1 instruction cache and keep the L2 cache enabled. In SMP configurations, disable the L1 instruction cache on all online processors.
>
> Why does SMP need to disable L1? If there is a reason it would be good to explain this in the commit message and the code.

Author: Gedare Bloom 2024-06-24T16:37:44.049Z

mixing tabs and spaces

Author: Sebastian Huber 2024-06-24T06:32:56.856Z

changed this line in version 3 of the diff

Author: Gedare Bloom 2024-05-31T19:58:41.948Z

Somewhat of a historical question maybe, but should there be an `arm/shared/cache/cache-l2c-310.h` or similar?

Author: Sebastian Huber 2024-05-31T19:58:41.948Z

No, this is an internal function which needs to be implemented in assembly. In general, there is no reusable API here.

Author: Sebastian Huber 2024-06-24T06:32:57.640Z

changed this line in version 3 of the diff

Author: Gedare Bloom 2024-05-31T20:00:10.718Z

This belongs in its own MR first, with test case and documentation added. It is a new (internal) API. There should be an Issue to track it.

Author: Sebastian Huber 2024-05-31T20:00:10.718Z

This is an internal function, the Doxygen documentation is all what you get. I moved it to !46. There is no specific SMP barrier test, so adding a test case for this function exceeds my time budget for this work.

Author: Sebastian Huber 2024-06-24T06:32:58.409Z

changed this line in version 3 of the diff

Author: Gedare Bloom 2024-05-31T20:01:38.507Z

This is only “all_other” when `count` is equal to the online CPUs.

I might suggest `_SMP_barrier_Wait_for_count( ... unsigned int count)` and change `count - 1` below to `count`.

The function documentation and usage could be clarified. As a curiosity will it work with `x > 1` thread waiting here, if passing `count - x`?

Author: Sebastian Huber 2024-05-31T20:01:38.507Z

Yes, good idea. I changed it in !46.

Author: Sebastian Huber 2024-06-24T06:32:59.819Z

changed this line in version 3 of the diff

Author: Sebastian Huber 2024-06-05T06:26:22.247Z

marked this merge request as **draft**

Author: Sebastian Huber 2024-06-07T16:02:42.657Z

I managed to disable the L1 and L2 caches, however, afterwards I got not that far. On the Cortex-A cores it seems at least the L1 data cache is required to provide support for atomic operations:

https://stackoverflow.com/questions/76207164/disabled-dcache-will-prevent-atomic-flag-from-being-s

So, I suggest to do this for the cache manager implementation:

- Make the rtems_cache_disable_data() directive a nop.
- Issue a fatal error if someone calls rtems_cache_disable_data().

Author: Sebastian Huber 2024-06-24T16:37:56.583Z

A third option would be to return a status code in rtems_cache_disable_data().

Author: Gedare Bloom 2024-06-24T16:37:56.583Z

returning a failure code seems a bit nicer.

Author: Sebastian Huber 2024-06-24T06:33:00.051Z

added 86 commits

- b47df27c...2089f993 - 81 commits from branch `rtems/rtos:main`
- a2e289ef - validation: Fix cache invalidation test case
- 65645dd6 - rtems: Fatal error for rtems_cache_disable_data()
- 7775da00 - bsps/arm: Fix Doxygen group placement
- a7474409 - bsps/arm: Fix L2C-310 instruction enabled/disable
- 633ef6b3 - bsps/arm: Use fatal error for data cache disable

Compare with previous version

Author: Sebastian Huber 2024-06-24T06:33:43.225Z

marked this merge request as **ready**

Author: Gedare Bloom 2024-06-24T16:37:56.600Z

resolved all threads

Author: Gedare Bloom 2024-06-24T16:38:08.504Z

approved this merge request

Author: Amar Takhar 2024-06-25T03:58:20.186Z

approved this merge request

Author: Amar Takhar 2024-06-25T03:58:37.824Z

added 6 commits

- d09d61ff - 1 commit from branch `rtems/rtos:main`
- 19a30cfa - validation: Fix cache invalidation test case
- 2953f4c6 - rtems: Fatal error for rtems_cache_disable_data()
- ef9b49dc - bsps/arm: Fix Doxygen group placement
- 3a281aca - bsps/arm: Fix L2C-310 instruction enabled/disable
- c4c3e687 - bsps/arm: Use fatal error for data cache disable

Compare with previous version

3.9.2.246 79 - Improve ISR locks

Id	79
State	merged
Merged by	Kinsey Moore
Merged at	2024-06-21T14:33:41.950Z
Assignee(s)	Sebastian Huber
Reviewer(s)	Chris Johns, Kinsey Moore
Created	2024-06-18T11:22:02.491Z
Updated	2024-06-21T14:33:44.229Z
Milestone	6.1
Labels	rtems::kernel
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/79
Commit	7ce6667e38408f5d56141dbf9e55e6a5005ce40e

Summary

Add a new API-level define `RTEMS_INTERRUPT_LOCK_NEEDS_OBJECT` to indicate if a lock object is needed. This can be used to reduce the size overhead of locks when no lock object is needed.

Simplify the score ISR locks API by using the new `ISR_LOCK_NEEDS_OBJECT` indicator.

See #4957 and #5038

Author: Sebastian Huber 2024-06-18T11:22:02.613Z

requested review from @opticron

Author: Sebastian Huber 2024-06-18T11:22:02.650Z

assigned to @sebhub

Author: Chris Johns 2024-06-19T22:58:35.069Z

added 9 commits

- 2fe92099 - 1 commit from branch `rtems/rtos:main`
- 50466ac4 - score: Improve _ISR_lock_Initialize()
- 6e9a1b0b - rtems: Add RTEMS_INTERRUPT_LOCK_NEEDS_OBJECT
- 0fb51266 - score: Remove ISR_LOCK_DEFINE()
- 42b7ef99 - score: Remove ISR_LOCK_REFERENCE()
- 12026bc9 - score: Remove ISR_LOCK_DECLARE()
- 1b3a948e - score: Remove ISR_LOCK_MEMBER
- 0928cb64 - score: Conditionally provide ISR_LOCK_INITIALIZER()
- d71aa764 - score: Conditionally provide ISR_lock_Control

Compare with previous version

Author: Chris Johns 2024-06-19T23:01:05.445Z

changed the description

Author: Chris Johns 2024-06-21T06:57:31.400Z

What is the default setting for `RTEMS_INTERRUPT_LOCK_NEEDS_OBJECT` ?

Why would you use tor not use this option and reduce the size?

Does this vary the API is defined and not defined? The comment would indicate you need a lock object and not need a lock object?

Author: Sebastian Huber 2024-06-21T06:57:31.400Z

The documentation of this define is:

```
1 /**
2 * @ingroup RTEMSAPIClassicIntr
3 *
4 * @brief If this define has a non-zero value, then the interrupt lock
5 *   operations require an object of type ::rtems_interrupt_lock,␣
  ↪otherwise no
6 *   lock object is required.
7 *
8 * @par Notes
9 * This indication can be used to avoid the space overhead for lock␣
```

(continues on next page)

(continued from previous page)

```
 ↪objects
10 * when they are not needed.  In this case, the lock operations will not␣
 ↪use a
11 * lock objects parameter.
12 */
13 #define RTEMS_INTERRUPT_LOCK_NEEDS_OBJECT ISR_LOCK_NEEDS_OBJECT
```

The default value is 0, if RTEMS_SMP is defined, then it is 1.

Author: Sebastian Huber 2024-06-21T06:57:31.400Z

I added a code example using RTEMS_INTERRUPT_LOCK_NEEDS_OBJECT to the rtems_interrupt_lock notes.

Author: Chris Johns 2024-06-21T06:57:31.400Z

Thanks the documentation helps. I now get the connection and the reason for the MR. I will need to go and review the code in more detail to comment further. The last question in initial my list is outstanding?

Is the overhead of the `char` that was added in the non-SMP lock `struct` something you have seen as adding data? I am surprised if but willing to understand the nature of the problem you are resolving if you care to outline it?

Author: Sebastian Huber 2024-06-21T06:57:31.400Z

The lock operations API is always the same.

In C, the empty structures had a size of zero. It is not just a `char`. If you add the locks to a structure is is usually a 4 or 8 bytes overhead due to alignment.

Author: Chris Johns 2024-06-21T06:57:31.400Z

Yes field alignment is arch dependent and can be painful.

Can I summarize the change as moving from one point of difference in the `ISR_lock_Control` struct to explicitly handling the ISR lock control?

Can `ISR_LOCK_MEMBER` remain as empty? It seems the lock was already wrapped so I do not understand why that has been removed?

Author: Sebastian Huber 2024-06-21T06:57:31.400Z

The ISR_LOCK_* is an internal API, so we can break it. The patch set removes the `ISR_lock_Control` structure if it is not needed to make sure we don't use it internally. The problem with the `ISR_LOCK_MEMBER` member approach is that it confuses Doxygen. It adds the documentation of the removed member to the next one.

Author: Chris Johns 2024-06-21T06:59:02.323Z

Yes the API it is internal. Thanks for clarifying the change. It now makes sense to me.

Author: Chris Johns 2024-06-19T23:05:55.185Z

changed the description

Author: Sebastian Huber 2024-06-21T06:10:55.790Z

added 16 commits

- d71aa764...b48166b9 - 8 commits from branch `rtems/rtos:main`
- 26a0bfcb - score: Improve _ISR_lock_Initialize()
- 050b61aa - rtems: Add RTEMS_INTERRUPT_LOCK_NEEDS_OBJECT
- bdbda6a7 - score: Remove ISR_LOCK_DEFINE()
- fa243988 - score: Remove ISR_LOCK_REFERENCE()
- 283b4406 - score: Remove ISR_LOCK_DECLARE()
- b0599ef3 - score: Remove ISR_LOCK_MEMBER
- 5d63827d - score: Conditionally provide ISR_LOCK_INITIALIZER()
- 7ce6667e - score: Conditionally provide ISR_lock_Control

Compare with previous version

Author: Sebastian Huber 2024-06-21T06:14:09.799Z

resolved all threads

Author: Chris Johns 2024-06-21T06:57:31.419Z

resolved all threads

Author: Chris Johns 2024-06-21T06:58:14.314Z

approved this merge request

Author: Chris Johns 2024-06-21T06:58:32.268Z

requested review from @chris

Author: Kinsey Moore 2024-06-21T14:33:34.781Z

approved this merge request

3.9.2.247 84 - zynqmp: Add support for ECC error reporting

Id	84
State	merged
Merged by	Chris Johns
Merged at	2024-06-21T05:57:54.052Z
Assignee(s)	Kinsey Moore
Created	2024-06-19T17:57:04.313Z
Updated	2024-06-21T05:57:56.526Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/84
Commit	b48166b9b6e845519d1eba8177b31d47c50c1794

Summary

This adds support for reporting cache, on-chip memory, and DDR ECC errors.

Author: Kinsey Moore 2024-06-19T17:57:04.476Z

assigned to @opticron

Author: Kinsey Moore 2024-06-19T17:57:13.962Z

added 7 commits

- 9788e437...0bdeef72 - 5 commits from branch `rtems/rtos:main`
- 8ba7e9e7 - cpukit/aarch64: Add A53-specific registers
- 1d2af35f - bsps/aarch64/zynqmp: Add memory error reporting

Compare with previous version

Author: Chris Johns 2024-06-20T16:45:27.875Z

This Xilinx ZynqMP specific or `aarch64` specific?

Author: Kinsey Moore 2024-06-20T16:45:27.875Z

This is specific to the implementation using A53 cores in the ZynqMP chip. The cache error reporting varies a bit by core and this could theoretically be reused for other A53 cores with interrupt number varying.

Author: Chris Johns 2024-06-20T16:45:19.957Z

Is this touching hardware?

Author: Kinsey Moore 2024-06-20T16:45:19.957Z

No, this is operating on pre-read registers and pointers are passed in since the values are needed in the calling function. They are intentionally non-volatile.

Author: Chris Johns 2024-06-20T13:25:07.526Z

Hardware?

Author: Kinsey Moore 2024-06-20T13:25:07.526Z

Yes, this should have been volatile. I'll get that fixed up.

Author: Kinsey Moore 2024-06-20T13:25:15.438Z

changed this line in version 3 of the diff

Author: Chris Johns 2024-06-21T02:17:46.249Z

Do the hardware accessing function need to be volatile?

Author: Kinsey Moore 2024-06-21T02:17:46.249Z

All the hardware accesses have been marked volatile in the new version of the patch.

Author: Sebastian Huber 2024-06-20T14:51:09.182Z

Please use rtems_interrupt_entry_install() to avoid a dependency on the dynamic memory allocator.

Author: Kinsey Moore 2024-06-20T14:50:31.074Z

changed this line in version 5 of the diff

Author: Kinsey Moore 2024-06-20T14:51:09.182Z

I have converted to rtems_interrupt_entry_install() in the new patch set and removed the magic interrupt numbers in favor of #defines in bsp/irq.h.

Author: Sebastian Huber 2024-06-20T16:44:52.383Z

Should a fatal error be issued by default?

Author: Kinsey Moore 2024-06-20T16:44:52.383Z

That's a good idea, I'll change it to do that.

Author: Kinsey Moore 2024-06-20T16:44:55.128Z

changed this line in version 6 of the diff

Author: Kinsey Moore 2024-06-20T13:25:16.060Z

added 2 commits

- e5338eb9 - cpukit/aarch64: Add A53-specific registers
- 2c948bf1 - bsps/aarch64/zynqmp: Add memory error reporting

Compare with previous version

Author: Sebastian Huber 2024-06-21T05:57:38.908Z

The enum and structure naming is not really in line with the RTEMS-style. Should all this ECC stuff be in ecc.h?

Author: Kinsey Moore 2024-06-21T05:57:38.908Z

I was trying to keep BSP-internal interfaces separate from user-facing interfaces. I'll rename the existing ecc.h and move this into a new ecc.h.

Author: Kinsey Moore 2024-06-21T05:57:38.908Z

I'll also move the structs and enums to typedefs. As for the naming, would you prefer a **Zynqmp_** prefix? The naming rules for items in BSPs are listed as "TODO.".

Author: Kinsey Moore 2024-06-20T16:44:56.039Z

changed this line in version 6 of the diff

Author: Kinsey Moore 2024-06-20T13:25:59.391Z

added 8 commits

- 2c948bf1...2fe92099 - 6 commits from branch `rtems/rtos:main`
- a1542a4a - cpukit/aarch64: Add A53-specific registers
- 027830ae - bsps/aarch64/zynqmp: Add memory error reporting

Compare with previous version

Author: Kinsey Moore 2024-06-20T14:50:31.722Z

added 2 commits

- e5338eb9 - cpukit/aarch64: Add A53-specific registers
- 41fe3351 - bsps/aarch64/zynqmp: Add memory error reporting

Compare with previous version

Author: Kinsey Moore 2024-06-20T16:44:56.255Z

added 1 commit

- c4fe5b1b - bsps/aarch64/zynqmp: Add memory error reporting

Compare with previous version

Author: Kinsey Moore 2024-06-20T16:45:27.892Z

resolved all threads

Author: Kinsey Moore 2024-06-20T18:58:15.749Z

added 12 commits

- c4fe5b1b...e233b5c1 - 10 commits from branch `rtems/rtos:main`
- 34fe7c12 - cpukit/aarch64: Add A53-specific registers
- 14efe0ce - bsps/aarch64/zynqmp: Add memory error reporting

Compare with previous version

Author: Sebastian Huber 2024-06-21T05:54:40.060Z

approved this merge request

Author: Chris Johns 2024-06-21T05:57:17.732Z

approved this merge request

Author: Chris Johns 2024-06-21T05:57:25.922Z

added 4 commits

- 14efe0ce...78afce5b - 2 commits from branch `rtems/rtos:main`
- 27ec46f1 - cpukit/aarch64: Add A53-specific registers
- b48166b9 - bsps/aarch64/zynqmp: Add memory error reporting

Compare with previous version

Author: Chris Johns 2024-06-21T05:57:38.927Z

resolved all threads

3.9.2.248 73 - cpukit: Resolve gcc14 warnings

Id	73
State	merged
Merged by	Amar Takhar
Merged at	2024-06-14T02:46:37.681Z
Assignee(s)	Kinsey Moore
Created	2024-06-13T22:27:38.639Z
Updated	2024-06-18T23:58:04.950Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/73
Commit	b031cf2b19ef4be3a865d818e8d609011b04a3df

Summary

cpukit: Resolve gcc14 warnings

This resolves several warnings upon upgrading to gcc14 and building without SMP support.

Closes #5038 Closes #4957

Author: Kinsey Moore 2024-06-13T22:27:38.790Z

assigned to @opticron

Author: Kinsey Moore 2024-06-13T22:29:34.110Z

changed the description

Author: Chris Johns 2024-06-13T23:36:21.225Z

approved this merge request

Author: Amar Takhar 2024-06-14T02:46:33.261Z

approved this merge request

Author: Sebastian Huber 2024-06-18T23:51:25.476Z

Did you check how much the data size increased due to this change? It caused a test failure in tc-intr-non-smp.c. Using the name in `_ISR_lock_Initialize()` may have side-effects.

Author: Chris Johns 2024-06-18T23:51:25.476Z

If the standard says the behavior with an empty struct is undefined and adding a `char` element results in test failures then I think the existing code and expected behavior is broken. I feel what GCC supports as an extension is a mute point.

An important lesson here is all warnings need to be carefully examined.

Author: Amar Takhar 2024-06-18T23:51:25.476Z

100% agreed also in general it's better to avoid extensions due to cross platform issues. The other problem is since it's undefined even if LLVM had an extension there is absolutely no way to know whether both are implemented in the same way or would stay the same way.

Author: Sebastian Huber 2024-06-18T23:51:25.476Z

There was no need to push this through within five hours. It would be nice if non-trivial changes stay open for at least a business day.

Author: Chris Johns 2024-06-18T23:51:25.476Z

Five hours is quick and different for RTEMS. My hope is any issues from a fast turn around are isolated so I think the benefits out weigh the process we had before.

We have avoided placing time limits on things because it quickly becomes complicated. A business day is not easy to define. With a world wide 24/7 community your business day and others in the community do not overlap and we would need to guard each side of the weekend which means we would have 3 effective review days per week and then there are public holidays, annual leave and more.

Author: Amar Takhar 2024-06-18T23:58:04.923Z

It's usually less than 3 effective review days because in order to give everyone a chance to see it around the world you really need to block it for 36-48 hours. With

the project having as few eyes as it does then MRs would sit around waiting for them to time out then you'd get a glut of MRs being accepted quickly to avoid the next "timeout window".

Eventually approvers will just wait once or twice a week to look at it so they can do several at once. Time limits don't work unless you have a large team and even then it's dubious.

We have been using the 'Reviewer' field and making an issue as Draft if someone absolutely must block something until an action is taken or they get a chance to review. I'm working on a bot to block MRs unless the reviewers have also approved this will mitigate some of these issues but for now I think it's OK.

Author: Kinsey Moore 2024-06-18T23:51:32.488Z

Discussion elsewhere suggested that this undefined behavior resulted in empty structs consuming 1 byte. That portion of the patch was tailored to replicate that behavior, so there should be minimal to no change. To answer the question, I didn't double-check the data size since it was claimed to be no actual change.

Existing users of _ISR_lock_Initialize() expect _name to be evaluated at least once in SMP mode and shouldn't have an issue with the same occurring in non-SMP mode. The vast majority pass in literals, function arguments, or struct members with the exception being the call in the testsuite that stringifies it to verify that it evaluates to a no-op which it still does, just not the same kind of no-op.

In any case, I broke the test so I need to fix it. If this macro evaluating to an empty string is specified behavior, then I can submit an alternative resolution to the warnings. If not, I can update the test.

Author: Gedare Bloom 2024-06-18T23:51:32.488Z

The 1 byte is how C++ handles it.

Author: Kinsey Moore 2024-06-15T13:57:41.476Z

I have created !74 with the test update fix.

Author: Chris Johns 2024-06-18T23:51:32.505Z

resolved all threads

3.9.2.249 78 - bsp/powerpc: Remove e500 machine state for asm functions

Id	78
State	merged
Merged by	Amar Takhar
Merged at	2024-06-18T06:27:00.919Z
Assignee(s)	Chris Johns
Created	2024-06-18T04:10:47.060Z
Updated	2024-06-18T06:27:03.274Z
Milestone	6.1
Labels	arch:powerpc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/78
Commit	0bdeef72fe2e1f449ffdf923ecfce21baf785cb1

Remove e500 machine state for asm functions in `bsps/powerpc`

The e500 machine state was added in gcc 10 to deal with issues when -many was from removed

Close #5043

Author: Chris Johns 2024-06-18T04:10:47.243Z

assigned to @chris

Author: Amar Takhar 2024-06-18T04:27:21.970Z

The end part of the commit message doesn't make sense. Typo?

Author: Chris Johns 2024-06-18T04:27:21.970Z

Yes. Fixed.

Author: Chris Johns 2024-06-18T04:27:09.516Z

added 1 commit

- 01d82dfe - bsp/powerpc: Remove e500 machine state for asm functions

Compare with previous version

Author: Chris Johns 2024-06-18T04:27:21.987Z

resolved all threads

Author: Chris Johns 2024-06-18T04:27:49.284Z

added 4 commits

- 01d82dfe...7f2b904d - 3 commits from branch `rtems/rtos:main`
- 0bdeef72 - bsp/powerpc: Remove e500 machine state for asm functions

Compare with previous version

Author: Sebastian Huber 2024-06-18T06:24:52.044Z

approved this merge request

Author: Amar Takhar 2024-06-18T06:26:55.152Z

approved this merge request

3.9.2.250 74 - testsuites: Update lock init validation test

Id	74
State	merged
Merged by	Kinsey Moore
Merged at	2024-06-17T16:21:03.683Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Sebastian Huber
Created	2024-06-15T13:56:57.001Z
Updated	2024-06-17T16:21:05.062Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/74
Commit	644041626d3e83917309dae6a45e5696013eda63

Summary

testsuites: Update lock init validation test

This test was broken by b031cf2b19ef4be3a865d818e8d609011b04a3df since it expects the macros to evaluate to an empty string for non-SMP builds. This updates the check for the new content.

Author: Kinsey Moore 2024-06-15T13:56:57.236Z

assigned to @opticron

Author: Kinsey Moore 2024-06-15T13:57:12.608Z

added 2 commits

- 20a663cc - 1 commit from branch `rtems/rtos:main`
- 5e683bab - testsuites: Update lock init validation test

Compare with previous version

Author: Kinsey Moore 2024-06-15T13:57:41.982Z

mentioned in merge request !73

Author: Amar Takhar 2024-06-15T18:23:07.023Z

approved this merge request

Author: Kinsey Moore 2024-06-17T16:09:46.557Z

requested review from @sebhub

Author: Sebastian Huber 2024-06-17T16:20:03.481Z

approved this merge request

Author: Kinsey Moore 2024-06-17T16:20:56.427Z

added 2 commits

- 2c0ab5ba - 1 commit from branch `rtems/rtos:main`
- 64404162 - testsuites: Update lock init validation test

Compare with previous version

3.9.2.251 70 - Synchronize with FreeBSD

Id	70
State	merged
Merged by	Kinsey Moore
Merged at	2024-06-13T17:21:43.160Z
Assignee(s)	Sebastian Huber
Created	2024-06-11T18:25:10.902Z
Updated	2024-06-13T19:51:53.551Z
Milestone	6.1
Labels	rtems::score
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/70
Commit	1e68298847afecd134e424fac20e042333ce9dd5

In addition to the synchronization with FreeBSD, this change set removes dead code and fixes a bug.

Author: Sebastian Huber 2024-06-11T18:25:12.752Z

assigned to @sebhub

Author: Sebastian Huber 2024-06-11T18:25:16.717Z

restored source branch `sync-iovprintf-with-freebsd`

Author: Sebastian Huber 2024-06-11T18:27:50.093Z

changed title from **{-kvprintf(9): add missing FALLTHROUGH-}** to **{+Synchronize with FreeBSD+}**

Author: Sebastian Huber 2024-06-11T18:27:50.118Z

changed the description

Author: Chris Johns 2024-06-13T02:23:50.165Z

approved this merge request

Author: Amar Takhar 2024-06-13T07:33:48.200Z

added 5 commits

- 6dcc0805...1d997f33 - 2 commits from branch `rtems/rtos:main`
- 1689decf - kvprintf(9): add missing FALLTHROUGH
- ba837cea - sys: Remove $FreeBSD$: one-line .c pattern
- db0dbae1 - sys: Remove ancient SCCS tags.

Compare with previous version

Author: Amar Takhar 2024-06-13T07:34:41.683Z

@sebhub sorry, another conflict when trying to rebase.

Author: Sebastian Huber 2024-06-13T08:47:16.352Z

I don't see a conflict.

Author: Sebastian Huber 2024-06-13T10:52:18.074Z

added 5 commits

- 121b7420 - kvprintf(9): add missing FALLTHROUGH
- a5670595 - sys: Remove $FreeBSD$: one-line .c pattern
- 7cc9f486 - sys: Remove ancient SCCS tags.

- 68a84311 - dev/io: Remove dead code in _IO_Vprintf()
- be913c0b - dev/io: Fix “%hhi” conversion

Compare with previous version

Author: Sebastian Huber 2024-06-13T10:52:32.745Z

reset approvals from @chris by pushing to the branch

Author: Sebastian Huber 2024-06-13T10:53:45.453Z

changed the description

Author: Amar Takhar 2024-06-13T17:06:30.631Z

approved this merge request

Author: Kinsey Moore 2024-06-13T17:19:38.932Z

added 6 commits

- ad24b764 - 1 commit from branch `rtems/rtos:main`
- a9e1c29a - kvprintf(9): add missing FALLTHROUGH
- c2041d3a - sys: Remove $FreeBSD$: one-line .c pattern
- 0c7a972b - sys: Remove ancient SCCS tags.
- 30125493 - dev/io: Remove dead code in _IO_Vprintf()
- 1e682988 - dev/io: Fix “%hhi” conversion

Compare with previous version

Author: Kinsey Moore 2024-06-13T17:21:32.875Z

approved this merge request

Author: Amar Takhar 2024-06-13T19:51:53.496Z

mentioned in merge request !65

3.9.2.252 21 - QSPI Flash on Xilinx Versal

Id	21
State	merged
Merged by	Gedare Bloom
Merged at	2024-06-10T17:58:28.398Z
Reviewer(s)	Kinsey Moore
Created	2024-05-07T05:55:28.671Z
Updated	2024-06-11T13:13:40.103Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/21
Commit	7bfe79c44d44a193289df90719e821ce8dc7e06b

Summary

build: Fix build issues with xqspipsu on versal

Updates #4870

Author: Kinsey Moore 2024-05-21T21:01:04.209Z

added 30 commits

- 367221c0...cfb9f96c - 27 commits from branch `rtems/rtos:main`
- 6d33d47f - build: Fix build issues with xqspipsu on versal
- c9821511 - bsps: Add flash wrapper for Xilinx GQSPI
- 757be0bb - libmisc/shell: Improve print messages for flashdev command

Compare with previous version

Author: Gedare Bloom 2024-06-03T04:16:10.533Z

preface the macro with a “namespace” like `XQSPI_FLASH_` if that would be appropriate. I’d also suggest making it have a type, maybe `0x8000U` or `((size_t)0x8000)`

Author: Aaron Nyholm 2024-06-03T05:29:45.758Z

changed this line in version 4 of the diff

Author: Gedare Bloom 2024-06-06T18:36:37.931Z

should this go in a versal-specific header file?

Author: Aaron Nyholm 2024-06-03T05:29:46.444Z

changed this line in version 4 of the diff

Author: Aaron Nyholm 2024-06-06T18:36:37.931Z

This should be made shared. Missed this when moving from Versal into shared. Updated.

Author: Gedare Bloom 2024-06-03T04:38:59.184Z

this line is overlength

Author: Aaron Nyholm 2024-06-03T05:29:46.953Z

changed this line in version 4 of the diff

Author: Gedare Bloom 2024-06-03T05:35:17.340Z

`tmp_buffer` is uninitialized, and `&tmp_buffer` is a pointer to this function's stack. This is going to be just writing into the stack space beyond the current stack frame.

Author: Kinsey Moore 2024-06-03T05:35:17.340Z

This is actually fine. This function is built weird and pastes its internal buffer pointer into the uint8_t** provided as the last argument.

Author: Kinsey Moore 2024-06-03T05:35:17.340Z

FYI, it uses its internal buffer because it must be properly aligned for the hardware to transfer data into it.

Author: Gedare Bloom 2024-06-03T05:35:17.340Z

ok, it's probably worth mentioning. It is still an uninitialized pointer** the first time it is called.

Author: Aaron Nyholm 2024-06-03T05:29:47.745Z

changed this line in version 4 of the diff

Author: Gedare Bloom 2024-06-03T05:35:22.194Z

do you need to adjust `MAX_READ_SIZE - startAlign`?

Author: Aaron Nyholm 2024-06-03T05:29:48.123Z

changed this line in version 4 of the diff

Author: Aaron Nyholm 2024-06-03T05:35:22.194Z

`startAlign` is used to correctly read when the offset is odd as `QspiPsu_NOR_Read` can only read at even addresses. We read the byte before the first requested byte to align the read and then throw out the unrequested byte. We still want to read the `MAX_READ_SIZE`.

Author: Gedare Bloom 2024-06-03T04:54:24.289Z

line length

Author: Aaron Nyholm 2024-06-03T05:29:48.656Z

changed this line in version 4 of the diff

Author: Gedare Bloom 2024-06-03T05:35:27.166Z

can `search_offset` be negative? if so, this needs adjustment.

Author: Aaron Nyholm 2024-06-03T05:35:27.166Z

`search_offset` can't be negative. It's the offset from the flash base.

Author: Gedare Bloom 2024-06-03T05:07:17.242Z

line length

Author: Aaron Nyholm 2024-06-03T05:29:49.408Z

changed this line in version 4 of the diff

Author: Gedare Bloom 2024-05-24T01:34:44.760Z

any good reason to cast away the `const`?

Author: Kinsey Moore 2024-05-24T01:34:44.760Z

It's because the function doesn't take a const. Realistically, we own that function now and could constify that parameter.

Author: Gedare Bloom 2024-05-24T01:34:44.760Z

ok that's fine. We should keep the code close to the upstream?

Author: Kinsey Moore 2024-05-24T01:34:44.760Z

When I say we own that function, there is not a file that directly corresponds to the contents of xqspipsu-flash-helper.c in the embeddedsw repository. If we want to improve the interface, we can and should. The NOR driver layer on top of the QSPI interface was not well organized and upstream can only serve as vague direction at this point.

Author: Aaron Nyholm 2024-06-03T05:29:50.195Z

changed this line in version 4 of the diff

Author: Gedare Bloom 2024-06-03T05:35:31.912Z

does the caller expect this? it should be documented.

Author: Aaron Nyholm 2024-06-03T05:29:50.658Z

changed this line in version 4 of the diff

Author: Aaron Nyholm 2024-06-03T05:35:31.912Z

`XQspiPsu` shouldn't be freed as it's not allocated in this function. Updated.

Author: Gedare Bloom 2024-06-03T05:10:58.892Z

parens are redundant `&(x->y)` equivalent to `&x->y`

Author: Aaron Nyholm 2024-06-03T05:29:51.208Z

changed this line in version 4 of the diff

Author: Gedare Bloom 2024-06-03T05:11:44.108Z

line length

Author: Aaron Nyholm 2024-06-03T05:29:51.944Z

changed this line in version 4 of the diff

Author: Gedare Bloom 2024-06-03T05:30:23.467Z

versal specific?

Author: Aaron Nyholm 2024-06-03T05:29:52.483Z

changed this line in version 4 of the diff

Author: Aaron Nyholm 2024-06-03T05:30:23.467Z

Missed renaming when moving files. Updated.

Author: Gedare Bloom 2024-06-03T05:30:23.674Z

This address is same as `xtable` which is good because it makes the later `free` work. However, it could change if someone is not aware and modifies the `versal_xqspi_region_table` layout. It should be documented, or you should explicitly use `xtable` here

Author: Aaron Nyholm 2024-06-03T05:29:53.394Z

changed this line in version 4 of the diff

Author: Aaron Nyholm 2024-06-03T05:30:23.674Z

Updated to be explicitly `xtable`.

Author: Gedare Bloom 2024-06-03T05:35:38.028Z

not sure what this means

Author: Gedare Bloom 2024-06-03T05:35:38.028Z

maybe `s/Replicate/Generate` and add “CPP” or “macro” somewhere in here just to make it clear.

Author: Aaron Nyholm 2024-06-03T05:29:54.477Z

changed this line in version 4 of the diff

Author: Gedare Bloom 2024-05-24T01:37:42.706Z

this is not usual. what is the purpose?

Author: Kinsey Moore 2024-05-24T01:37:42.706Z

This is to generate a “versal” define that the Xilinx driver code has ifdefs for to alter behavior on Versal systems versus ZynqMP systems. It’s done this way so that it only gets defined for Versal BSPs.

Author: Gedare Bloom 2024-05-24T01:37:42.706Z

Thanks that is helpful.

Author: Kinsey Moore 2024-05-23T23:39:52.227Z

added 14 commits

- 757be0bb...869071df - 11 commits from branch `rtems/rtos:main`
- b354d39e - build: Fix build issues with xqspipsu on versal
- e6e883b0 - bsps: Add flash wrapper for Xilinx GQSPI
- 8390bdca - libmisc/shell: Improve print messages for flashdev command

Compare with previous version

Author: Aaron Nyholm 2024-06-03T05:29:55.571Z

added 11 commits

- 8390bdca...b8910111 - 8 commits from branch `rtems/rtos:main`
- a02363e9 - build: Fix build issues with xqspipsu on versal
- 9ad34eae - bsps: Add flash wrapper for Xilinx GQSPI
- 25a695d8 - libmisc/shell: Improve print messages for flashdev command

Compare with previous version

Author: Aaron Nyholm 2024-06-03T05:35:38.048Z

resolved all threads

Author: Kinsey Moore 2024-06-06T06:18:23.204Z

This structure needs documentation.

Author: Kinsey Moore 2024-06-06T06:22:09.515Z

Trailing lines like this are unnecessary and inconsistent with other documentation.

Author: Aaron Nyholm 2024-06-06T06:22:09.515Z

Removed. The formatting for that entire file doesn't match RTEMS style guide so wasn't sure what was the best solution.

Author: Kinsey Moore 2024-06-06T06:22:32.174Z

Doxygen function attribute descriptions should have a space between the type of tag (@param) and the name of the remainder of the description. This applies elsewhere.

Author: Aaron Nyholm 2024-06-07T04:27:20.178Z

changed this line in version 8 of the diff

Author: Kinsey Moore 2024-06-06T18:55:43.683Z

Why does the offset need to be aligned to a 2 byte boundary?

Author: Aaron Nyholm 2024-06-06T18:55:43.683Z

This is due to striping across multiple flash chips. Xilinx stores the even byte on one flash chip and odd on the other. This means you can't read one without also reading the other. The GQSPI driver does not handle this and instead always returns the lowest even byte regardless. I don't remember what happens at the end of the buffer of the top of my head but I think it might not return it as the buffer is full due to the extra byte read. Aligning to the two byte boundary ensures that we always get exactly what we ask for and can fix up the odd byte ourselves.

Author: Kinsey Moore 2024-06-06T18:55:43.683Z

Sounds like it only applies in parallel configurations, but it doesn't hurt single or stacked configurations so that's fine.

Author: Aaron Nyholm 2024-06-07T04:27:21.057Z

changed this line in version 8 of the diff

Author: Kinsey Moore 2024-06-06T06:39:21.012Z

Is there a reason to break this out?

Author: Aaron Nyholm 2024-06-06T06:39:21.012Z

Because it wasn't triggering for versal builds. I get errors around xilinx files not being included which are resolved by explicitly defining the bsps.

Author: Kinsey Moore 2024-06-06T06:43:42.132Z

Is there a reason to break this out?

Author: Aaron Nyholm 2024-06-06T06:43:42.132Z

This one doesn't need to be builds work either way. I'll revert it.

Author: Aaron Nyholm 2024-06-07T04:27:22.392Z

changed this line in version 8 of the diff

Author: Kinsey Moore 2024-06-07T13:53:52.251Z

It might be a good idea to move this functionality into the flash helper code, similar to how the write page code was merged in. It's generally useful.

Author: Aaron Nyholm 2024-06-07T13:53:52.251Z

If it was to be moved to `xqspipsu-flash-helper.c` what would header file look like? Move the logic into `QspiPsu_NOR_Read` and change the arguments and then put a new name to the existing `QspiPsu_NOR_Read` code?

Author: Kinsey Moore 2024-06-07T13:53:52.251Z

Yes, the existing function would be renamed QspiPsu_NOR_Read_Page and then the functionality here would be QspiPsu_NOR_Read. This is by no means a requirement for my approval of this patch set, just a suggestion if you feel like it.

Author: Aaron Nyholm 2024-06-07T13:53:52.251Z

I've moved the read into `xqspipsu-flash-helper.c`

Author: Kinsey Moore 2024-06-04T23:30:51.937Z

requested changes

Author: Kinsey Moore 2024-06-05T00:05:02.407Z

added 14 commits

- 25a695d8...25ba6796 - 11 commits from branch `rtems/rtos:main`
- 23953630 - build: Fix build issues with xqspipsu on versal
- 47f1afc1 - bsps: Add flash wrapper for Xilinx GQSPI
- d770073f - libmisc/shell: Improve print messages for flashdev command

Compare with previous version

Author: Gedare Bloom 2024-06-06T18:39:15.512Z

approved this merge request

Author: Kinsey Moore 2024-06-06T18:56:07.251Z

added 4 commits

- 42ad53f3 - 1 commit from branch `rtems/rtos:main`
- 5c983e8b - build: Fix build issues with xqspipsu on versal
- bae73ba2 - bsps: Add flash wrapper for Xilinx GQSPI
- a694194c - libmisc/shell: Improve print messages for flashdev command

Compare with previous version

Author: Gedare Bloom 2024-06-06T20:29:19.524Z

requested review from @opticron

Author: Amar Takhar 2024-06-06T20:31:07.193Z

approved this merge request

Author: Gedare Bloom 2024-06-06T20:31:42.013Z

resolved all threads

Author: Amar Takhar 2024-06-06T20:33:04.366Z

unapproved this merge request

Author: Kinsey Moore 2024-06-06T22:08:37.107Z

added 4 commits

- e1be6899 - 1 commit from branch `rtems/rtos:main`

- 25b0f12f - build: Fix build issues with xqspipsu on versal
- a621ba39 - bsps: Add flash wrapper for Xilinx GQSPI
- 9a687abe - libmisc/shell: Improve print messages for flashdev command

Compare with previous version

Author: Aaron Nyholm 2024-06-07T04:27:23.242Z

added 4 commits

- cbe60cea - 1 commit from branch `rtems/rtos:main`
- f6fc5539 - build: Fix build issues with xqspipsu on versal
- ae6b5a43 - bsps: Add flash wrapper for Xilinx GQSPI
- e258664b - libmisc/shell: Improve print messages for flashdev command

Compare with previous version

Author: Aaron Nyholm 2024-06-07T04:27:37.816Z

reset approvals from @gedare by pushing to the branch

Author: Aaron Nyholm 2024-06-07T05:27:09.426Z

added 2 commits

- 04c085d8 - bsps: Add flash wrapper for Xilinx GQSPI
- 1f2fa116 - libmisc/shell: Improve print messages for flashdev command

Compare with previous version

Author: Kinsey Moore 2024-06-07T13:53:52.273Z

resolved all threads

Author: Kinsey Moore 2024-06-09T23:32:34.937Z

With this change, the only existing consumer should also be updated in bsps/aarch64/xilinx-zynqmp/jffs2_xqspipsu.c. Other than that, everything looks ready.

Author: Aaron Nyholm 2024-06-09T23:32:34.937Z

Updated

Author: Aaron Nyholm 2024-06-09T23:31:56.395Z

added 2 commits

- 5d244bc2 - bsps: Add flash wrapper for Xilinx GQSPI
- 82b22eb7 - libmisc/shell: Improve print messages for flashdev command

Compare with previous version

Author: Aaron Nyholm 2024-06-09T23:32:34.979Z

resolved all threads

Author: Kinsey Moore 2024-06-10T14:55:16.422Z

approved this merge request

Author: Gedare Bloom 2024-06-10T17:57:49.202Z

approved this merge request

Author: Gedare Bloom 2024-06-10T17:58:07.533Z

added 10 commits

- 82b22eb7...4f1b0ca2 - 7 commits from branch `rtems/rtos:main`
- fb4f9f8c - build: Fix build issues with xqspipsu on versal
- e950c4d7 - bsps: Add flash wrapper for Xilinx GQSPI
- 7bfe79c4 - libmisc/shell: Improve print messages for flashdev command

Compare with previous version

Author: Sebastian Huber 2024-06-11T06:05:12.301Z

This change causes build issues:

```
/home/EB/sebastian_h/src/rtems/bsps/shared/dev/spi/xqspipsu-flash-
↪helper.c: In function 'QspiPsu_NOR_Read':
/home/EB/sebastian_h/src/rtems/bsps/shared/dev/spi/xqspipsu-flash-
↪helper.c:965:10: error: 'count' undeclared (first use in this␣
↪function)
965 |   while (count > XQSPI_FLASH_MAX_READ_SIZE) {
|          ^~~~~
/home/EB/sebastian_h/src/rtems/bsps/shared/dev/spi/xqspipsu-flash-
↪helper.c:965:10: note: each undeclared identifier is reported only␣
```

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```
↪once for each function it appears in
/home/EB/sebastian_h/src/rtems/bsps/shared/dev/spi/xqspipsu-flash-
↪helper.c:971:7: warning: implicit declaration of function 'memcpy' [-
↪Wimplicit-function-declaration]
971 |       memcpy(ReadBfr, tmp_buffer + startAlign,
|       ^~~~~~
/home/EB/sebastian_h/src/rtems/bsps/shared/dev/spi/xqspipsu-flash-
↪helper.c:19:1: note: include '<string.h>' or provide a declaration of
↪'memcpy'
18 | #include <rtems.h>
+++ |+#include <string.h>
19 |
/home/EB/sebastian_h/src/rtems/bsps/shared/dev/spi/xqspipsu-flash-
↪helper.c:971:7: warning: incompatible implicit declaration of built-
↪in function 'memcpy' [-Wbuiltin-declaration-mismatch]
971 |       memcpy(ReadBfr, tmp_buffer + startAlign,
|       ^~~~~~
/home/EB/sebastian_h/src/rtems/bsps/shared/dev/spi/xqspipsu-flash-
↪helper.c:971:7: note: include '<string.h>' or provide a declaration␣
↪of 'memcpy'
/home/EB/sebastian_h/src/rtems/bsps/shared/dev/spi/xqspipsu-flash-
↪helper.c:975:7: error: 'buffer' undeclared (first use in this␣
↪function); did you mean 'setbuffer'?
975 |       buffer = buffer + XQSPI_FLASH_MAX_READ_SIZE - startAlign;
|       ^~~~~~
|       setbuffer
/home/EB/sebastian_h/src/rtems/bsps/shared/dev/spi/xqspipsu-flash-
↪helper.c:976:7: error: 'offset' undeclared (first use in this␣
↪function); did you mean 'off_t'?
976 |       offset = offset + XQSPI_FLASH_MAX_READ_SIZE;
|       ^~~~~~
|       off_t
/home/EB/sebastian_h/src/rtems/bsps/shared/dev/spi/xqspipsu-flash-
↪helper.c:987:5: warning: passing argument 4 of 'QspiPsu_NOR_Read'␣
↪from incompatible pointer type [-Wincompatible-pointer-types]
987 |     &tmp_buffer);
|     ^~~~~~~~~~~
|     |
|     uint8_t ** {aka unsigned char **}
/home/EB/sebastian_h/src/rtems/bsps/shared/dev/spi/xqspipsu-flash-
↪helper.c:952:7: note: expected 'u8 *' {aka 'unsigned char *'} but␣
↪argument is of type 'uint8_t **' {aka 'unsigned char **'}
952 |   u8 *ReadBfr
|   ~~~~^~~~~~~
/home/EB/sebastian_h/src/rtems/bsps/shared/dev/spi/xqspipsu-flash-
↪helper.c:990:5: warning: incompatible implicit declaration of built-
↪in function 'memcpy' [-Wbuiltin-declaration-mismatch]
990 |     memcpy(ReadBfr, tmp_buffer + startAlign, ByteCount);
|     ^~~~~~
```

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```
/home/EB/sebastian_h/src/rtems/bsps/shared/dev/spi/xqspipsu-flash-helper.c:990:5: note: include '<string.h>' or provide a declaration of 'memcpy'

Waf: Leaving directory `/tmp/sh/b-rtems/aarch64/xilinx_zynqmp_ilp32_qemu'
```

Author: Sebastian Huber 2024-06-11T11:43:50.495Z

For a fix see !67.

Author: Sebastian Huber 2024-06-11T11:44:43.429Z

Did this ever work? You call QspiPsu_NOR_Read() recursively here.

Author: Kinsey Moore 2024-06-11T13:11:29.063Z

This piece of code was formerly external to the flash helper and got moved here on my request because it's generic and useful functionality to have. It looks like it didn't get refactored or an old version of it slipped in.

Author: Sebastian Huber 2024-06-11T13:13:40.080Z

I got it to compile, but I really don't know if it is functionally all right, see !67.

3.9.2.253 62 - aarch64/xilinx-zynqmp: Small improvements

Id	62
State	merged
Merged by	Gedare Bloom
Merged at	2024-06-10T18:01:35.075Z
Assignee(s)	Sebastian Huber
Reviewer(s)	Kinsey Moore
Created	2024-06-07T07:05:05.754Z
Updated	2024-06-10T18:01:36.567Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/62
Commit	28c7475b173da46bab8f4254447d92734818d440

Author: Sebastian Huber 2024-06-07T07:05:05.862Z

requested review from @opticron

Author: Sebastian Huber 2024-06-07T07:05:06.902Z

assigned to @sebhub

Author: Kinsey Moore 2024-06-07T12:22:05.434Z

approved this merge request

Author: Sebastian Huber 2024-06-09T14:45:26.666Z

added 1 commit

- 81d03937 - aarch64/xilinx-zynqmp: Relocate RAM area

Compare with previous version

Author: Sebastian Huber 2024-06-09T14:45:39.342Z

reset approvals from @opticron by pushing to the branch

Author: Kinsey Moore 2024-06-10T14:56:25.517Z

approved this merge request

Author: Gedare Bloom 2024-06-10T18:00:59.219Z

approved this merge request

Author: Gedare Bloom 2024-06-10T18:01:11.481Z

added 18 commits

- 81d03937...7bfe79c4 - 10 commits from branch `rtems/rtos:main`
- 1421b9f7 - bsps/aarch64: Use BSP fatal error
- 36e596a0 - bsps/aarch64: Use interrupt entry for IPI
- ce3de685 - bsps/aarch64: Always set the start vector table
- 41b597e8 - aarch64/xilinx-zynqmp: Use forward declaration
- b9148332 - aarch64/xilinx-zynqmp: Include standard header
- b826e20d - aarch64/xilinx-zynqmp: Add BSP Doxygen group
- 80a22dc0 - aarch64/xilinx-zynqmp: Replace file header
- 28c7475b - aarch64/xilinx-zynqmp: Relocate RAM area

Compare with previous version

3.9.2.254 63 - BSP fatal extension improvements

Id	63
State	merged
Merged by	Gedare Bloom
Merged at	2024-06-10T17:33:20.022Z
Assignee(s)	Sebastian Huber
Created	2024-06-07T07:21:09.096Z
Updated	2024-06-10T17:33:21.467Z
Milestone	6.1
Labels	bsp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/63
Commit	4f1b0ca27aabc6eee7a3448413d2e14837db32a0

Author: Sebastian Huber 2024-06-07T07:21:09.264Z

assigned to @sebhub

Author: Kinsey Moore 2024-06-07T12:24:09.682Z

approved this merge request

Author: Gedare Bloom 2024-06-10T17:32:46.801Z

approved this merge request

Author: Gedare Bloom 2024-06-10T17:32:57.082Z

added 7 commits

- 6a597445...fc68da47 - 5 commits from branch `rtems/rtos:main`
- 0bbb25b1 - bsps: Disable interrupts in fatal extension
- 4f1b0ca2 - bsps: Request SMP shutdown in fatal extension

Compare with previous version

3.9.2.255 57 - rtems: Clarify rtems_interrupt_set_priority()

Id	57
State	merged
Merged by	Kinsey Moore
Merged at	2024-06-06T23:42:39.733Z
Assignee(s)	Sebastian Huber
Created	2024-06-04T09:34:53.980Z
Updated	2024-06-06T23:42:41.867Z
Milestone	6.1
Labels	rtems::kernel
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/57
Commit	cbe60cea71a07106922b4b4db52a912216987962

Summary

rtems: Clarify rtems_interrupt_set_priority()

Update #5002.

Author: Sebastian Huber 2024-06-04T09:34:54.076Z

assigned to @sebhub

Author: Gedare Bloom 2024-06-06T21:02:32.962Z

approved this merge request

Author: Kinsey Moore 2024-06-06T23:41:16.072Z

added 14 commits

- b2bf0691...e1be6899 - 13 commits from branch `rtems/rtos:main`
- cbe60cea - rtems: Clarify rtems_interrupt_set_priority()

Compare with previous version

Author: Kinsey Moore 2024-06-06T23:42:28.392Z

approved this merge request

3.9.2.256 58 - smpschedaffinity02: Fix sporadic test failures

Id	58
State	merged
Merged by	Amar Takhar
Merged at	2024-06-06T21:49:33.909Z
Created	2024-06-04T18:30:09.209Z
Updated	2024-06-06T21:49:35.212Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/58
Commit	e1be689980bacbdaca279783ba184a89c1bb0ee8

Summary

smpschedaffinity02: Fix sporadic test failures

Under rare timing conditions, the polled mutex obtain can favour one processor and starve the other. This can lead to test failures.

Author: Sebastian Huber 2024-06-06T05:42:41.191Z

added 3 commits

- 82d5aabf...42ad53f3 - 2 commits from branch `rtems/rtos:main`
- e1be6899 - smpschedaffinity02: Fix sporadic test failures

Compare with previous version

Author: Gedare Bloom 2024-06-06T21:03:30.726Z

approved this merge request

Author: Amar Takhar 2024-06-06T21:49:29.756Z

approved this merge request

3.9.2.257 46 - score: Add _SMP_barrier_Wait_for_other()

Id	46
State	merged
Merged by	Amar Takhar
Merged at	2024-06-04T22:01:17.977Z
Assignee(s)	Sebastian Huber
Created	2024-05-24T06:45:18.806Z
Updated	2024-06-04T22:01:20.976Z
Milestone	6.1
Labels	rtems::score
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/46
Commit	25ba67963aa23dff4fbe87a2e0c56b8c011cdf8a

Summary

score: Add _SMP_barrier_Wait_for_other()

This function may be used to ensure that a count of processors performed a set of actions and then wait on the barrier performing only memory loads (no memory stores).

Author: Sebastian Huber 2024-05-24T06:45:18.898Z

assigned to @sebhub

Author: Sebastian Huber 2024-05-24T06:54:07.941Z

mentioned in merge request !44

Author: Gedare Bloom 2024-05-31T20:01:31.208Z

approved this merge request

Author: Amar Takhar 2024-06-04T22:00:57.916Z

added 16 commits

- e1f328e9...6c66526e - 15 commits from branch `rtems/rtos:main`
- 25ba6796 - score: Add _SMP_barrier_Wait_for_other()

Compare with previous version

Author: Amar Takhar 2024-06-04T22:01:13.788Z

approved this merge request

3.9.2.258 52 - x86_64/include/rtems/score/cpuimpl.h: Relicense to 2-BSD

Id	52
State	merged
Merged by	Chris Johns
Merged at	2024-05-28T21:24:10.333Z
Assignee(s)	Joel Sherrill
Created	2024-05-28T20:47:38.908Z
Updated	2024-05-28T21:24:12.050Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/52
Commit	e63c867104f3bf63d66dbfd067c15a914debb228

Summary

x86_64/include/rtems/score/cpuimpl.h: Relicense to 2-BSD

This file had two copyrights but was missed in the earlier review. Both parties had given permission.

Update #3053.

Author: Joel Sherrill 2024-05-28T20:47:39.070Z

assigned to @joel

Author: Amar Takhar 2024-05-28T20:54:02.637Z

approved this merge request

Author: Chris Johns 2024-05-28T21:24:02.688Z

approved this merge request

3.9.2.259 31 - build: Simplify wscript code

Id	31
State	merged
Merged by	Gedare Bloom
Merged at	2024-05-23T20:56:04.723Z
Created	2024-05-14T05:51:07.181Z
Updated	2024-05-23T20:56:07.413Z
Milestone	6.1
Labels	rtems::build
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/31
Commit	a85402f76f7a249eebef488166faba06d5b52add

Summary

Author: Chris Johns 2024-05-14T05:57:55.652Z

approved this merge request

Author: Kinsey Moore 2024-05-21T20:27:23.085Z

added 8 commits

- 31aaf164...cfb9f96c - 7 commits from branch `rtems/rtos:main`
- 7b5c9267 - build: Simplify wscript code

Compare with previous version

Author: Chris Johns 2024-05-23T00:00:20.598Z

added 8 commits

- 7b5c9267...e74cea41 - 7 commits from branch `rtems/rtos:main`
- db570c67 - build: Simplify wscript code

Compare with previous version

Author: Gedare Bloom 2024-05-23T20:55:24.829Z

added 3 commits

- db570c67...3225f69d - 2 commits from branch `rtems/rtos:main`
- a85402f7 - build: Simplify wscript code

Compare with previous version

Author: Gedare Bloom 2024-05-23T20:55:53.631Z

approved this merge request

3.9.2.260 41 - posix: Fixed header comment of aio_read.c

Id	41
State	merged
Merged by	Gedare Bloom
Merged at	2024-05-23T19:10:33.860Z
Created	2024-05-21T16:57:26.125Z
Updated	2024-05-23T19:10:36.532Z
Milestone	6.1
Labels	api::posix
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/41
Commit	d1a38c7749c7f4f9a84b7ccdc29ad38a780a4069

Summary

Corrected the header comment of aio_read.c

Fixes #5015

Author: Alessandro Nardin 2024-05-21T16:58:01.980Z

changed the description

Author: Joel Sherrill 2024-05-23T19:05:34.870Z

Can you convert the documentation in all aio*.c to Doxygen? This style of comments dates from the earliest days of RTEMS.

Author: Alessandro Nardin 2024-05-23T19:05:34.870Z

I was looking at the Doxygen Guidelines in the RTEMS documentation and it looks like every function declaration should be documented in the header. Right now the only documented function declaration is aio_cancel(). Should i move the documentation present in the various aio*.c files in aio.h ?

Author: Alessandro Nardin 2024-05-23T08:43:58.657Z

changed this line in version 4 of the diff

Author: Kinsey Moore 2024-05-21T20:22:30.762Z

added 2 commits

- cfb9f96c - 1 commit from branch `rtems/rtos:main`
- 7ba99e25 - Fixed header comment of aio_read.c

Compare with previous version

Author: Chris Johns 2024-05-21T23:00:23.399Z

approved this merge request

Author: Alessandro Nardin 2024-05-23T07:07:59.312Z

added 8 commits

- 7ba99e25...e74cea41 - 7 commits from branch `rtems/rtos:main`
- b4118cd9 - Merge branch rtems:main into aio-read-correction

Compare with previous version

Author: Alessandro Nardin 2024-05-23T08:43:58.855Z

added 1 commit

- ae771d14 - fixed style in aio_read.c and converted documentation to doxygen

Compare with previous version

Author: Alessandro Nardin 2024-05-23T08:44:14.296Z

reset approvals from @chris by pushing to the branch

Author: Joel Sherrill 2024-05-23T18:40:29.062Z

approved this merge request

Author: Gedare Bloom 2024-05-23T19:05:34.886Z

resolved all threads

Author: Gedare Bloom 2024-05-23T19:07:10.872Z

added 3 commits

- 80c94eef - 1 commit from branch `rtems/rtos:main`
- b04e2db3 - Fixed header comment of aio_read.c
- d1a38c77 - fixed style in aio_read.c and converted documentation to doxygen

Compare with previous version

Author: Gedare Bloom 2024-05-23T19:08:26.880Z

changed title from **Fixed header comment of aio_read.c** to **{+posix: +}Fixed header comment of aio_read.c**

Author: Gedare Bloom 2024-05-23T19:08:55.766Z

approved this merge request

3.9.2.261 12 - arm: Fix Armv7-M floating-point support

Id	12
State	merged
Merged by	Kinsey Moore
Merged at	2024-05-22T01:52:07.631Z
Created	2024-05-02T11:59:25.894Z
Updated	2024-05-22T01:52:10.162Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/12
Commit	e74cea4172ee8564bef5f8500c5dd07512257d99

The _ARMV7M_Pendable_service_call() and _ARMV7M_Supervisor_call() work as a team. The –ef and ++ef is there to preserve the original exception frame across the jump to and from _ARMV7M_Thread_dispatch().

```
void _ARMV7M_Pendable_service_call( void )
{
Per_CPU_Control *cpu_self = _Per_CPU_Get();

/*
* We must check here if a thread dispatch is allowed.  Right after a
* "msr basepri_max, %[basepri]" instruction an interrupt service may
still
* take place.  However, pendable service calls that are activated during
* this interrupt service may be delayed until interrupts are enable
again.
*/
if (
( cpu_self->isr_nest_level |
cpu_self->thread_dispatch_disable_level ) == 0
) {
ARMV7M_Exception_frame *ef;

cpu_self->isr_nest_level = 1;

_ARMV7M_SCB->icsr = ARMV7M_SCB_ICSR_PENDSVCLR;
_ARMV7M_Trigger_lazy_floating_point_context_save();

At this point, the floating point context should be saved on the
exception frame.  The FPCCR.LSPACT bit should be 0, to indicate that lazy
```

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```
state preservation is no longer active.

ef = (ARMV7M_Exception_frame *) _ARMV7M_Get_PSP();
--ef;
_ARMV7M_Set_PSP( (uint32_t) ef );

This new exception frame is just there to jump to
_ARMV7M_Thread_dispatch(). Here was the problem, that FPCCR.LSPACT was
not set to 1.  This resulted in a floating-point context from
uninitialized memory which could corrupt the floating-point state.  See
also:

https://developer.arm.com/documentation/ddi0403/d/System-Level-Architecture/
↪System-Level-Programmers--Model/ARMv7-M-exception-model/Exception-return-
↪behavior?lang=en

/*
* According to "ARMv7-M Architecture Reference Manual" section B1.5.6
* "Exception entry behavior" the return address is half-word aligned.
*/
ef->register_pc = (void *)
((uintptr_t) _ARMV7M_Thread_dispatch & ~((uintptr_t) 1));

ef->register_xpsr = 0x01000000U;
}
}
```

Close #4923.

Author: Sebastian Huber 2024-05-02T12:01:45.890Z

mentioned in merge request !10

Author: Amar Takhar 2024-05-06T05:40:00.789Z

added 9 commits

- 75cc5fd8...33f92239 - 8 commits from branch `rtems/rtos:main`
- 0a5b3653 - arm: Fix Armv7-M floating-point support

Compare with previous version

Author: Kinsey Moore 2024-05-07T23:18:02.092Z

added 10 commits

- 0a5b3653...1f4e0c10 - 8 commits from branch `rtems/rtos:main`
- 578b179c - bsps: Use interrupt entry in clock driver

- 79c73681 - arm: Fix Armv7-M floating-point support

Compare with previous version

Author: Sebastian Huber 2024-05-13T05:00:39.914Z

See discussion in !10, this merge request should be checked in and !10 should be closed.

Author: Kinsey Moore 2024-05-17T14:07:25.368Z

added 14 commits

- 79c73681...ab8817ca - 13 commits from branch `rtems/rtos:main`
- 5c02691f - arm: Fix Armv7-M floating-point support

Compare with previous version

Author: Joel Sherrill 2024-05-17T14:11:28.870Z

approved this merge request

Author: Kinsey Moore 2024-05-17T14:18:59.213Z

@cedric I think the approvals setup is now live and functional. I can't approve because I clicked rebase and became a committer, but you should be able to approve and then it can be merged.

Author: Gedare Bloom 2024-05-17T14:28:51.445Z

approved this merge request

Author: Kinsey Moore 2024-05-22T01:31:14.388Z

added 13 commits

- 5c02691f...2c03b41f - 12 commits from branch `rtems/rtos:main`
- 8039398e - arm: Fix Armv7-M floating-point support

Compare with previous version

Author: Kinsey Moore 2024-05-22T01:46:03.381Z

added 2 commits

- b874f4c9 - 1 commit from branch `rtems/rtos:main`

- e74cea41 - arm: Fix Armv7-M floating-point support

Compare with previous version

3.9.2.262 30 - cpukit/libdl/aarch64: Improve debug output

Id	30
State	merged
Merged by	Chris Johns
Merged at	2024-05-21T23:28:17.714Z
Assignee(s)	Kinsey Moore
Created	2024-05-10T16:06:27.044Z
Updated	2024-05-21T23:28:18.948Z
Milestone	6.1
Labels	arch:aarch64, cpukit::dl
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/30
Commit	2c03b41fdcd5a9efe49e1103e5762a8d9073a13d

Summary

This rearranges the debug output so that more information is available on a failed alignment check.

Author: Kinsey Moore 2024-05-10T16:06:27.216Z

assigned to @opticron

Author: Joel Sherrill 2024-05-21T20:12:50.322Z

Looks good to hopefully improve catching an error.

Author: Joel Sherrill 2024-05-21T20:12:54.840Z

approved this merge request

Author: Kinsey Moore 2024-05-21T20:18:30.825Z

added 8 commits

- c132c9bb...cfb9f96c - 7 commits from branch `rtems/rtos:main`
- 97466a03 - cpukit/libdl/aarch64: Improve debug output

Compare with previous version

Author: Chris Johns 2024-05-21T23:28:00.834Z

approved this merge request

Author: Chris Johns 2024-05-21T23:28:05.534Z

added 5 commits

- 97466a03...f0944277 - 4 commits from branch `rtems/rtos:main`
- 2c03b41f - cpukit/libdl/aarch64: Improve debug output

Compare with previous version

3.9.2.263 36 - spec/xilinx-zynqmp-rpu: Calculate correct RAM area

Id	36
State	merged
Merged by	Chris Johns
Merged at	2024-05-21T22:57:51.028Z
Assignee(s)	Kinsey Moore
Created	2024-05-17T19:25:48.605Z
Updated	2024-05-21T22:57:52.851Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/36
Commit	7eb3ef09b06ff19ecb32c932866f53ea21c8b12c

Summary

spec/xilinx-zynqmp-rpu: Calculate correct RAM area

There were some problems in the math calculating RAM length and NOCACHE origin location. These have been resolved in this patch allowing RTEMS RAM space to be relocated above 0xfe00000 to better accomodate other elements in the system.

Author: Kinsey Moore 2024-05-17T19:25:48.811Z

assigned to @opticron

Author: Kinsey Moore 2024-05-17T19:26:05.012Z

added 4 commits

- 3e837678...47808714 - 2 commits from branch `rtems/rtos:main`
- 96fa9ad2 - cpukit/libdl/aarch64: Improve debug output
- 070cfd46 - spec/xilinx-zynqmp-rpu: Calculate correct RAM area

Compare with previous version

Author: Kinsey Moore 2024-05-17T19:27:57.009Z

added 1 commit

- 40bfc0d7 - spec/xilinx-zynqmp-rpu: Calculate correct RAM area

Compare with previous version

Author: Kinsey Moore 2024-05-17T19:58:02.561Z

added 2 commits

- fafd85e1 - 1 commit from branch `rtems/rtos:main`
- 17615f71 - spec/xilinx-zynqmp-rpu: Calculate correct RAM area

Compare with previous version

Author: Amar Takhar 2024-05-20T02:37:10.113Z

Just testing.

Author: Kinsey Moore 2024-05-20T03:03:36.802Z

added 3 commits

- 17615f71...e95dabc7 - 2 commits from branch `rtems/rtos:main`
- 7eceeba6 - spec/xilinx-zynqmp-rpu: Calculate correct RAM area

Compare with previous version

Author: Sebastian Huber 2024-05-21T08:53:42.005Z

This change is fine. I have a larger patch set for the RPU in my queue which touches also this area, however, it depends on !16.

Author: Kinsey Moore 2024-05-21T17:37:32.905Z

added 2 commits

- 79b385c8 - 1 commit from branch `rtems/rtos:main`
- 6f6a1691 - spec/xilinx-zynqmp-rpu: Calculate correct RAM area

Compare with previous version

Author: Joel Sherrill 2024-05-21T20:07:43.857Z

i reviewed this and am ok. Hopefully a second approval can push this over the line.

Author: Joel Sherrill 2024-05-21T20:07:48.486Z

approved this merge request

Author: Kinsey Moore 2024-05-21T20:17:13.541Z

added 2 commits

- cfb9f96c - 1 commit from branch `rtems/rtos:main`
- 63dddbdb - spec/xilinx-zynqmp-rpu: Calculate correct RAM area

Compare with previous version

Author: Chris Johns 2024-05-21T22:54:27.551Z

approved this merge request

Author: Chris Johns 2024-05-21T22:55:15.916Z

added 2 commits

- fca3f2b8 - 1 commit from branch `rtems/rtos:main`
- 7eb3ef09 - spec/xilinx-zynqmp-rpu: Calculate correct RAM area

Compare with previous version

3.9.2.264 17 - rtems: Add get/set interrupt priorities

Id	17
State	merged
Merged by	Kinsey Moore
Merged at	2024-05-10T15:02:18.598Z
Created	2024-05-02T13:00:25.078Z
Updated	2024-05-10T15:02:20.826Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/17
Commit	ab8817ca03a2518679edccea7d1346764a27451c

Summary

Add directives to get and set the priority of an interrupt vector.

Implement the directives for the following BSP families:

- arm/lpc24xx
- arm/lpc32xx
- powerpc/mpc55xxevb
- powerpc/qoriq

Implement the directives for the following interrupt controllers:

- GICv2 and GICv3 (arm and aarch64)

- NVIC (arm)
- PLIC (riscv)

Update #5002.

Author: Kinsey Moore 2024-05-07T19:15:20.743Z

added 8 commits

- d1618873...f5b52a3a - 7 commits from branch `rtems/rtos:main`
- 4b19581f - rtems: Add get/set interrupt priorities

Compare with previous version

Author: Kinsey Moore 2024-05-07T20:20:30.374Z

The original implementations of these functions handle non-ARCH_V4 builds while the new versions do not. Was this functionality unused?

Author: Kinsey Moore 2024-05-07T20:20:30.374Z

Disregard, I see that the functionality mentioned was broken out into a separate implementation.

Author: Kinsey Moore 2024-05-07T20:20:30.391Z

resolved all threads

Author: Kinsey Moore 2024-05-07T21:01:13.316Z

approved this merge request

Author: Chris Johns 2024-05-08T07:37:30.784Z

Is `priority` unused?

If there is no debug `bsp_interrupt_assert` becomes `((void) 0)` so does that mean `vector` is unused?

I will not comment on the other cases in this and the other files and assume this comment covers those cases as well.

Author: Sebastian Huber 2024-05-08T07:37:30.784Z

This is the version for BSPs which have no real implementation of this new API.

Author: Chris Johns 2024-05-08T07:37:30.784Z

Do we get warnings now? If not why not?

Author: Sebastian Huber 2024-05-08T07:37:30.784Z

Unused parameter warnings are not enabled as far as I know.

Author: Chris Johns 2024-05-08T07:37:30.784Z

Ah OK then turning it on would cause a lot of problems.

Author: Chris Johns 2024-05-08T07:35:54.055Z

Is this more a case of not supported on the BSP/arch? Would saying this help someone who sees the interface but does not know the BSP specifics understand what the error is?

Author: Sebastian Huber 2024-05-08T07:35:54.055Z

This error is returned if there is no real implementation or the interrupt controller doesn't support priorities. It is also associated with the can_get_priority attribute.

Author: Chris Johns 2024-05-08T07:35:54.055Z

Makes sense. Can this be added?

Author: Sebastian Huber 2024-05-08T07:35:44.643Z

changed this line in version 4 of the diff

Author: Sebastian Huber 2024-05-08T07:35:54.055Z

Ok, I updated the documentation.

Author: Chris Johns 2024-05-08T07:25:36.056Z

Is <= OK or should it be <? The test as is means `MPC55XX_INTC_DISABLED_PRIORITY` is a valid priority?

If it is valid then I suggest this is noted in a comment.

Author: Sebastian Huber 2024-05-08T07:25:36.056Z

Yes, 15 is a valid priority value. The effect is that this interrupt is disabled.

Author: Sebastian Huber 2024-05-08T07:23:14.535Z

changed this line in version 3 of the diff

Author: Sebastian Huber 2024-05-08T07:25:36.056Z

I added a comment.

Author: Chris Johns 2024-05-08T07:25:51.695Z

Same comment as `MPC55XX`. Is this test valid or should it be <?

Author: Sebastian Huber 2024-05-08T07:23:15.328Z

changed this line in version 3 of the diff

Author: Sebastian Huber 2024-05-08T07:25:51.695Z

I added a comment.

Author: Chris Johns 2024-05-08T07:26:16.642Z

Am I to assume the `15` is related to the comment in the header file about the PIC value?

Should this be a define from that set so a check takes to those defines and so the comment?

Author: Sebastian Huber 2024-05-08T07:23:15.791Z

changed this line in version 3 of the diff

Author: Sebastian Huber 2024-05-08T07:26:16.642Z

I replaced the UINT32_C(15) with QORIQ_PIC_PRIORITY_DISABLED.

Author: Sebastian Huber 2024-05-08T07:23:16.009Z

added 3 commits

- 4b19581f...40ddcf95 - 2 commits from branch `rtems/rtos:main`
- 6f1503b9 - rtems: Add get/set interrupt priorities

Compare with previous version

Author: Sebastian Huber 2024-05-08T07:23:29.833Z

reset approvals from @opticron by pushing to the branch

Author: Sebastian Huber 2024-05-08T07:27:34.043Z

I also updated the documentation to cross reference rtems_interrupt_set_priority() and CONFIGURE_INTERRUPT_STACK_SIZE.

Author: Sebastian Huber 2024-05-08T07:35:44.894Z

added 1 commit

- 78bf4217 - rtems: Add get/set interrupt priorities

Compare with previous version

Author: Chris Johns 2024-05-08T07:37:30.815Z

resolved all threads

Author: Chris Johns 2024-05-08T07:38:22.984Z

approved this merge request

Author: Kinsey Moore 2024-05-10T13:24:50.811Z

added 5 commits

- 78bf4217...f6c8726c - 4 commits from branch `rtems/rtos:main`
- 554a108e - rtems: Add get/set interrupt priorities

Compare with previous version

Author: Kinsey Moore 2024-05-10T13:26:27.362Z

added 8 commits

- 554a108e...89ccc65d - 7 commits from branch `rtems/rtos:main`
- ab8817ca - rtems: Add get/set interrupt priorities

Compare with previous version

Author: Kinsey Moore 2024-05-10T15:02:12.567Z

approved this merge request

3.9.2.265 20 - Synchronize timecounter support with FreeBSD 2024-05-06

Id	20
State	merged
Merged by	Kinsey Moore
Merged at	2024-05-10T13:26:11.427Z
Reviewer(s)	Chris Johns
Created	2024-05-06T14:20:28.124Z
Updated	2024-05-10T13:26:13.740Z
Milestone	6.1
Labels	rtems::score
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/20
Commit	89ccc65d1a4d8d6aea6b21551296aedd19d5a034

Summary

Author: Chris Johns 2024-05-06T23:03:53.735Z

approved this merge request

Author: Chris Johns 2024-05-07T05:11:26.927Z

requested review from @chris

Author: Sebastian Huber 2024-05-07T09:14:32.467Z

added 15 commits

- d802b343...168bcd2a - 5 earlier commits
- 25d227f1 - bsps/arm: Add Doxygen group for Armv7-M SysTick
- c18851ba - bsps/arm: Add CMSIS files to Doxygen group
- 30413b08 - bsps/arm: Fix Doxygen group assignment
- 982ee02e - sys/sys: further adoption of SPDX licensing ID tags.
- 94a954a8 - spdx: The BSD-2-Clause-FreeBSD identifier is obsolete, drop - FreeBSD
- 5fc0796d - kern_ntptime: Fix undefined behavior of the shift operator
- 4bd8af9b - sys: Remove $FreeBSD$: two-line .h pattern
- 5dba74cb - sys: Remove $FreeBSD$: one-line .c pattern

- b3aacb6e - timerfd: Move implementation from linux compat to cpukit/score/src
- df167273 - Remove a reference to xrpu from timetc.h

Compare with previous version

Author: Sebastian Huber 2024-05-07T09:14:45.468Z

reset approvals from @chris by pushing to the branch

Author: Sebastian Huber 2024-05-07T09:15:43.358Z

added 7 commits

- b8c47bbc - sys/sys: further adoption of SPDX licensing ID tags.
- e5641803 - spdx: The BSD-2-Clause-FreeBSD identifier is obsolete, drop - FreeBSD
- 51753a2f - kern_ntptime: Fix undefined behavior of the shift operator
- 70863e90 - sys: Remove $FreeBSD$: two-line .h pattern
- f37f0f6d - sys: Remove $FreeBSD$: one-line .c pattern
- f28fd988 - timerfd: Move implementation from linux compat to cpukit/score/src
- 34f385e6 - Remove a reference to xrpu from timetc.h

Compare with previous version

Author: Sebastian Huber 2024-05-07T09:16:17.646Z

I updated the merge request to the new main.

Author: Sebastian Huber 2024-05-07T19:19:27.255Z

added 13 commits

- 34f385e6...f5b52a3a - 6 commits from branch `rtems/rtos:main`
- 0d880b6c - sys/sys: further adoption of SPDX licensing ID tags.
- 9fe57e7d - spdx: The BSD-2-Clause-FreeBSD identifier is obsolete, drop - FreeBSD
- a4834817 - kern_ntptime: Fix undefined behavior of the shift operator
- f46781a8 - sys: Remove $FreeBSD$: two-line .h pattern
- e0092f1d - sys: Remove $FreeBSD$: one-line .c pattern
- 9a1fd2e9 - timerfd: Move implementation from linux compat to cpukit/score/src

- 497b1468 - Remove a reference to xrpu from timetc.h

Compare with previous version

Author: Chris Johns 2024-05-08T07:52:33.458Z

approved this merge request

Author: Chris Johns 2024-05-08T07:53:30.488Z

added 9 commits

- 497b1468...40ddcf95 - 2 commits from branch `rtems/rtos:main`
- ac64ff71 - sys/sys: further adoption of SPDX licensing ID tags.
- f4385965 - spdx: The BSD-2-Clause-FreeBSD identifier is obsolete, drop - FreeBSD
- 8f2adbe6 - kern_ntptime: Fix undefined behavior of the shift operator
- 11724e5a - sys: Remove $FreeBSD$: two-line .h pattern
- f898cbdb - sys: Remove $FreeBSD$: one-line .c pattern
- 9077f5bf - timerfd: Move implementation from linux compat to cpukit/score/src
- eadfdc70 - Remove a reference to xrpu from timetc.h

Compare with previous version

Author: Kinsey Moore 2024-05-10T13:24:40.607Z

added 11 commits

- eadfdc70...f6c8726c - 4 commits from branch `rtems/rtos:main`
- b294ef23 - sys/sys: further adoption of SPDX licensing ID tags.
- e11536c3 - spdx: The BSD-2-Clause-FreeBSD identifier is obsolete, drop - FreeBSD
- 42649240 - kern_ntptime: Fix undefined behavior of the shift operator
- 770ef97a - sys: Remove $FreeBSD$: two-line .h pattern
- 7867005d - sys: Remove $FreeBSD$: one-line .c pattern
- c71d561b - timerfd: Move implementation from linux compat to cpukit/score/src
- 89ccc65d - Remove a reference to xrpu from timetc.h

Compare with previous version

Author: Kinsey Moore 2024-05-10T13:26:08.026Z

approved this merge request

3.9.2.266 14 - Build optimizations for arm BSPs

Id	14
State	merged
Merged by	Kinsey Moore
Merged at	2024-05-10T13:24:28.030Z
Reviewer(s)	Chris Johns
Created	2024-05-02T12:48:48.391Z
Updated	2024-05-10T13:24:29.986Z
Milestone	6.1
Labels	rtems::build
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/14
Commit	f6c8726cb7d39369f3341e62d5d2b86793896f02

Author: Sebastian Huber 2024-05-02T12:54:29.284Z

changed title from **Build optimizations for arm {-bsp-}s** to **Build optimizations for arm {+BSP+}s**

Author: Sebastian Huber 2024-05-02T12:54:43.770Z

changed the description

Author: Chris Johns 2024-05-06T03:59:43.102Z

approved this merge request

Author: Chris Johns 2024-05-06T04:01:20.193Z

I struggled with the name of this MR. I was looking for code optimizations for ARM BSPs and there are none.

Out of interest how are the changes build system optimizations?

Author: Sebastian Huber 2024-05-07T04:43:32.055Z

Build tasks are moved from shared items to BSP items which actually use them.

Author: Amar Takhar 2024-05-06T05:34:38.528Z

added 5 commits

- bd2fee87...86dcfc7c - 2 commits from branch `rtems/rtos:main`
- bc48bbd0 - bsps/arm: Move BSP-specific header file installs
- 16e441aa - bsps/arm: Use shared object for ARM920 MMU support
- f22f5f40 - bsps/arm: Move BSP-specific header file

Compare with previous version

Author: Amar Takhar 2024-05-06T05:40:19.539Z

added 9 commits

- f22f5f40...33f92239 - 6 commits from branch `rtems/rtos:main`
- 5500eb7d - bsps/arm: Move BSP-specific header file installs
- 5f00fd44 - bsps/arm: Use shared object for ARM920 MMU support
- 4e19f5d2 - bsps/arm: Move BSP-specific header file

Compare with previous version

Author: Amar Takhar 2024-05-06T05:42:31.970Z

Sorry for the noise just testing this out. I'm setting up some CI to help with merge trains.

Author: Chris Johns 2024-05-07T04:44:13.369Z

requested review from @chris

Author: Sebastian Huber 2024-05-08T14:29:44.737Z

added 12 commits

- 4e19f5d2...40ddcf95 - 9 commits from branch `rtems/rtos:main`
- 08c21318 - bsps/arm: Move BSP-specific header file installs
- d868a085 - bsps/arm: Use shared object for ARM920 MMU support
- 89443617 - bsps/arm: Move BSP-specific header file

Compare with previous version

Author: Kinsey Moore 2024-05-10T13:20:48.505Z

added 4 commits

- dfc147fd - 1 commit from branch `rtems/rtos:main`

- 5a3a85cc - bsps/arm: Move BSP-specific header file installs
- ee7f8474 - bsps/arm: Use shared object for ARM920 MMU support
- f6c8726c - bsps/arm: Move BSP-specific header file

Compare with previous version

Author: Kinsey Moore 2024-05-10T13:24:04.277Z

approved this merge request

3.9.2.267 27 - aarch64/xilinx-zynqmp: Enable errata workarounds

Id	27
State	merged
Merged by	Kinsey Moore
Merged at	2024-05-08T22:09:44.553Z
Created	2024-05-08T09:24:40.238Z
Updated	2024-05-08T22:09:47.504Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/27
Commit	dfc147fd33da7cd06e2c26b21cd669dfe1ce66d9

Summary

aarch64/xilinx-zynqmp: Enable errata workarounds

Close #5003.

Author: Sebastian Huber 2024-05-08T10:19:47.869Z

added 1 commit

- dfc147fd - aarch64/xilinx-zynqmp: Enable errata workarounds

Compare with previous version

Author: Sebastian Huber 2024-05-08T10:20:53.455Z

This change is required to build the Cortex-A53 based BSPs with the latest tools.

Author: Kinsey Moore 2024-05-08T22:09:31.642Z

Thanks for adding the no-outline-atomics flags to the generic A53 BSPs. I didn't realize that A53 cores *can't* support FEAT_LSE as per documentation and I'm surprised outline atomics are enabled when the A53 core is selected by the CPU flag.

Author: Sebastian Huber 2024-05-08T22:09:31.642Z

I am not sure if the no-outline-atomics flag is actually redundant. I used it also for the multilib configuration.

Author: Kinsey Moore 2024-05-08T22:09:31.642Z

It was when I tested on zynqmp which is why it's there. GCC was generating instructions from FEAT_LSE and throwing undefined instruction errors. No idea if it's still necessary.

Author: Kinsey Moore 2024-05-08T22:09:36.470Z

If we're going to rearrange these, should we arrange them alphabetically? Applies to the other change as well.

Author: Sebastian Huber 2024-05-08T22:09:36.470Z

They are sorted from general to specific and match with the multilib configuration.

Author: Chris Johns 2024-05-08T21:51:55.618Z

approved this merge request

Author: Kinsey Moore 2024-05-08T22:09:23.677Z

approved this merge request

Author: Kinsey Moore 2024-05-08T22:09:36.490Z

resolved all threads

3.9.2.268 23 - bsps: Use interrupt entry in clock driver

Id	23
State	merged
Merged by	Chris Johns
Merged at	2024-05-07T23:37:02.598Z
Created	2024-05-07T09:19:32.656Z
Updated	2024-05-07T23:37:09.255Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/23
Commit	40ddcf95800fabff71aa3238e0c284cde0599263

Summary

Submit again since commits disappeared.

Author: Kinsey Moore 2024-05-07T23:21:34.304Z

added 8 commits

- 1c713394...1f4e0c10 - 7 commits from branch `rtems/rtos:main`
- 40ddcf95 - bsps: Use interrupt entry in clock driver

Compare with previous version

Author: Kinsey Moore 2024-05-07T23:36:17.307Z

approved this merge request

Author: Chris Johns 2024-05-07T23:36:58.074Z

approved this merge request

3.9.2.269 24 - bsps/powerpc: Introduction of interrupt locks

Id	24
State	merged
Merged by	Chris Johns
Merged at	2024-05-07T21:14:28.989Z
Created	2024-05-07T16:31:05.542Z
Updated	2024-05-07T21:14:28.981Z
Milestone	6.1
Labels	arch:powerpc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/24
Commit	1f4e0c1036d7a814a7ce854436b5f7b82f92ef61

Summary

bsps/powerpc: Introduction of interrupt locks

Interrupt locks are introduced in shared vme device drivers to enable compilation in an SMP configuration of the qoriq BSP.

This merge request replicates the changes added in !11 that have been lost.

Author: Vincenzo Calabretta 2024-05-07T16:34:20.406Z

mentioned in merge request !11

Author: Chris Johns 2024-05-07T21:14:20.298Z

From !11 which was lost due to the history rewrite.

The changes had a review on the devel@ mailing list before we moved to GitLab. The important detail is:

> Hello Chris, it is tested on an MVME2500 which uses the powerpc/qoriq_e500 in an SMP configuration. Best regards Christian On 2024-04-18 04:04, Chris Johns wrote:
>
> > Hi Vincenzo,
> >
> > Welcome to RTEMS. What hardware in the shared VME PowerPC family of BSPS has this change been
> >
> > tested on? Thanks Chris
> >
> > I am happy with this. Any regressions on other shared PowerPC BSPs can be covered by new issues.

Author: Chris Johns 2024-05-07T21:14:22.645Z

approved this merge request

3.9.2.270 5 - Drop index.html from directory it loads by default.

Id	5
State	merged
Merged by	Amar Takhar
Merged at	2024-04-29T04:25:33.999Z
Created	2024-04-27T06:06:57.836Z
Updated	2024-04-29T04:25:35.967Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/5
Commit	3d8ddd62306ebc4b29ccb5f227052654086f51da

Summary

Drop index.html from directory it loads by default.

Testing out the new approvers setup.

Refs administration/gitlab#35

Author: Amar Takhar 2024-04-27T06:08:50.192Z

approved this merge request

Author: Chris Johns 2024-04-29T04:23:49.272Z

Loos good. Thanks for the clean up.

Author: Chris Johns 2024-04-29T04:23:52.505Z

approved this merge request

3.9.2.271 4 - Add an additional line for consistency.

Id	4
State	merged
Merged by	Amar Takhar
Merged at	2024-04-27T01:33:53.970Z
Created	2024-04-26T17:53:56.934Z
Updated	2024-04-27T01:33:55.251Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/4
Commit	fb3d4a8f5abf116905c18e69c7bdf755d04e0dd6

Summary

Add an additional line for consistency.

This is also to test the merge template which just sets the milestone.

Author: Amar Takhar 2024-04-26T23:56:32.059Z

Still unsure why the milestone is not being set when I can set it the comments. See:

Author: Amar Takhar 2024-04-26T23:57:01.252Z

Yes it just set OK but not from the Default template.

Author: Amar Takhar 2024-04-27T01:27:22.530Z

approved this merge request

Author: Chris Johns 2024-04-27T01:31:58.670Z

approved this merge request

3.9.2.272 2 - bsp/arm/zynq: Move README to README.md

Id	2
State	merged
Merged by	Chris Johns
Merged at	2024-04-25T22:06:59.729Z
Assignee(s)	Chris Johns
Created	2024-04-25T22:03:48.504Z
Updated	2024-04-25T22:07:01.003Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/2
Commit	7db19489176bc099d76486e0f4b7ea81c416eb6a

Author: Chris Johns 2024-04-25T22:03:48.644Z

assigned to @chris

Author: Amar Takhar 2024-04-25T22:04:49.656Z

approved this merge request

Author: Kinsey Moore 2024-04-25T22:06:12.343Z

approved this merge request

3.9.2.273 1 - Convert README to MarkDown

Id	1
State	merged
Merged by	Amar Takhar
Merged at	2024-04-25T04:50:59.852Z
Created	2024-04-24T22:29:39.834Z
Updated	2024-04-25T05:50:36.552Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/1
Commit	3fc3a4f8598a5e4a9d06410931fa654f718978f5

In preparation for moving to MarkDown.

Author: Amar Takhar 2024-04-24T22:30:12.665Z

added 5 commits

- bb7d37df...912d7572 - 3 commits from branch `rtems/rtos:main`
- ba8bcfeb - Rename README to README.md

- 710880c2 - Convert README to MarkDown.

Compare with previous version

Author: Chris Johns 2024-04-25T01:13:15.693Z

I like RTEMS in the title for those who may not pick up the what it stands for. What about:

> RTEMS - Real-Time Executive for Multiprocessing Systems
>
> ?

Author: Amar Takhar 2024-04-25T01:13:15.693Z

The very first sentence right after that says RTEMS I removed it because it was silly seeing it twice and it's hard to make the next sentence work without saying RTEMS.

Author: Chris Johns 2024-04-25T01:13:15.693Z

I have not viewed a rendered version and I have now by browsing the files under the commit (nice :smile:). It looks good.

Author: Chris Johns 2024-04-25T01:17:55.575Z

What about an update here while we make the change and say the license is permissive?

Author: Amar Takhar 2024-04-25T01:17:55.575Z

I'm converting to MarkDown right now I didn't even read the content really other than capitalising the first letters. We can make changes after it's converted?

Author: Chris Johns 2024-04-25T00:47:06.918Z

Looks good.

Do we want to add support is via RTEMS GitLab?

Author: Amar Takhar 2024-04-25T01:17:55.594Z

resolved all threads

Author: Chris Johns 2024-04-25T01:24:38.795Z

approved this merge request

Author: Amar Takhar 2024-04-25T01:30:19.147Z

I'm going to close this because we've hit a bug in GitLab. I've turned off 'pipeline must succeed' but it's not doing anything so will re-submit see:

- https://gitlab.com/gitlab-org/gitlab/-/issues/334281

Author: Chris Johns 2024-04-25T01:33:57.391Z

approved this merge request

Author: Amar Takhar 2024-04-25T01:44:31.233Z

Closing the merge request and re-opening has fixed the pipeline issue. We aren't launching with pipelines so for now we'll keep the requirement off.

Author: Amar Takhar 2024-04-25T03:25:16.510Z

added 3 commits

- bbe12d62 - 1 commit from branch `rtems/rtos:main`
- 5b5c4a05 - Rename README to README.md
- 3fc3a4f8 - Convert README to MarkDown.

Compare with previous version

Author: Amar Takhar 2024-04-25T04:05:28.625Z

approved this merge request

Author: Amar Takhar 2024-04-25T04:05:52.736Z

Enabled self approval for testing purposes.

Author: Chris Johns 2024-04-25T04:50:15.270Z

approved this merge request

Author: Amar Takhar 2024-04-25T05:50:36.520Z

mentioned in issue administration/gitlab#15

3.9.2.274 26 - Draft: Main (closed)

Id	26
State	closed
Closed by	xiaojun zheng
Created	2024-05-08T01:37:44.930Z
Closed	2024-05-08T01:38:33.008Z
Updated	2025-09-19T02:39:35.694Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/26
Commit	4655ceee4d6ca784d036b6c1aded8191b22010db

Summary

3.9.2.275 10 - Draft: Fix 4923 (FPU context init/switch on ARMv7-M platform) (closed)

Id	10
State	closed
Closed by	Kinsey Moore
Created	2024-05-01T20:34:45.140Z
Closed	2024-05-17T14:21:09.911Z
Updated	2025-09-19T02:39:34.985Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/10
Commit	2f7d3c2bd5e59d01bc0e303172e9516588da4eaa

Summary

My attempt to fix bug #4923

The problem can be reproduced easily after applying the following patch to the paranoia.exe test for example:

https://devel.rtems.org/attachment/ticket/4923/bug-1-make-paranoia-test-fail.patch

The test fails after the added sleep(1) at the beginning of Init() and the CONFIGURE_STACK_CHECKER_ENABLED option which poisons the stack.

I've found two problems which are fixed here:

1. The FPSCR was not saved and restored during a user-generated context switches (sleep() call for example). The first patch fixes that.
2. The FPSCR (and half the FPU register file) was not initialised for new threads, it got its data from an unused/unitialised part of the thread stack. The second patch fixes that.

Note: If the stack was initialised with zeros, and if in the application there was never any change to the FPU registers (rounding mode for example), then everything could work by accident.

I'm marking that as a draft because this is my first attempt at a merge request here, and because I've not been able to recompile/test everything after the gitlab migration, but apart from that I believe the patches are correct.

Comments welcome!

Author: Joel Sherrill 2024-05-01T22:46:58.485Z

Is memset() guaranteed to be OK from an ISR?

Please use sizeof(ARMV7M_Exception_frame) so there is no doubt.

Author: Chris Johns 2024-05-02T07:13:02.600Z

We do not control `memset` and it changes so while reviewing the code is a good idea, how we know `memset` will always meet the requirements of code executing in this context? For example on some ARM `memset` needs the MMU to set up. I am not saying that is an issue here, it is an example.

Author: Amar Takhar 2024-05-02T07:21:29.019Z

Hey Cedric when you say 'next push' you mean another MR? We're trying to resolve comments within the MR you can modify this MR to solve the issues developers have brought up it can't be done in a separate request because it would make this (incorrect) one land.

If you mean you'll update this MR that's fine. We're trying to figure out our workflow and make sure everyone is aware.

Author: Cedric Berger 2024-05-02T07:23:27.844Z

Yes, update this MR, by either adding a new commit or force-pushing on the branch.

Author: Amar Takhar 2024-05-02T07:33:36.629Z

Okay thanks that's perfect just checking in. :)

Author: Amar Takhar 2024-05-02T06:16:55.095Z

Hi there Cedric I hope you don't mind but I'm going to be using this MR to test our CODEOWNERS file. You've hit something we didn't expect. So please ignore any churn in closing/opening it. :smile:

@gedare @chris

Author: Cedric Berger 2024-05-02T06:16:55.095Z

Fine with me :smile:

Author: Amar Takhar 2024-05-02T06:16:55.095Z

Great thank you. :)

Author: Sebastian Huber 2024-05-02T12:34:55.044Z

Hello Cedric, I packed out a board with a Cortex-M4 today (SAMRH71) and tested my suggested fix. It seems to work, please have a look at !12 . It has a slightly lower overhead compared to your fix since it only sets a bit in the FSCCR register.

Author: Cedric Berger 2024-05-02T12:34:55.012Z

Hello Sebastian, Is your patch supposed to replace just one or both of my fixes?

Author: Sebastian Huber 2024-05-02T12:45:35.848Z

It is supposed to replace the patch with the memset().

Saving and restoring the FPSCR during a context switch is another topic. According to the ABI, the FPSCR should have thread-storage duration, however, my off hand guess is that this is not required for RTEMS applications. See also #4027. I think we should just agree on the storage duration for FPSCR and FPEXC.

Author: Cedric Berger 2024-05-02T13:04:23.469Z

Ok, so how about I drop my memset() patch here in favour of yours, and we keep the other patch on this MR to fix the FPSCR not having thread-storage duration?

I mean functions like fesetround() change the FPSCR, so this should clearly be thread-local, otherwise these functions are useless.

Author: Sebastian Huber 2024-05-02T13:09:00.566Z

Yes, the fesetround() changes the FPSCR, but do you really need a thread-specific rounding mode? For me it is fine to make the FPSCR thread-specific if you really need it. What about the FPEXEC? It would be good to have a test case for this new feature.

Author: Cedric Berger 2024-05-02T13:23:08.762Z

Regarding FPEXEC I don't know, but I've never used FPU exceptions in my life. I can change my patch to save it as well if you want.

Author: Cedric Berger 2024-05-02T13:29:54.144Z

https://cplusplus.com/reference/cfenv/fesetround

> Each thread maintains a separate floating-point environment with its own state. Spawning a new thread copies the current state. [This applies to C11 and C++11 implementations]

Author: Sebastian Huber 2024-05-02T13:39:24.415Z

Yes, this is also referenced in #4027.. I am fine with making the FPSCR thread-specific. It seems the context creation needs to take the copy from the executing context into account. There should be also a test case where two threads with different rounding modes are involved.

Author: Cedric Berger 2024-05-02T13:43:07.487Z

So, do you want me to continue and write these test cases, or do you want to take over?

Author: Sebastian Huber 2024-05-02T13:45:17.333Z

It would be nice if you could continue with the FPSCR saving and restoring stuff.

Author: Cedric Berger 2024-05-02T13:52:14.399Z

Ok, will do.

Regarding your !12 patch, we can run some tests with it here, but I don't have a good enough understanding of the interactions between RTEMS and the lazy context save of the H7 to review your code properly. But it sure looks better and more efficient as it read/write less stuff.

Author: Sebastian Huber 2024-05-13T05:00:40.195Z

mentioned in merge request !12

Author: Kinsey Moore 2024-05-17T14:21:09.452Z

Closing this in favor of !12

3.9.2.276 9 - test MR (closed)

Id	9
State	closed
Closed by	Ning Yang
Created	2024-05-01T19:18:02.797Z
Closed	2024-05-01T19:22:31.045Z
Updated	2025-09-19T02:39:34.783Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/9
Commit	b7f1fa2f89244347472fa1f6829287bcab285730

Summary

score: Add barrier thread queue operations

This fixes a missing decrement of the number of waiting threads during a barrier wait timeout.

Close #4232.

3.9.2.277 200 - Draft: Add programmatic interface for data produced by cpuuse (closed)

Id	200
State	closed
Closed by	Kinsey Moore
Created	2024-08-30T14:54:39.528Z
Closed	2024-09-28T21:17:40.945Z
Updated	2025-09-19T02:39:17.078Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/200
Commit	5e5214b786e327fa0639b45c181638ac174f1f97

Summary

Currently, the data produced by the 'cpuuse' shell command is output via a printer visitor which makes it hard to consume programmatically as it requires parsing the resulting string. This functionality could be recreated in an application, but it would be better to provide this directly to reduce copying.

closes #5105

test.txt

Author: Kinsey Moore 2024-09-09T18:51:48.331Z

Please change the name of the visitor callback back to "cpu_usage_visitor" as this is more descriptive than "callback".

Author: zack liang 2024-09-07T19:36:00.748Z

changed this line in version 3 of the diff

Author: Kinsey Moore 2024-09-09T18:48:06.736Z

This function pointer isn't actually getting used anywhere. This should be used by the cpu_usage_visitor function to produce the desired output.

Author: zack liang 2024-09-20T01:47:51.923Z

changed this line in version 6 of the diff

Author: zack liang 2024-09-07T19:34:25.466Z

added 9 commits

- a79efe23...6dee3075 - 8 commits from branch `rtems/rtos:main`
- f3bdaba7 - Merge branch rtems:main into main

Compare with previous version

Author: zack liang 2024-09-07T19:36:01.402Z

added 1 commit

- 1d034578 - added fixes to functions

Compare with previous version

Author: Kinsey Moore 2024-09-09T18:48:29.070Z

The formatting here is incorrect. The opening brace should be on the next line and the variable declaration needs indentation.

Author: zack liang 2024-09-11T02:27:42.705Z

changed this line in version 5 of the diff

Author: Kinsey Moore 2024-09-09T18:56:55.661Z

This should be set in the calling function so that it can be changed out more easily. Once that is done, you'll need a way to pass it in. I'd recommend breaking out the core of the calling function (the section after the header is printed and before the footer is printed) into its own separate function so that usage_function_pointer can be provided.

Author: zack liang 2024-09-11T02:27:43.107Z

changed this line in version 5 of the diff

Author: zack liang 2024-09-11T01:50:24.263Z

added 4 commits

- 1d034578...d670dafa - 3 commits from branch `rtems/rtos:main`
- 68ee44a9 - Merge branch rtems:main into main

Compare with previous version

Author: zack liang 2024-09-11T02:27:43.318Z

added 1 commit

- b5c1200f - allowed for the cpu usage function to be passed as a function pointer

Compare with previous version

Author: Gedare Bloom 2024-09-14T21:51:15.242Z

Please rebase your commits, and make sure the commit messages follow our guidelines: https://docs.rtems.org/branches/master/eng/vc-users.html#commit-message-guidance

Ensure no merge commits get included in your MR.

Author: Gedare Bloom 2024-09-14T21:54:37.494Z

Line lengths and white space usage are not consistent, and deviate from our style. Please see https://docs.rtems.org/branches/master/eng/coding-formatting.html

Author: zack liang 2024-09-17T00:53:07.732Z

Where do i need to fix?

Author: zack liang 2024-09-20T01:47:52.944Z

changed this line in version 6 of the diff

Author: Gedare Bloom 2024-09-14T21:54:37.617Z

Avoid having multiple blank lines in a row.

Author: zack liang 2024-09-20T01:47:53.838Z

changed this line in version 6 of the diff

Author: Gedare Bloom 2024-09-14T21:54:37.695Z

you can merge these two lines.

Author: zack liang 2024-09-17T00:32:33.873Z

which two lines?

Author: zack liang 2024-09-20T01:47:55.511Z

changed this line in version 6 of the diff

Author: Gedare Bloom 2024-09-14T21:54:37.776Z

each argument should be on its own line.

Author: zack liang 2024-09-20T01:47:57.018Z

changed this line in version 6 of the diff

Author: Gedare Bloom 2024-09-14T21:54:37.864Z

indent

Author: zack liang 2024-09-20T01:47:58.589Z

changed this line in version 6 of the diff

Author: Gedare Bloom 2024-09-14T21:54:37.969Z

avoid making whitespace/formatting changes to parts of the code you aren't modifying functionally

Author: zack liang 2024-09-20T01:48:01.230Z

changed this line in version 6 of the diff

Author: Gedare Bloom 2024-09-14T21:54:39.299Z

requested changes

Author: Amar Takhar 2024-09-14T22:34:30.426Z

marked this merge request as **draft**

Author: Amar Takhar 2024-09-14T22:34:58.950Z

Setting to Draft because this change has a merge commit once that's out anyone is free to un-draft it.

Author: zack liang 2024-09-20T01:22:04.641Z

added 30 commits

- b5c1200f...5e5214b7 - 29 commits from branch `rtems/rtos:main`
- 1c6db03f - Merge branch rtems:main into main

Compare with previous version

Author: Kinsey Moore 2024-09-28T21:17:40.305Z

This MR has been superceded by !232

3.9.2.278 184 - bsps/stm32h7: make errata configurable (closed)

Id	184
State	closed
Closed by	Karel Gardas
Created	2024-08-12T08:50:42.404Z
Closed	2024-08-31T16:24:42.924Z
Updated	2025-09-19T02:39:16.965Z
Milestone	6.1
Labels	arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/184
Commit	a56786627210f0083910d76d9fea216ccfb6dc63

Summary

bsps/stm32h7: make errata configurable

Closes 5110

Closes #5110

Author: Kinsey Moore 2024-08-12T12:44:06.421Z

approved this merge request

Author: Sebastian Huber 2024-08-14T03:19:56.293Z

You should avoid scripts if possible. You can use `enabled-by: STM32H7_ERRATA_ENABLE_FMC_282` and make it an option with these actions:

```
actions:
- get-string: null
- split: null
- env-append: ABI_FLAGS
```

You can also use a single `STM32H7_ERRATA_FMC_282_FLAGS` option which is `-mno-unaligned-access` by default and can be configured to be empty.

The libc, C++ library, etc. will not use this option. I am not sure if this is an issue.

Author: Karel Gardas 2024-08-14T05:11:39.146Z

Thanks for the review!

(1) yaml thing is something I'm lost in as I've not been able to find any documentation about it, any sensible doc documenting RTEMS macros/impls. Do you know if there is any available? But definitely agree that your suggestions are way better than using script. I've tried several times to find those, but failed, hence script was a way how to escape.

(2) the fact that -mno-unaligned-access is not used for libc/C++ etc from tools is indeed a showstopper which needs to be solved somehow. Probably the most easiest would be to add big warning to the stm32h7 BSP doc about a need to configure tools in a special way...

Author: Sebastian Huber 2024-08-14T13:15:33.871Z

(1) The build system documentation is here:

https://docs.rtems.org/branches/master/eng/build-system.html

The item format is also documented, for example:

https://docs.rtems.org/branches/master/eng/req/items.html#spectypebuildoptionaction

If you are unsure how something can be configured, then please ask on the mailing list. A key property of the build specification items is that they are processed in a defined order and each item is enabled according to the `enabled-by` attribute.

(2) I haven't looked at the errata, but if this option is really important, then we may need dedicated GCC multilibs for this. Also the memcpy() and memset() assembly implementations in Newlib assume that unaligned access works.

Author: Cedric Berger 2024-08-14T14:24:33.630Z

A few random comments here: * The errata looks scary “Read access with unaligned address, such as a half-word read access starting at odd address, is not supported” but I suppose that on the M7 side, for simple code+data access (no peripherals) it should probably not matter because all the access goes through the cache, and the cache will access the FMC one full cache line at a time, correct? * I’ve seen very weird things in that area, like writing stuff with the M4 and getting something slightly different on the M7 for the last bytes of every cache line, stuff like that. Never got to the bottom of it besides deciding to never share the FMC memory between M4 and M7. * We’ve got some data corruption when using the rtems-libbsd ethernet stm driver with data in SDRAM. I wonder if this is related in any way (I’m going to do some testing in this area today)

Author: Sebastian Huber 2024-08-16T00:13:31.571Z

That a certain memory doesn’t support unaligned access is not unusual. Normally, this is fixed by using a cache in the middle. You may have to configure it as write-back, write-allocate, and read-allocate.

If the Ethernet DMA performs an unaligned access, then you may have issues since it doesn’t use the cache.

Author: Karel Gardas 2024-08-16T06:11:10.725Z

changed this line in version 2 of the diff

Author: Cedric Berger 2024-08-16T06:25:25.773Z

Ok, so we’re on the same page here, which means the PR goes to the wrong direction and is trying to fix the wrong thing:

1. The M7 has a cache, it is used by RTEMS, so ‘fixing’ the compiler does not help anybody here. Things are fine without any fix as far as regular code is concerned. 1. The M4 used in a few variants (like the stm32h747 we use) has no cache, so a toolchain fix could help there in theory, but nobody in their right mind would configure the M4 to use the FMC for data, these chips have dedicated memories for the M4 (SRAM 1/2/3) 1. What would be hugely useful though for RTEMS and would help us here a lot would be some way to put any memory that is touched by peripheral DMAs into another section. In this case here, if there was an easy way to say: “I want all my data in SDRAM, but please allocate Ethernet mbuf clusters from AXIS or SRAM2”, then this would help a lot. the same goes of course for memory that is touched by the USB HOST stack. This is where we’re stuck right now.

Author: Karel Gardas 2024-08-16T06:38:50.447Z

I do not think that PR goes into wrong direction. IMHO it goes not enough deep

and this worries me a bit since it may create false assumptions in H7 RTEMS users, nothing more.

Author: Cedric Berger 2024-08-16T07:05:56.265Z

My assumption was I can develop some nice hardware using the stm32h7 and 64Megs of SDRAM, put RTEMS on it with libbsd, and release a beautiful and stable product with that combination. Was I right with that assumption? Mostly. The only issue I've at the moment is that for some reason, if_stmac.c is not working. My assumption was that if_stmac.c would be working. This PR does nothing to help that problem and is trying to "fix" something which is **not broken**.

Author: Karel Gardas 2024-08-16T07:20:38.869Z

@cedric there is clearly misunderstanding going here. ST thinks that FMC errata is important to mention in their errata document, hence RTEMS supporting H7 also needs to somehow react to that. And the discussion here is about that reaction. If your issue with RTEMS now is not working if_stmac in libbsd, then this is completely unrelated to that MR and #5110

Author: Cedric Berger 2024-08-16T07:45:28.153Z

@kgardas: Of course it important to know that the FMC cannot do unaligned access, hence the errata. I think the correct reaction for RTEMS would be: * A note in the stm32h7 ARM porting section. * Investigations of the consequences of this errata for peripheral access.

Author: Sebastian Huber 2024-08-29T00:18:31.735Z

I worked with other systems in the past where the memory controller had issues with misaligned access. The solution was to access the external memory through a properly configured cache and to make sure that DMA controllers don't use misaligned access. This worked quite well.

Forcing the compiler to not use misaligned access is a bit difficult since you also have to catch handwritten assembly files (memset(), memcpy(), etc.). Also you may have performance issues with packed structures (network stack).

Author: Karel Gardas 2024-08-15T22:25:31.609Z

Thanks for the review and suggestion, but even with this I'm still not able to make errata.yaml work as defined here:

```
SPDX-License-Identifier: CC-BY-SA-4.0 OR BSD-2-Clause
build-type: option
actions:
- get-string: null
```

(continues on next page)

(continued from previous page)

```
- split: null
- env-append: ABI_FLAGS
copyrights:
- Copyright (C) 2024 Karel Gardas
default:
- enabled-by: STM32H7_ERRATA_ENABLE_FMC_282
value: -mno-unaligned-access
- enabled-by: true
value: ""
enabled-by: true
links: []
name: STM32H7_ERRATA
format: '{}'
prepare-build: null
prepare-configure: null
type: build
```

during the configure stage it simply does nothing.

Due to this and due to the fact that this whole is half-baked solution I'm considering abandoning this and even reverting original:

```
commit d81bf04501cb83de4586f431ae91123e4965d86a (origin/main, origin/
↪HEAD, main)
Author: Karel Gardas <karel@functional.vision>
Date:   Fri Aug 9 15:39:11 2024 +0200

bsps/stm32h7: Workaround STM32 H7 errata by enforcing aligned access␣
↪only

The patch changes compiler ABI flags option and adds -mno-unaligned-
↪access
there. Usage of this option is also officially recommended way
by the errata document how to work around the issue. For more details
about the errata please see referenced issue number.

Closes #5110.
```

the thing is that this issue is quite complex to fix as a whole and currently I lack a time for that. What do you prefer? Half-baked solution or rather revert completely? – with perhaps some not to H7 BSP doc about a need to investigate erratas?

Author: Kinsey Moore 2024-08-15T22:27:42.540Z

Looking at other examples (tms570/optvariant.yml), you may need a set-value: in optenfmc282errata.yml. That example ends up getting used in tms570/optmemsramsize.yml

Author: Joel Sherrill 2024-08-15T22:21:42.797Z

@sebhub Can you point to an existing example in the source tree that does the equivalent of adding an extra GCC flag?

Alternatively, can you kindly post the file you want?

Thanks.

Author: Sebastian Huber 2024-08-16T00:23:54.981Z

With current list of actions, you:

1. Get a boolean option value from the configuration file or the default value.
2. You assign the option value to the build environment variable named `STM32H7_ERRATA_ENABLE_FMC_282`.
3. If the option value is true, then you define the define named `STM32H7_ERRATA_ENABLE_FMC_282`.

If you want to use `STM32H7_ERRATA_ENABLE_FMC_282` in `enabled-by` expressions, then you also have to add it to the enabled set. This is done by the

```
- env-enable: null
```

action.

Author: Chris Johns 2024-08-16T00:28:39.551Z

As @joel asked in https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/184#note_111112 would it be possible to provide an example file that shows this?

I am fine with the script version in the commit and think it is a rather clever solution.

Author: Sebastian Huber 2024-08-16T01:00:35.196Z

The problem is that there are two items involved. One item defines if a certain feature is enabled or disabled. Then another item does certain things if the feature is enabled. For this use case, we have the `enabled-by` expressions. This is a basic feature of the build system. If these mechanisms are not clear enough after reading the documentation, then we really have to fix this.

The scripts should be rarely used and definitely not be used for this purpose. If we decide to change the build system, then it is easy to convert all the non-script stuff, however, all the scripts would need manual work.

Author: Chris Johns 2024-08-16T01:21:02.928Z

Yes `enabled-by` is a well used expression however it can also be complex in how it can be used and the translation of that logic to the YAML format is not easy. I know from my recent PowerPC `libdebugger` experience I spent a number of hours guessing at the needed format to exclude specific BSPs and ended up adding a considerable number of prints to `wscript` to help. Then after all that I could see nothing

wrong with the YAML fragment so deleted the bits I needed and typed them back in. It worked and to this day I have no idea what the difference was and why it worked after typing the same text back in.

We have a bespoke solution as a build system and to me this means we need to lead users with a specific example and updated documentation if their offering is not acceptable. I cannot help because I do not know enough to provide valid input and I feel I would only make things more confusing.

The change presented here is clever because it uses `waf` in a `waf` way and that implies to me some effort has been expended. We have a few choices:

1. Accept this change and move on
2. Help provided what you see as needed
3. Not accept the MR.

My choice is option 1 because I cannot help with 2 and do not accept option 3 as a valid option.

Author: Sebastian Huber 2024-08-16T04:03:55.503Z

If nobody complains, nothing can get fixed. For example, it would easy to display a given enabled-by expression in C syntax (see `enabled_by_to_exp()` in https://gitlab.rtems.org/rtems/prequal/rtems-central/-/blob/main/rtemsspec/content.py?ref_type=heads#L1185). Spending hours to craft an enabled-by expression is definitely a big issue, because they are present in every item.

I think it makes more sense if someone else starts to work on documenting and improving the build system. I don't want to be the single point of failure.

For libdebugger, this would also work:

```
diff --git a/spec/build/cpukit/optlibdebugger.yml b/spec/build/cpukit/
↪optlibdebugger.yml
index 19ce1a8dd4..4917533b31 100644
--- a/spec/build/cpukit/optlibdebugger.yml
+++ b/spec/build/cpukit/optlibdebugger.yml
@@ -11,21 +11,23 @@ enabled-by:
- aarch64
- and:
- arm
-  - not: bsps/arm/atsam
-  - not: bsps/arm/imxrt
-  - not: bsps/arm/lm3s69xx
-  - not: bsps/arm/lpc176x
-  - not: bsps/arm/lpc24xx
-  - not: bsps/arm/stm32h7
-  - not: bsps/arm/stm32f4
+  - not:
+    - bsps/arm/atsam
+    - bsps/arm/imxrt
+    - bsps/arm/lm3s69xx
```

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```
+    - bsps/arm/lpc176x
+    - bsps/arm/lpc24xx
+    - bsps/arm/stm32h7
+    - bsps/arm/stm32f4
- i386
- microblaze
- and:
- powerpc
-  - not: bsps/powerpc/mpc55xxevb
-  - not: bsps/powerpc/qoriq
-  - not: bsps/powerpc/ss555
-  - not: bsps/powerpc/t32mppc
+  - not:
+    - bsps/powerpc/mpc55xxevb
+    - bsps/powerpc/qoriq
+    - bsps/powerpc/ss555
+    - bsps/powerpc/t32mppc
links: []
name: BUILD_LIBDEBUGGER
type: build
```

Author: Chris Johns 2024-08-16T04:12:59.320Z

I am not complaining and I am sorry if that is the impression. I simply wanted to provide some feedback. I would like to help but I do not know the implementation and I have not spent enough time using it. I hope that changes however until then I depend on your support and advice.

The change above is a nice example, thanks. My problem was not finding examples, it was the lack of feedback, trace and debug output in the tool to guide and help me see what was wrong with my broken input. I read the documentation, looked for examples and attempted to be self sufficient but the lack of feedback from the tools made it hard.

I have no idea how C expressions would help and asking users to scan through rtems-central is not helpful.

What I did then and say now does not help progress this MR and we have headed away from it. If you are not prepared to offer a solution please say as we can move on?

Author: Karel Gardas 2024-08-16T06:11:12.068Z

changed this line in version 2 of the diff

Author: Karel Gardas 2024-08-16T06:11:12.574Z

added 1 commit

- a5678662 - bsps/stm32h7: make errata configurable

Compare with previous version

Author: Karel Gardas 2024-08-16T06:11:30.303Z

reset approvals from @opticron by pushing to the branch

Author: Karel Gardas 2024-08-16T06:32:19.463Z

Guys, thanks to Sebastian's help, I was able to transit from script to option hence pushing a new version.

My original question if to fix this issue (FMC H7 errata) by half-baked solution still stays. Fixing it properly would require deep dive into newlibc with possibility of touching assembly and that is currently out of my reach for my spare time... I'm asking since I would not like to make an impression to the RTEMS H7 user that this issue is *properly* fixed. Comments welcome!

Author: Chris Johns 2024-08-16T06:32:45.288Z

I have not looked at the errata or details of what may be need as discussed but the RSB has the following options:

1. `--targetcflags`
2. `--targetcxxflags`

I have not used them in a long time and the options were added for MMS for Alan to test the performance of custom builds of libc and libm. Maybe it can help you see the effects of these options.

Author: Karel Gardas 2024-08-31T16:24:41.810Z

As originator of this MR I feel a need to close it as this is not the right way to tackle this issue. Since this whole issue was divided between two MRs I'm also pushing new !201 to remove part of the fix which was already merged. Sebastian & Cedric are right here that this can of worms needs to be solved by application programmer and not by the RTEMS itself...

Author: Karel Gardas 2024-08-31T16:26:13.224Z

mentioned in merge request !201

3.9.2.279 92 - libtests/dl12: Fix build error (closed)

Id	92
State	closed
Assignee(s)	Sebastian Huber
Closed by	Sebastian Huber
Created	2024-06-25T06:18:46.956Z
Closed	2024-06-25T13:27:34.147Z
Updated	2025-09-19T02:39:16.580Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/92
Commit	514866cea5f930a9ccb4d9cdfd142299e19fd45d

Summary

libtests/dl12: Fix build error

Use standard link command to get all the required flags.

Update #3740. Close #5053.

Author: Sebastian Huber 2024-06-25T06:18:47.068Z

assigned to @sebhub

Author: Sebastian Huber 2024-06-25T06:20:02.797Z

mentioned in merge request !91

Author: Sebastian Huber 2024-06-25T13:20:14.384Z

mentioned in merge request !25

Author: Ranulfo Raphael 2024-06-25T13:23:17.668Z

Thanks for the fix allowing additional ldflags to the `link_cc`. But in this case the `link_cc` has additional arguments that invalidates the object creation for the dl12 test case, such as `-Wl,-gc-sections` and some rtems library linkage, resulting the following test output for `arm/xilinx_zynq_a9_qemu`:

```
$ qemu-system-arm -no-reboot -nographic -net none -serial null -serial␣
↪mon:stdio -M xilinx-zynq-a9 -m 256M -kernel build/arm/xilinx_zynq_a9_
↪qemu/testsuites/libtests/dl12.exe
qemu-system-arm: warning: nic cadence_gem.0 has no peer
qemu-system-arm: warning: nic cadence_gem.1 has no peer


```

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```
*** BEGIN OF TEST libdl (RTL) 12 ***
*** TEST VERSION: 6.0.0.514866cea5f930a9ccb4d9cdfd142299e19fd45d
*** TEST STATE: EXPECTED_PASS
*** TEST BUILD:
*** TEST TOOLS: 13.3.0 20240521 (RTEMS 6, RSB␣
↪4c6dfb7aef9811258457971aa9213d5aebb9ce8d, Newlib 1ed1516)
load: /dl12-inc.o
dlopen failed: no memory to load obj

[ RTEMS shutdown ]
RTEMS version: 6.0.0.514866cea5f930a9ccb4d9cdfd142299e19fd45d
RTEMS tools: 13.3.0 20240521 (RTEMS 6, RSB␣
↪4c6dfb7aef9811258457971aa9213d5aebb9ce8d, Newlib 1ed1516)
executing thread ID: 0x0a010001
executing thread name: UI1
```

This commit creates the `dl12-inc.o` object with the following commands:

```
#arm/tms570lc4357_hdk_sdram
/home/devel/rtems-6/bin/arm-rtems6-gcc -mbe32 -qnolinkcmds -T linkcmds.
↪tms570lc4357_hdk_sdram /workdir/build/arm/tms570lc4357_hdk_sdram/
↪testsuites/libtests/dl12/dl12-o1.o /workdir/build/arm/tms570lc4357_
↪hdk_sdram/testsuites/libtests/dl12/dl12-o2.o -o/workdir/build/arm/
↪tms570lc4357_hdk_sdram/testsuites/libtests/dl12/dl12-inc.o -L. -
↪lrtemscpu -lrtemsbsp -lrtemstest -qrtems -march=armv7-r -mthumb -mbig-
↪endian -mfpu=vfpv3-d16 -mfloat-abi=hard -Wl,--gc-sections -L/workdir/
↪bsps/arm/shared/start -L/workdir/bsps/arm/tms570/start -Wl,--
↪wrap=printf -Wl,--wrap=puts -Wl,--wrap=putchar -Wl,-r
#arm/xilinx_zynq_a9_qemu
/home/devel/rtems-6/bin/arm-rtems6-gcc /workdir/build/arm/xilinx_zynq_
↪a9_qemu/testsuites/libtests/dl12/dl12-o1.o /workdir/build/arm/xilinx_
↪zynq_a9_qemu/testsuites/libtests/dl12/dl12-o2.o -o/workdir/build/arm/
↪xilinx_zynq_a9_qemu/testsuites/libtests/dl12/dl12-inc.o -L. -
↪lrtemscpu -lrtemsbsp -lrtemstest -qrtems -march=armv7-a -mthumb -
↪mfpu=neon -mfloat-abi=hard -mtune=cortex-a9 -Wl,--gc-sections -L/
↪workdir/bsps/arm/shared/start -L/workdir/bsps/arm/xilinx-zynq/start -
↪Wl,--wrap=printf -Wl,--wrap=puts -Wl,--wrap=putchar -Wl,-r
```

readelf:

```
$ arm-rtems6-readelf -s build/arm/xilinx_zynq_a9_qemu/testsuites/
↪libtests/dl12/dl12-inc.o | head -n 30
readelf: Error: Section 21 has invalid sh_entsize of 0
readelf: Error: (Using the expected size of c for the rest of this dump)

Symbol table '.symtab' contains 571 entries:
Num:    Value  Size Type    Bind   Vis      Ndx Name
0: 00000000     0 NOTYPE  LOCAL  DEFAULT  UND
1: 00000000     0 SECTION LOCAL  DEFAULT    1 .start
2: 00000000     0 SECTION LOCAL  DEFAULT    3 .xbarrier
```

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```
3: 00000000     0 SECTION LOCAL  DEFAULT    4 .text
4: 00000000     0 SECTION LOCAL  DEFAULT    6 .init
5: 00000000     0 SECTION LOCAL  DEFAULT    7 .fini
6: 00000000     0 SECTION LOCAL  DEFAULT    8 .robarrier
7: 00000000     0 SECTION LOCAL  DEFAULT    9 .rodata
8: 00000000     0 SECTION LOCAL  DEFAULT   11 .ARM.exidx
9: 00000000     0 SECTION LOCAL  DEFAULT   12 .eh_frame
10: 00000000     0 SECTION LOCAL  DEFAULT   13 .tdata
11: 00000000     0 SECTION LOCAL  DEFAULT   14 .tbss
12: 00000000     0 SECTION LOCAL  DEFAULT   15 .preinit_array
13: 00000000     0 SECTION LOCAL  DEFAULT   16 .init_array
14: 00000000     0 SECTION LOCAL  DEFAULT   18 .fini_array
15: 00000000     0 SECTION LOCAL  DEFAULT   20 .rel.dyn
16: 00000000     0 SECTION LOCAL  DEFAULT   21 .rela.dyn
17: 00000000     0 SECTION LOCAL  DEFAULT   22 .tm_clone_table
18: 00000000     0 SECTION LOCAL  DEFAULT   23 .rtemsroset
19: 00000000     0 SECTION LOCAL  DEFAULT   25 .rwbarrier
20: 00000000     0 SECTION LOCAL  DEFAULT   26 .vector
21: 00000000     0 SECTION LOCAL  DEFAULT   27 .fast_text
22: 00000000     0 SECTION LOCAL  DEFAULT   28 .fast_data
23: 00000000     0 SECTION LOCAL  DEFAULT   29 .data
24: 00000000     0 SECTION LOCAL  DEFAULT   31 .rtemsrwset
25: 00000000     0 SECTION LOCAL  DEFAULT   32 .bss
26: 00000000     0 SECTION LOCAL  DEFAULT   33 .rtemsstack
```

I would expect something like this:

```
#arm/tms570lc4357_hdk_sdram
/home/devel/rtems-6/bin/arm-rtems6-gcc -march=armv7-r -mthumb -mbig-
↪endian -mfpu=vfpv3-d16 -mfloat-abi=hard -r testsuites/libtests/dl12/
↪dl12-o1.o testsuites/libtests/dl12/dl12-o2.o -o testsuites/libtests/
↪dl12/dl12-inc.o
#arm/xilinx_zynq_a9_qemu
/home/devel/rtems-6/bin/arm-rtems6-gcc -march=armv7-a -mthumb -
↪mfpu=neon -mfloat-abi=hard -mtune=cortex-a9 -r testsuites/libtests/
↪dl12/dl12-o1.o testsuites/libtests/dl12/dl12-o2.o -o testsuites/
↪libtests/dl12/dl12-inc.o
```

readelf:

```
$ arm-rtems6-readelf -s build/arm/xilinx_zynq_a9_qemu/testsuites/
↪libtests/dl12/dl12-inc.o

Symbol table '.symtab' contains 29 entries:
Num:    Value  Size Type    Bind   Vis      Ndx Name
0: 00000000     0 NOTYPE  LOCAL  DEFAULT  UND
1: 00000000     0 SECTION LOCAL  DEFAULT    1 .text
2: 00000000     0 SECTION LOCAL  DEFAULT    2 .text.dl_o1_func
3: 00000000     0 SECTION LOCAL  DEFAULT    4 .text.dl_o2_func
4: 00000000     0 SECTION LOCAL  DEFAULT    6 .rodata.dl_o1_fu[...]
```

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```
5: 00000000     0 SECTION LOCAL  DEFAULT    7 .rodata.dl_o2_fu[...]
6: 00000000     0 SECTION LOCAL  DEFAULT    8 .data
7: 00000000     0 SECTION LOCAL  DEFAULT    9 .bss
8: 00000000     0 SECTION LOCAL  DEFAULT   10 .comment
9: 00000000     0 SECTION LOCAL  DEFAULT   11 .debug_aranges
10: 00000000     0 SECTION LOCAL  DEFAULT   13 .debug_info
11: 00000000     0 SECTION LOCAL  DEFAULT   15 .debug_abbrev
12: 00000000     0 SECTION LOCAL  DEFAULT   16 .debug_line
13: 00000000     0 SECTION LOCAL  DEFAULT   18 .debug_frame
14: 00000000     0 SECTION LOCAL  DEFAULT   20 .debug_str
15: 00000000     0 SECTION LOCAL  DEFAULT   21 .debug_rnglists
16: 00000000     0 SECTION LOCAL  DEFAULT   23 .ARM.attributes
17: 00000000     0 FILE    LOCAL  DEFAULT  ABS dl12-o1.c
18: 00000000     0 NOTYPE  LOCAL  DEFAULT    6 $d
19: 00000000     0 NOTYPE  LOCAL  DEFAULT    2 $t
20: 00000000     0 NOTYPE  LOCAL  DEFAULT    6 .LC0
21: 00000000     0 FILE    LOCAL  DEFAULT  ABS dl12-o2.c
22: 00000000     0 NOTYPE  LOCAL  DEFAULT    7 $d
23: 00000000     0 NOTYPE  LOCAL  DEFAULT    4 $t
24: 00000000     0 NOTYPE  LOCAL  DEFAULT    7 .LC0
25: 00000001    28 FUNC    GLOBAL DEFAULT    2 dl_o1_func
26: 00000000     0 NOTYPE  GLOBAL DEFAULT  UND rtems_printf
27: 00000000     0 NOTYPE  GLOBAL DEFAULT  UND rtems_test_printer
28: 00000001    28 FUNC    GLOBAL DEFAULT    4 dl_o2_func
```

Author: Sebastian Huber 2024-06-25T13:27:33.644Z

Closed in favour of !91.

3.9.2.280 37 - This is a test commit for CODEOWNERS. (closed)

Id	37
State	closed
Assignee(s)	Amar Takhar
Closed by	Amar Takhar
Created	2024-05-18T02:10:38.508Z
Closed	2024-05-26T19:04:05.855Z
Updated	2025-09-19T02:39:16.472Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/37
Commit	60ffa1f3384c4485a90bfcd51aa55b6463f5d432

Summary

This is a test commit for CODEOWNERS.

It won't be merged.

Author: Amar Takhar 2024-05-26T19:04:01.092Z

assigned to @amar

Author: Amar Takhar 2024-05-26T19:04:05.558Z

Closing this as it's no longer needed everything should work as expected. I might re-open it later if we run into issues again.

3.9.2.281 28 - aarch64/arm: Make _CPU_Fatal_halt() BSP-specific (closed)

Id	28
State	closed
Closed by	Sebastian Huber
Created	2024-05-08T14:22:20.032Z
Closed	2024-07-15T13:48:26.786Z
Updated	2025-09-19T02:39:16.180Z
Milestone	6.1
Labels	arch:aarch64, arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/28
Commit	1e88be025e9ea363f5f695255dcbb1f0c0c6c529

Summary

In general, for test runs the system should reset once the test program terminated. The system reset implementation is BSP-specific. This makes _CPU_Fatal_halt() essentially a dead function since it is invoked after the BSP fatal extension which resets the system. To avoid this issue make the _CPU_Fatal_halt() implementation BSP-specific (similar to riscv and sparc).

Update #5010 and #5011.

Author: Sebastian Huber 2024-05-08T14:23:21.605Z

changed title from **aarch64: Make _CPU_Fatal_halt() BSP-specific** to **aarch64{+/arm+}: Make _CPU_Fatal_halt() BSP-specific**

Author: Sebastian Huber 2024-05-08T14:23:21.630Z

changed the description

Author: Chris Johns 2024-06-14T07:08:28.837Z

This reads as a change in functionality.

The `bsp_reset` call resets the board in a BSP specific manner. This may be common in a SoC or even on the same SoC overridden by a user to use an external watchdog

POR. You need this on a Zynq due to the way the resets work. The new name is `_CPU_Fatal_halt` that halts the CPU, shutting down the board requiring an external restart. This is normally something you see in a secure mode.

Author: Sebastian Huber 2024-06-14T07:08:28.837Z

I am not sure what you mean with the functional change. Applications should not call `_CPU_Fatal_halt()` directly. When applications do not want to use the BSP fatal error handler, then they should register their own fatal error handler through CONFIGURE_INITIAL_EXTENSIONS.

Author: Chris Johns 2024-06-14T07:08:28.837Z

The label `_CPU_Fatal_halt` reads

> Perform a CPU fatal error halt operation and that means halt the CPU because of a fatal issue in the CPU. An example is detecting tampering in a secure mode. It is unfortunate the scoping we have of `_CPU` and `Fatal` errors which ``halt``s RTEMS produces this naming. This is a comment on the naming we have.
>
> Does the fatal error path bypass `_exit` and other shutdown calls?

Author: Sebastian Huber 2024-06-14T07:08:28.837Z

All termination paths end up in _Terminate() which ultimately calls _CPU_Fatal_halt() provided all fatal user extensions return. However, a statically configured BSP or application fatal error extension should reset the system and not return to process the dynamic fatal error extensions.

Author: Chris Johns 2024-06-14T07:08:48.995Z

Ah I see this has been wrapped. Nice to see it is still present.

Author: Kinsey Moore 2024-06-14T07:08:48.995Z

This seems like a benign comment, can this thread be resolved?

Author: Chris Johns 2024-05-22T00:05:15.059Z

The comment for the first patch says:

```
In general, for test runs the system should reset once the test program
terminated.  The system reset implementation is BSP-specific. This makes
_CPU_Fatal_halt() essentially a dead function since it is invoked after␣
↪the BSP
```

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```
fatal extension which resets the system.  To avoid this issue make the
_CPU_Fatal_halt() implementation BSP-specific (similar to riscv and
↪sparc).
```

It is a requirement the kernel exits through the documented C API paths. A BSP gains control from those interfaces and then decide on the path taken. If testing is a special path should it be handled in the context of the existing interfaces or they should be updated?

I am as guiltily as anyone in by passing things and using `bsp_reset` so this is not a criticism of the change and more of a reality check to know if we are OK with this path and we are not digging a hole for ourselves?

Author: Sebastian Huber 2024-05-22T11:09:56.349Z

I think the interface to customize the fatal error handling (CONFIGURE_INITIAL_EXTENSIONS) is fine. The issue is that by default, the BSP resets the system. This makes a CPU port provided `_CPU_Fatal_halt()` a bit useless.

Author: Gedare Bloom 2024-05-23T20:31:19.128Z

I'm confused what problem this MR (and the related Issues) are solving. Is it to do with Testing / Coverage, that `_CPU_Fatal_halt` is dead code, or something else?

There is no requirement for BSPs to use the default fatal error handler. If they don't, they can also not provide `bsp_reset` or use the empty stub (like riscv and sparc).

Author: Sebastian Huber 2024-05-31T19:39:48.045Z

I do currently test runs with coverage enabled for arm and aarch64 BSPs. I noticed that the `_CPU_Fatal_halt()` is basically dead code, since the BSP fatal extension resets the system. So, I would like to make the implementation of `_CPU_Fatal_halt()` BSP-specific and let it do the system reset.

Author: Gedare Bloom 2024-05-31T19:39:48.013Z

If the problem is testing/application-specific, then why not configure with `BSP_RESET_BOARD_AT_EXIT = 0` and `BSP_PRESS_KEY_FOR_RESET = 0` to test the `CPU_Fatal_halt()` works as expected?

Making this change without modifying `_Terminate` also does not seem to be correct.

Author: Sebastian Huber 2024-06-04T08:56:02.025Z

Running the tests with different build options is an absolute no go from my side. You should run the tests exactly with the build options you use for your application.

The `_Terminate()` implementation is fine. It provides a safe fallback for badly configured applications.

This patch set fixes a minor code coverage issue by moving the `_CPU_Fatal_halt()` implementation from the CPU port to the BSP. I really don't understand why this causes such headaches on your side. A properly configured application should use the BSP fatal extension handler or provide its own. For these applications, there is no functional change.

Author: Sebastian Huber 2024-06-07T06:24:34.861Z

Yes, if you configure `BSP_FATAL_RESET` as disabled, then you would see a reset through `_CPU_Fatal_halt()`. Maybe we should remove this BSP option. The recommended approach to customize the termination process for applications is to install a static fatal error extension. Maybe this should be clarified in https://docs.rtems.org/branches/master/c-user/fatal-error/operations.html or the related sections.

The complexity of the BSP development is not increased. The BSP just has to provide a `_CPU_Fatal_halt()` function instead of `bsp_reset()`. Since the `_CPU_Fatal_halt()` sees the fatal source and code you could even pass this information to a boot monitor, hypervisor, or some reset safe storage to get better diagnostics.

Author: Sebastian Huber 2024-06-25T14:47:27.509Z

Any blocking issues left to resolve?

Author: Sebastian Huber 2024-07-09T09:29:11.971Z

This is a general change for aarch64 and arm BSPs. It is a blocking issue for my patch queue. It would be really nice if someone could have a look at it. From my point of view, I addressed all issues with the documentation update.

Author: Gedare Bloom 2024-07-10T05:59:34.045Z

I'm not that happy with the user experience that they can configure `BSP_FATAL_RESET` as disabled and still have the CPU port/BSP cause a reset. It would be a surprising bug.

A "Fatal_Halt" that results in a board reset by default is also surprising.

Overall, this change increases the number of surprises that a user will face. I understand that it is desirable to improve coverage, but I'm not convinced the cost is worth it here. Honestly, I don't see how to provide a "Fatal Halt" condition that is testable, while using a "Reset" to handle fatal errors. Maybe this patch should go the other way around, and `#ifdef` out the `_CPU_Fatal_halt()` functionality if a BSP reset is defined?

I am generally not in favor about the placement of `_CPU_Xxx` inside of BSP, but would be willing to overlook it. I do appreciate the documentation update.

Author: Sebastian Huber 2024-07-10T06:43:47.056Z

The system termination should always end in a statically configured fatal error handler. Everything else is a configuration bug.

Yes, the `BSP_FATAL_RESET` could lead to surprises, so I would remove this option.

In general, it seems that the current system termination procedure is too complicated.

Author: Kinsey Moore 2024-06-04T23:50:18.150Z

added 51 commits

- 95faacc2...25ba6796 - 49 commits from branch `rtems/rtos:main`
- fffb3221 - aarch64: Make _CPU_Fatal_halt() BSP-specific
- 34700fa1 - arm: Make _CPU_Fatal_halt() BSP-specific

Compare with previous version

Author: Sebastian Huber 2024-06-10T19:07:27.861Z

added 23 commits

- 34700fa1...28c7475b - 21 commits from branch `rtems/rtos:main`
- 6efc5916 - aarch64: Make _CPU_Fatal_halt() BSP-specific
- a6a88e52 - arm: Make _CPU_Fatal_halt() BSP-specific

Compare with previous version

Author: Sebastian Huber 2024-06-11T06:20:55.888Z

added 1 commit

- 8f29370d - arm: Make _CPU_Fatal_halt() BSP-specific

Compare with previous version

Author: Sebastian Huber 2024-06-11T07:15:21.537Z

added 1 commit

- 3933c3e3 - arm: Make _CPU_Fatal_halt() BSP-specific

Compare with previous version

Author: Kinsey Moore 2024-06-13T12:36:08.647Z

added 6 commits

- 3933c3e3...1d997f33 - 4 commits from branch `rtems/rtos:main`
- 75493303 - aarch64: Make _CPU_Fatal_halt() BSP-specific
- 5d5240d7 - arm: Make _CPU_Fatal_halt() BSP-specific

Compare with previous version

Author: Sebastian Huber 2024-06-14T06:21:30.183Z

added 12 commits

- 5d5240d7...0951e4e6 - 10 commits from branch `rtems/rtos:main`
- 69f55c4c - aarch64: Make _CPU_Fatal_halt() BSP-specific
- f5428867 - arm: Make _CPU_Fatal_halt() BSP-specific

Compare with previous version

Author: Kinsey Moore 2024-06-14T21:29:55.094Z

added 3 commits

- 20a663cc - 1 commit from branch `rtems/rtos:main`
- 19f483b0 - aarch64: Make _CPU_Fatal_halt() BSP-specific
- c9769b51 - arm: Make _CPU_Fatal_halt() BSP-specific

Compare with previous version

Author: Sebastian Huber 2024-06-22T22:56:31.684Z

I added a documentation update to clarify the system termination procedure:

https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/23

Author: Sebastian Huber 2024-06-24T09:24:07.001Z

added 24 commits

- c9769b51...2089f993 - 22 commits from branch `rtems/rtos:main`
- 1cb66ca0 - aarch64: Make _CPU_Fatal_halt() BSP-specific
- e3fd141c - arm: Make _CPU_Fatal_halt() BSP-specific

Compare with previous version

Author: Sebastian Huber 2024-06-25T14:47:47.375Z

added 12 commits

- e3fd141c...263cbb94 - 10 commits from branch `rtems/rtos:main`
- 58549096 - aarch64: Make _CPU_Fatal_halt() BSP-specific
- 9118db3f - arm: Make _CPU_Fatal_halt() BSP-specific

Compare with previous version

Author: Sebastian Huber 2024-07-02T08:38:20.500Z

added 9 commits

- 9118db3f...acf12498 - 7 commits from branch `rtems/rtos:main`
- 8735d04f - aarch64: Make _CPU_Fatal_halt() BSP-specific
- ca500db8 - arm: Make _CPU_Fatal_halt() BSP-specific

Compare with previous version

Author: Kinsey Moore 2024-07-09T14:39:34.376Z

added 7 commits

- ca500db8...6d65f2cf - 5 commits from branch `rtems/rtos:main`
- 011e7e07 - aarch64: Make _CPU_Fatal_halt() BSP-specific
- 1e88be02 - arm: Make _CPU_Fatal_halt() BSP-specific

Compare with previous version

Author: Sebastian Huber 2024-07-15T13:48:25.914Z

I will address the code coverage issue differently. I will simplify the `_Termiante()` function and remove `_CPU_Fatal_halt()` in general and replace it with call to `_CPU_Thread_Idle_body()`.

3.9.2.282 355 - score: Fix RTEMS_DEBUG build (closed)

Id	355
State	closed
Assignee(s)	Sebastian Huber
Closed by	Gedare Bloom
Created	2025-01-08T05:44:42.125Z
Closed	2025-02-03T18:58:30.565Z
Updated	2025-09-19T02:39:16.085Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/355
Commit	f7d6553b4517bf06677c6d099bedcf0b7a42c157

Summary

Author: Sebastian Huber 2025-01-08T05:44:42.208Z

assigned to @sebhub

Author: Chris Johns 2025-01-08T05:46:22.847Z

added 10 commits

- 5aaf429d...d73e38be - 9 commits from branch `rtems/rtos:main`
- f7d6553b - score: Fix RTEMS_DEBUG build

Compare with previous version

Author: Kinsey Moore 2025-01-08T13:31:59.329Z

approved this merge request

Author: Gedare Bloom 2025-02-03T18:58:30.121Z

Duplicated in !357

3.9.2.283 54 - Draft: Added documentation for cpukit/libmisc/stackchk/check.c (closed)

Id	54
State	closed
Closed by	Mohamed Hassan
Created	2024-06-02T07:41:23.053Z
Closed	2024-06-15T09:43:38.768Z
Updated	2025-09-19T02:39:15.851Z
Milestone	6.1
Labels	cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/54
Commit	b088d6168d548060ded7767504c0a4f8251ed944

Added documentation for cpukit/libmisc/stackchk/check.c as a first step before starting adding configuration options.

Author: Amar Takhar 2024-06-02T15:56:12.250Z

marked this merge request as **draft**

Author: Amar Takhar 2024-06-02T15:56:52.386Z

Hello Mohamed this change has a Merge Commit in it. Please remove it by rebasing instead. Thank you.

Author: Mohamed Hassan 2024-06-03T18:24:43.374Z

added 6 commits

- 68c2e733...b8910111 - 3 commits from branch `rtems/rtos:main`
- 69ff4ebc - Added description/documentation to stackchk test files
- dee85ef1 - testsuite/libtest/stackchk: Changed commit msg and line comment to block comment
- de303dfe - cpukit/libmisc/stackchk/check.c: Add documentation

Compare with previous version

Author: Gedare Bloom 2024-06-05T15:14:37.883Z

avoid having multiple blank lines.

Author: Mohamed Hassan 2024-06-14T23:13:36.349Z

changed this line in version 9 of the diff

Author: Amar Takhar 2024-06-05T15:43:38.824Z

marked this merge request as **ready**

Author: Amar Takhar 2024-06-05T15:43:57.531Z

Removing draft as merge commit has been removed thanks.

Author: Kinsey Moore 2024-06-06T23:48:38.937Z

added 17 commits

- de303dfe...cbe60cea - 14 commits from branch `rtems/rtos:main`
- 7663b1f5 - Added description/documentation to stackchk test files
- 83b898df - testsuite/libtest/stackchk: Changed commit msg and line comment to block comment
- 40378a3f - cpukit/libmisc/stackchk/check.c: Add documentation

Compare with previous version

Author: Gedare Bloom 2024-06-10T18:12:21.671Z

this is not using the typical doxygen we use. also, I don't think we need to add doxygen for static/private functions.

You can update this MR to improve the comments on these internal functions, but they do not need to be in doxygen format. just use the existing `/* ... */`

Author: Mohamed Hassan 2024-06-12T17:48:55.470Z

changed this line in version 4 of the diff

Author: Mohamed Hassan 2024-06-12T17:48:55.675Z

added 5 commits

- 02978e56 - Added description/documentation to stackchk test files
- 597c8324 - testsuite/libtest/stackchk: Changed commit msg and line comment to block comment
- 97321bd0 - Merge remote-tracking branch 'upstream/main'
- 68c2e733 - cpukit/libmisc/stackchk/check.c: Add documentation
- e4315c01 - removed comments from external function and followed doxygen documentation

Compare with previous version

Author: Mohamed Hassan 2024-06-12T17:51:39.141Z

added 42 commits

- e4315c01...20939b21 - 38 commits from branch `rtems/rtos:main`
- 64cfab2f - Added description/documentation to stackchk test files
- 2e01a50b - testsuite/libtest/stackchk: Changed commit msg and line comment to block comment
- eec3f6b1 - cpukit/libmisc/stackchk/check.c: Add documentation
- 169a371b - removed comments from external function and followed doxygen documentation

Compare with previous version

Author: Mohamed Hassan 2024-06-12T19:29:58.733Z

added 9 commits

- 02978e56 - Added description/documentation to stackchk test files
- 597c8324 - testsuite/libtest/stackchk: Changed commit msg and line comment to block comment
- 97321bd0 - Merge remote-tracking branch 'upstream/main'
- 68c2e733 - cpukit/libmisc/stackchk/check.c: Add documentation
- e4315c01 - removed comments from external function and followed doxygen documentation
- a20cf4eb - cpukit/include/rtems/confdefs.h Added stack blown report configuration macro
- 01e22f7b - cpukit/include/rtems/stackchk.h Prototyped the customized stack blown...
- e6b1b676 - cpukit/libmisc/stackchl/check.c Added the configurable stack blown report functionality
- dc81414b - cpukit/libmisc/stackchk/check.c Added configurability to the stack blown report function

Compare with previous version

Author: Kinsey Moore 2024-06-13T12:48:48.900Z

marked this merge request as **draft**

Author: Kinsey Moore 2024-06-13T12:49:07.199Z

Re-marking as draft since a merge commit has been added back into the commit history for this MR.

Author: Mohamed Hassan 2024-06-13T16:19:30.932Z

added 1 commit

- 864d41a8 - cpukit/libmisc/stackchk/check.c rebasing

Compare with previous version

Author: Mohamed Hassan 2024-06-14T21:22:53.971Z

added 2 commits

- ba3e9277 - Merge branch rtems:main into main
- 9766e929 - cpukit/libmisc/stackchk Add documentation

Compare with previous version

Author: Mohamed Hassan 2024-06-14T23:13:36.548Z

added 9 commits

- babb2913 - bsps: Assign file to Doxygen group
- eb34763a - posix: Fixed header comment of aio_read.c
- 80d5884d - build: Simplify wscript code
- 32d674a0 - score: Add _Processor_mask_And_not()
- fadbadcc - Convert librtemscxx and libstdthreads to groups.
- 6113b5d5 - Typo aarch -> aarch64
- 4c36b352 - Promote to group for libdrvmgr and add libdebugger, libdl
- 40344a44 - bsps/amd64: Add comments to start.s
- b088d616 - cpukit/libmisc/stackchk Add documentation

Compare with previous version

3.9.2.284 334 - Modify the 'exit' coding style for libtests (closed)

Id	334
State	closed
Closed by	
Created	2024-11-28T10:00:10.637Z
Closed	2024-11-29T09:35:08.258Z
Updated	2025-09-19T02:39:15.739Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/334
Commit	8ffb84de13796add5fe561689e2f7a89304cdf6d

Modify the ‘exit’ coding style for libtests

Author: Sebastian Huber 2024-11-29T01:39:59.854Z

What is the reason for this change?

Author: 2024-11-29T01:39:59.854Z

“exit(0)” is more in line with coding standards. There are ‘exit(0)’ and ‘exit(0)’ in this directory. And I think they should be consistently written as exit(0).

Author: Sebastian Huber 2024-11-29T05:26:34.063Z

For RTEMS you can assume that each file has its own style. According to the RTEMS guidelines, it should be formatted like `exit( 0 )`:

https://docs.rtems.org/docs/main/eng/coding-formatting.html

I would not do any formatting changes by hand. This should be done by a tool. There are already two MRs open which do exactly this.

Author: 2024-11-29T09:34:56.684Z

I got it. Thank you!

Author: 2024-11-29T01:01:11.995Z

resolved all threads

Author: Amar Takhar 2024-11-29T09:36:49.606Z

Thank you for the submission and you are welcome to submit another one! :smiley:

3.9.2.285 190 - Draft: include/rtems: Fix Doxygen comments (closed)

Id	190
State	closed
Closed by	Mohamed Hassan
Created	2024-08-15T18:15:15.949Z
Closed	2024-08-16T15:16:22.947Z
Updated	2025-09-19T02:39:15.619Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/190
Commit	19026af7b1da9ae15f50768e05b7c41db2fb6140

Summary

Fixing comments to follow RTEMS Doxygen commenting guidelines.

Author: Mohamed Hassan 2024-08-15T18:16:29.969Z

mentioned in merge request !86

Author: Sebastian Huber 2024-08-16T08:35:32.162Z

This MR overlaps with !187.

Author: Mohamed Hassan 2024-08-16T08:35:32.124Z

Yeah I saw your merge request, but I tried to address your comments. What do you think the best way to integrate these changes without duplication or conflicts?

3.9.2.286 243 - aarch64/raspberrypi: Add FDT support (closed)

Id	243
State	closed
Closed by	Ning Yang
Created	2024-09-27T05:48:01.736Z
Closed	2024-09-27T06:10:06.112Z
Updated	2025-09-19T02:39:15.509Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/243
Commit	71967a2f08a1b367929be67587b811f48b947dee

Summary

aarch64/raspberrypi: Add FDT support

Use rtems-bin2c to generate the FDT blob based on device-tree files from Linux 6.5.

Author: Ning Yang 2024-09-27T05:49:53.068Z

My test app is as follows, it works fine.

```
rtems_task Init(
rtems_task_argument ignored)
{
puts("hello");

const void *fdt;
int node;
int len;
```

(continues on next page)

(continued from previous page)

```
const uint32_t *val;

fdt = bsp_fdt_get();
node = fdt_node_offset_by_compatible(fdt, -1, "brcm,bcm2835-sdhci");

printf("%d\\n", node);

val = fdt_getprop(fdt, node, "reg", &len);

printf("%lX %lX\\n", fdt32_to_cpu(val[0]), len);


puts("end");

rtems_shutdown_executive(0);
}
```

output:

```
hello
20748
7E300000 8
end
```

Author: Christian Mauderer 2024-09-27T09:46:21.522Z

You pulled the FDT from Linux, right? Which license did they use?

Usually the FDTs from Linux are GPL. Therefor it's tricky to link them into RTEMS because the license is not compatible.

Author: Ning Yang 2024-09-27T09:46:21.522Z

https://github.com/freebsd/freebsd-src/blob/b0f9f970ec104e1df22ece7c7cdf12240e3c6713/sys/contrib/device-tree/src/arm/broadcom/bcm2711-rpi-4-b.dts

why freebsd can use it?

Author: Christian Mauderer 2024-09-27T09:46:21.522Z

FreeBSD has that in a separate "contrib" folder. I think they somewhere tell you that it has separate licenses. Additionally, FreeBSD distributes the device tree as separate files.

Your solution links it into a blob in the binary. You can find both opinions: Some people will tell you that a blob doesn't "infect" the remaining system with GPL. Other people will tell you that it will. Licenses are a legal topic and it's really hard to estimate how a court would decide. Especially because RTEMS is a worldwide

project and therefore you have to guess it in multiple legal systems. Therefore, it's usually something where an open source project just has to be careful.

Author: Ning Yang 2024-09-27T09:46:21.522Z

Understood. Thank you very much for your detailed reply.

Author: Joel Sherrill 2024-09-27T13:28:29.285Z

FWIW the Microblaze BSP has multiple ways to get the FDT and one is selected by config.ini.

1. There is a default FDT included 1. Have no FDT and use default values for properties BSP requires 1. User provide a path to one 1. Use one provided by U-Boot

The Microblaze is a highly configurable CPU and SoC and the user who sponsored this port needed those options. But for use on reference hardware, the no FDT option was OK.

Would some of these options being supported help? It at least can move a questionably licensed FDT out of our space.

Author: Ning Yang 2024-09-27T09:46:21.545Z

resolved all threads

3.9.2.287 43 - Draft: Add new PL011 driver with IRQ support (closed)

Id	43
State	closed
Closed by	Ning Yang
Created	2024-05-22T06:31:16.598Z
Closed	2024-05-31T04:02:45.257Z
Updated	2025-09-19T02:39:15.189Z
Milestone	6.1
Labels	arch:aarch64, arch:arm, device::serial
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/43
Commit	c3e75ca6f5fc9da8afea683381a519c72dd84f2b

Add new PL011 driver. I don't have a Raspberry Pi 3b hardware. `arm/raspberrypi`,``arm/xen``need to be test.

Author: Sebastian Huber 2024-05-29T12:06:26.010Z

Why do we need a new PL011 driver?

Author: Gedare Bloom 2024-05-29T12:06:26.010Z

Agreed, we should refactor the existing one to be extensible. I encountered a similar issue doing the Versal UART, as it is based on the PL011 but is not an identical register map at the end. @yangn0 :

A way to do this would be to define a `struct { ...} pl011_base;` that contains all the field definitions and `BSP_BIT` macros that exist in `struct { ... } pl011` up to (not including) `uint32_t uartdmacr;`

then, create

```
struct {
pl011_base PL011;
uint32_t uartdmacr;
#define PL011_UARTDMACR_DMAONERR BSP_BIT32(2)
...
uint32_t uartpcellid3;
} arm_pl011_uart;
```

and:

```
struct {
plo011_base PL011;
/* anything extra goes here */
} raspberrypi_uart;
```

and:

```
struct {
pl011_base PL011;
} versal_uart;
```

Author: Sebastian Huber 2024-05-29T12:06:26.010Z

Yes, this makes sense.

Author: Ning Yang 2024-05-29T12:06:26.010Z

Hi @gedare, Thanks for your help. `raspberrypi_uart` and `versal_uart`, Where should these BSP-specific structures be placed? `bsps` directory or `dev` shared directory?

Author: Ning Yang 2024-05-29T12:06:26.010Z

!47

Author: Kinsey Moore 2024-05-23T15:58:18.981Z

These commits are not organized in such a way that all of them build correctly. They either need to be squashed or the changes rearranged to produce functional builds after every commit.

I believe there is also a leftover arm-pl011.h that is now unused after applying these commits.

Author: Kinsey Moore 2024-05-23T23:09:53.208Z

added 15 commits

- 515a7811...869071df - 4 commits from branch `rtems/rtos:main`
- 90417f80 - 1 earlier commit
- 8f7585d5 - bsps/shared: Add new Mini UART driver
- 847437cb - spec: Add Mini UART and PL011 drivers to build spec
- e5ae8585 - bsps: Update BSPs to use the new PL011 driver
- 3aec6c75 - set_attributes issue
- 095a8404 - fix: UART FIFO is not enabled correctly
- ed8ef880 - fix: In UART interrupt mode, writing a large number of characters will cause fatal
- 9b91efd5 - aarch64/a53: Add clock speed
- 1274a324 - aarch64/a72: Add clock speed
- df06e464 - arm/realview-pbx-a9: Add clock speed
- 00397abc - arm/raspberrypi: Add clock speed

Compare with previous version

Author: Ning Yang 2024-05-24T03:07:03.333Z

added 3 commits

- 00397abc...10727117 - 2 commits from branch `rtems/rtos:main`
- 8959cc1c - Merge branch rtems:main into uart-drivers

Compare with previous version

Author: Ning Yang 2024-05-24T03:07:07.845Z

added 2 commits

- 64844f44 - 1 commit from branch `rtems/rtos:main`
- 7628af95 - Merge branch rtems:main into uart-drivers

Compare with previous version

Author: Ning Yang 2024-05-24T03:15:01.361Z

added 13 commits

- 7628af95...3c1288db - 3 earlier commits
- 163e08bb - bsps: Update BSPs to use the new PL011 driver
- 64213799 - set_attributes issue
- 3e36f0a8 - fix: UART FIFO is not enabled correctly
- 2706ad36 - fix: In UART interrupt mode, writing a large number of characters will cause fatal
- d37dcbc5 - aarch64/a53: Add clock speed
- c67ac333 - aarch64/a72: Add clock speed
- 29a436a3 - arm/realview-pbx-a9: Add clock speed
- 515a7811 - arm/raspberrypi: Add clock speed
- da9d7354 - Merge branch 'uart-drivers' of ssh://gitlab.rtems.org:2222/yangn0/rtems into uart-drivers
- 13b26293 - arm/xen: Add clock speed

Compare with previous version

Author: Ning Yang 2024-05-24T03:16:38.060Z

changed the description

Author: Ning Yang 2024-05-24T08:57:12.494Z

added 1 commit

- c3e75ca6 - arm/xen: Add clock speed

Compare with previous version

Author: Utkarsh Verma 2024-05-26T02:49:46.715Z

I have a suggestion for the `arm-pl011` driver. Since it's a base driver that other devices extend from. Wouldn't it be better to have `unsigned long regs_base` instead of `volatile pl011* regs`?

This way, we can avoid creating redundant structs for each child driver. For example,

```
// raspberrypi_pl011.h

bool some_device_specific_function(arm_pl011_context *ctx, ...);
```

instead of

```c
#include <arm-pl011-regs.h>

typedef struct {
pl011 base;

/* Any new registers that you have specific to RPi. */
} raspberrypi_pl011;

typedef struct {
rtems_termios_device_context base;
volatile raspberrypi_pl011 *const regs;
const rtems_vector_number irq;
const uint32_t initial_baud;
} raspberrypi_pl011_context;

bool some_device_specific_function(raspberrypi_pl011_context *ctx, ...);
```

Author: Ning Yang 2024-05-26T05:59:49.030Z

marked this merge request as **draft**

Author: Ning Yang 2024-05-29T12:06:26.029Z

resolved all threads

Author: Ning Yang 2024-05-31T04:06:26.503Z

mentioned in issue #5026

Author: Ning Yang 2024-06-20T02:53:35.390Z

mentioned in merge request !47

Author: Ning Yang 2024-07-05T03:57:31.506Z

3.9.2.288 215 - libtests/shell01:add test empty and NULL usernames check (closed)

Id	215
State	closed
Closed by	shuhua hua
Created	2024-09-12T02:37:10.884Z
Closed	2024-09-13T07:42:19.438Z
Updated	2025-09-19T02:39:15.046Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/215
Commit	791b305535708a29f33a60bea150f0a6b93b51a8

Summary

add test empty and NULL usernames check

Author: Sebastian Huber 2024-09-13T01:47:37.159Z

Could you add this commit to !202 ?

Author: Amar Takhar 2024-09-13T01:47:37.159Z

Hi Sebastian I have made !202 as dependency to this one so it gets merged first the build won't break as it will ensure the other one gets added first is that OK for now?

Author: Sebastian Huber 2024-09-13T01:47:37.159Z

Thanks, this works also.

Author: Sebastian Huber 2024-09-13T01:47:37.180Z

resolved all threads

Author: Sebastian Huber 2024-09-13T03:00:11.708Z

Please fix the commit message so that it is close to usual format.

Author: shuhua hua 2024-09-13T03:00:11.666Z

I'm sorry, I just read the Checklist for Merge Requests, and I have revised the submission title.

Author: Amar Takhar 2024-09-13T04:24:41.210Z

Hello @huangshuhua you need to edit the commit message as part of your change. Your title for the MR is good please change the title of your commit message to what you have for the Merge Request, thank you!

Author: shuhua hua 2024-09-13T07:46:37.917Z

I'm really sorry, I'm not very proficient in using Gitlab. I just closed this branch and created a new request.

Author: shuhua hua 2024-09-13T02:57:34.352Z

changed title from **{-add test cases for handling empty and NULL usernames in rtems_shell_login_check function-}** to **{+libtests/shell01:add test empty and NULL usernames check+}**

Author: shuhua hua 2024-09-13T02:57:34.379Z

changed the description

3.9.2.289 50 - Draft: Added description/documentation to stackchk test files (closed)

Id	50
State	closed
Closed by	Mohamed Hassan
Created	2024-05-26T21:06:29.892Z
Closed	2024-06-12T17:48:13.999Z
Updated	2025-09-19T02:39:14.737Z
Milestone	6.1
Labels	doc, rtems::testing
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/50
Commit	ba3e9277b1877ab46bda2580c911e2bd76911a11

Summary

I documented the functions of the stackchk test adding more description to the function. It's the first step in my project.

Author: Chris Johns 2024-05-26T22:09:59.553Z

Please use `/* */` comments

Author: Mohamed Hassan 2024-05-28T06:03:13.462Z

changed this line in version 2 of the diff

Author: Mohamed Hassan 2024-06-04T14:32:05.724Z

Noted, will be modified.

Author: Chris Johns 2024-05-26T22:09:59.848Z

Please use `/* */` comments

Author: Mohamed Hassan 2024-05-28T06:03:13.836Z

changed this line in version 2 of the diff

Author: Chris Johns 2024-05-26T22:10:00.341Z

Please use `/* */`

Author: Mohamed Hassan 2024-05-28T06:03:14.394Z

changed this line in version 2 of the diff

Author: Chris Johns 2024-05-26T22:10:00.947Z

1. Please change the commit comment to be something like `testsuite/libtest/stackchk: Added description/documentation`
2. Do not use C++ comments for lines, please use `/* */` blocks

Author: Mohamed Hassan 2024-05-28T06:03:14.588Z

added 1 commit

- 597c8324 - testsuite/libtest/stackchk: Changed commit msg and line comment to block comment

Compare with previous version

Author: Mohamed Hassan 2024-05-28T06:04:16.431Z

added 9 commits

- 597c8324...b3a4f539 - 8 commits from branch `rtems/rtos:main`
- ba3e9277 - Merge branch rtems:main into main

Compare with previous version

Author: Gedare Bloom 2024-05-31T20:06:49.240Z

Rebase to get rid of the merge commit message. While you're at it, you can squash your commits to 1.

Author: Gedare Bloom 2024-05-31T20:11:01.598Z

Don't add >1 blank line in a row.

Author: Gedare Bloom 2024-05-31T20:11:01.848Z

see https://docs.rtems.org/branches/master/eng/coding-doxygen.html

Author: Gedare Bloom 2024-05-31T20:11:02.040Z

Replace **all** `//` comments by `/* */`

Author: Gedare Bloom 2024-05-31T20:11:02.642Z

don't leave two blank comment lines in a row either.

Author: Gedare Bloom 2024-05-31T20:11:02.996Z

some of these comments are superfluous / unnecessary.

Author: Gedare Bloom 2024-05-31T20:11:03.872Z

requested changes

Author: Gedare Bloom 2024-05-31T20:11:30.914Z

"requested to merge Hamzi/rtems:main"

You should prefer to work on a branch within your fork.

Author: Sebastian Huber 2024-06-04T09:11:22.774Z

I don't think we should add comments which explain the obvious.

Author: Sebastian Huber 2024-06-04T09:13:18.464Z

Do not use `@func` if you document something in place.

In general, it is good to have a high level description of a test, however, if we add documentation for individual test functions, then this could end up in a multi-year project.

Author: Gedare Bloom 2024-06-10T18:08:38.917Z

marked this merge request as **draft**

Author: Gedare Bloom 2024-06-10T18:09:24.416Z

@Hamzi please read through the comments on this MR, and then I think you should close it. The relative value of the additional source documentation added here is low.

3.9.2.290 33 - Test branch 2, do not merge (closed)

Id	33
State	closed
Closed by	Kinsey Moore
Created	2024-05-14T22:30:20.722Z
Closed	2024-05-23T14:33:32.018Z
Updated	2025-09-19T02:39:14.367Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/33
Commit	32d9ccd44ee654a191846a054748a8cc819be69b

Summary

bsps/aarch64/a72: Avoid use of reserved INTIDs

Interrupt IDs 1020, 1021, 1022, and 1023 are reserved as special INTIDs and should be ignored for normal RTEMS operation as they signal internal changes in the interrupt controller that RTEMS itself is directly causing.

Author: Kinsey Moore 2024-05-23T14:33:31.422Z

This test MR is no longer necessary

3.9.2.291 219 - shell/cat_file:Fix cat not outputting file with no newline at end (closed)

Id	219
State	closed
Assignee(s)	Kinsey Moore
Reviewer(s)	Kinsey Moore, Joel Sherrill
Closed by	Kinsey Moore
Created	2024-09-13T08:56:54.754Z
Closed	2024-10-25T02:53:53.841Z
Updated	2024-10-25T18:17:31.736Z
Milestone	6.1
Labels	rtems::shell
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/219
Commit	ad9e6d14e3ddf80db412c0313b8b2d8b52501567

Summary

The phenomenon is that when I create a file, such as 123.txt, in the root directory using the edit command, and type some content without pressing Enter to add a newline at the end, upon saving with F9, I can see the file 123.txt exists when using the ls command. However, when I try to view the content with the cat command, nothing is output.

Author: Kinsey Moore 2024-10-25T15:56:05.008Z

Instead of printing characters that are not part of the file, this should instead use fflush() to force a flush of the output buffer.

Author: shuhua hua 2024-10-25T15:56:05.008Z

I have tried using fflush, but it still couldn't output the data. Is it effective when you add fflush on your side?

Author: Joel Sherrill 2024-10-25T15:56:05.008Z

The fflush POSIX specification includes an example of using fflush() on stdout so it should work.

https://pubs.opengroup.org/onlinepubs/009695399/functions/fflush.html

Trace the fflush() call down to see if what is actually happening. I think stdout is line buffered so this may be a factor.

@opticron Do you have any idea why this isn't working?

Author: Kinsey Moore 2024-10-25T15:56:05.008Z

It appears that cat is actually working just fine, even without this change. I'm not sure what @huangshuhua is using for the content of the file, but when I use "This

is a test string with no newline" and cat the file, the result I get is that the string prints and then the shell outputs a carriage return with no newline and so the shell prompt overwrites the beginning of the text yielding "SHLL [/] # est string with no newline".

If anything, the shell should be modified to not overwrite user output.

Author: Kinsey Moore 2024-10-25T15:56:05.008Z

The relevant line is cpukit/libmisc/shell/shell.c:332

Author: shuhua hua 2024-10-25T15:56:05.008Z

Yes, it seems you're right. When I created a text file with the content "123456789qwert" and used the `cat` command, it output "rt". However, when I changed the content of the text file to "123456789" and executed the `cat` command again, there was no output.

Author: Chris Johns 2024-09-20T22:42:55.554Z

Maybe we should change the command to https://github.com/freebsd/freebsd-src/blob/main/bin/cat/cat.c?

Author: Chris Johns 2024-10-18T00:29:09.667Z

requested review from @opticron and @joel

Author: Kinsey Moore 2024-10-24T22:21:04.788Z

assigned to @opticron

Author: Joel Sherrill 2024-10-25T15:56:57.341Z

What if the last character of the file was a n? Should another one be output?

Author: Kinsey Moore 2024-10-25T15:56:57.341Z

No, the content of the file should not be altered on output for formatting purposes.

Author: Kinsey Moore 2024-10-25T02:28:48.923Z

mentioned in merge request !272

Author: Kinsey Moore 2024-10-25T02:29:52.555Z

@huangshuhua Can you verify that !272 fixes the issue you were seeing?

Author: Kinsey Moore 2024-10-25T02:45:18.037Z

added 183 commits

- 52a4a4a4...e0f1c8fe - 182 commits from branch `rtems/rtos:main`
- ad9e6d14 - shell/cat_file:Fix cat not outputting file with no newline at end

Compare with previous version

Author: Kinsey Moore 2024-10-25T15:56:57.360Z

resolved all threads

Author: Amar Takhar 2024-10-25T19:13:19.559Z

@huangshuhua Thanks for this submission .. it helped us fix a sneaky bug we didn't know about!

3.9.2.292 236 - cpukit/rtems: include types.h in optionsimpl.h (closed)

Id	236
State	closed
Assignee(s)	Gedare Bloom
Closed by	Gedare Bloom
Created	2024-09-23T22:10:44.368Z
Closed	2024-10-18T20:00:05.327Z
Updated	2024-10-18T20:00:05.312Z
Milestone	6.1
Labels	ci::possible, cpukit
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/236
Commit	0e3d1e18c77bcd6b1407bc0da7a4bc1a0ded81bb

Summary

Fix a dependency problem in include ordering. The `optionsimpl.h` file uses types that are defined in `types.h`, but it only gets them included if something else was included before `optionsimpl.h` that pulls in `types.h`

Author: Amar Takhar 2024-09-23T22:25:43.515Z

Good catch adding ~"ci::possible" tag to this. There are plenty of SAST that will check for this also includes that are no longer required.

Author: Amar Takhar 2024-09-23T22:25:46.538Z

approved this merge request

Author: Sebastian Huber 2024-09-23T23:21:02.181Z

I would rather fix this by changing these expressions. The result type of `(option_set & RTEMS_NO_WAIT)` is an integer and not a bool. This should be `return (option_set & RTEMS_NO_WAIT) != 0;` and `return (option_set & RTEMS_EVENT_ANY) != 0;`.

Author: Sebastian Huber 2024-10-18T10:01:54.563Z

I changed the expressions in !261.

Author: Amar Takhar 2024-10-16T04:35:29.459Z

assigned to @gedare

3.9.2.293 227 - SMP: Minor system start improvements (closed)

Id	227
State	closed
Assignee(s)	Sebastian Huber
Closed by	Sebastian Huber
Created	2024-09-19T04:53:00.698Z
Closed	2024-09-21T15:41:01.809Z
Updated	2024-09-21T15:41:01.793Z
Milestone	6.1
Labels	smp
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/227
Commit	bac4bb796f02be3832345f95749b8cf0ccf195ab

Summary

Author: Sebastian Huber 2024-09-19T04:53:00.785Z

assigned to @sebhub

Author: Sebastian Huber 2024-09-20T04:24:10.999Z

changed title from **{-score: Use _Per_CPU_Get()-}** to **{+SMP: Minor system start improvements+}**

Author: Sebastian Huber 2024-09-20T04:24:11.027Z

changed the description

Author: Chris Johns 2024-09-20T22:28:53.849Z

Why return anything when it is always `true` given the commit changes functionality by removing the timeout?

Author: Sebastian Huber 2024-09-21T15:38:22.998Z

This allows a tail call optimization.

Author: Chris Johns 2024-09-20T22:34:33.633Z

This is an interface that accepts a `bool` result of the CPU starting but this change removes that logic from the arm BSPs. Do any of the SMP supported arch detect a CPU failing to start?

Author: Sebastian Huber 2024-09-21T15:39:31.844Z

None of the BSPs detect a CPU failing to start.

Author: Chris Johns 2024-09-20T22:28:55.888Z

The MR's title says minor improvements but this change removes timeouts on a CPU starting. This is a little confusing?

Author: Sebastian Huber 2024-09-21T15:41:00.834Z

Removing unused code is an improvement from my point of view. However, I will rework this further. This _Per_CPU_State_wait_for_non_initial_state() function is superfluous in general.

3.9.2.294 113 - bsp/aarch64:SMP improvement on aarch64 (closed)

Id	113
State	closed
Reviewer(s)	Kinsey Moore, Sebastian Huber
Closed by	Sebastian Huber
Created	2024-07-10T09:26:22.765Z
Closed	2024-09-19T05:55:21.985Z
Updated	2024-09-20T04:22:47.579Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/113
Commit	711fdeb20db8c88af0f1fb951a68747b71fb61f6

Summary

bsp/aarch64:SMP improvement on aarch64 * add conversion between MPID and CPU index * add parameters to pass cluster ID to secondary CPU * add parameters cluster ID for gicv3_trigger_sgi() * move _CPU_SMP_Start_processor() from bspsmp-arm-psci.c to aarch64-smp.c

Close #5064

Author: Kinsey Moore 2024-08-28T15:47:12.702Z

Hi and thanks for working on this. Before you unmark this as a draft, please improve the commit message on the first patch. There is no explanation as to the functional difference. Given the other commit, I can assume that this corrects operation when multiple clusters are in use.

Author: xiaojun zheng 2024-08-28T15:47:12.702Z

sure, I'll refresh the commit messages when erevrything is ready.

Author: Kinsey Moore 2024-07-19T12:59:58.517Z

added 8 commits

- b5770056...a824ed6f - 6 commits from branch `rtems/rtos:main`
- 9037c00d - bsp/aarch64:use _Per_CPU_Get_index() to get current processor index
- c308ff2c - bsp/aarch64:SMP improvement on aarch64

Compare with previous version

Author: xiaojun zheng 2024-08-05T06:30:23.569Z

added 37 commits

- c308ff2c...44d17106 - 35 commits from branch `rtems/rtos:main`
- a67c5a44 - bsp/aarch64:use _Per_CPU_Get_index() to get current processor index
- 7893cab9 - bsp/aarch64:SMP improvement on aarch64

Compare with previous version

Author: xiaojun zheng 2024-08-19T08:54:03.743Z

added 61 commits

- 7893cab9...73918bc7 - 59 commits from branch `rtems/rtos:main`
- 58bd8212 - bsp/aarch64:use _Per_CPU_Get_index() to get current processor index
- cb00b5a9 - bsp/aarch64:SMP improvement on aarch64

Compare with previous version

Author: xiaojun zheng 2024-08-19T08:55:19.328Z

added 3 commits

- 606584d0 - 1 commit from branch `rtems/rtos:main`
- f3f79534 - bsp/aarch64:use _Per_CPU_Get_index() to get current processor index
- 741220ad - bsp/aarch64:SMP improvement on aarch64

Compare with previous version

Author: xiaojun zheng 2024-08-19T09:15:45.823Z

added 1 commit

- c0434d7c - bsp/aarch64:SMP improvement on aarch64

Compare with previous version

Author: xiaojun zheng 2024-08-19T09:18:40.895Z

added 1 commit

- 40038376 - bsp/aarch64:SMP improvement on aarch64

Compare with previous version

Author: xiaojun zheng 2024-08-19T09:30:59.209Z

added 1 commit

- cbde8c7f - bsp/aarch64:SMP improvement on aarch64

Compare with previous version

Author: xiaojun zheng 2024-08-19T14:34:35.192Z

added 2 commits

- c818e960 - bsp/aarch64:use _Per_CPU_Get_index() to get current processor index
- d354e53c - bsp/aarch64:SMP improvement on aarch64

Compare with previous version

Author: xiaojun zheng 2024-08-19T14:49:41.055Z

added 1 commit

- 52f0f597 - bsp/aarch64:SMP improvement on aarch64

Compare with previous version

Author: xiaojun zheng 2024-08-19T14:52:18.227Z

marked this merge request as **ready**

Author: xiaojun zheng 2024-08-19T14:52:18.248Z

changed the description

Author: Kinsey Moore 2024-08-28T15:47:12.721Z

resolved all threads

Author: Joel Sherrill 2024-08-28T15:49:22.876Z

The paragraphs in the commit message for “bsp/aarch64:use _Per_CPU_Get_index() to get current processor index” are way too long. Please stay under 80 columns.

Author: xiaojun zheng 2024-08-30T02:18:55.581Z

OK, fixed.

Author: xiaojun zheng 2024-08-30T02:16:45.567Z

added 2 commits

- e22ad639 - bsp/aarch64:use _Per_CPU_Get_index() to get current processor index
- f7b1a454 - bsp/aarch64:SMP improvement on aarch64

Compare with previous version

Author: Sebastian Huber 2024-08-31T03:42:12.041Z

The new objects and functions should be in a proper namespace, for example `_AArch64_` or `aarch64_`. The Doxygen documentation should be more detailed and explain the relationship between the functions and objects. It should also explain the initialization order and dependencies.

Author: xiaojun zheng 2024-09-13T04:18:20.185Z

changed this line in version 12 of the diff

Author: xiaojun zheng 2024-09-13T04:22:10.087Z

Updated the objects names, functions names, comments, and some code style.

Author: Sebastian Huber 2024-09-13T04:56:15.034Z

Please fix the white space and spelling in your commit messages.

Author: Chris Johns 2024-09-11T22:20:12.406Z

requested review from @opticron and @sebhub

Author: xiaojun zheng 2024-09-13T04:18:20.460Z

added 63 commits

- f7b1a454...ce1fb41a - 61 commits from branch `rtems/rtos:main`
- 8ef69a4a - bsp/aarch64:use _Per_CPU_Get_index() to get current processor index
- 492e26e2 - bsp/aarch64:SMP improvement on aarch64

Compare with previous version

Author: Sebastian Huber 2024-09-13T05:33:49.182Z

I can't build your branch:

```
[1392/4729] Compiling bsps/aarch64/shared/start/start.S
06:53:46 runner ['/opt/rtems/6/bin/aarch64-rtems6-gcc', '-MMD', '-mno-
↪outline-atomics', '-mcpu=cortex-a53', '-mfix-cortex-a53-835769', '-
↪mfix-cortex-a53-843419', '-DASM', '-g', '-Icpukit/include', '-I../../.
↪./cpukit/include', '-Icpukit/score/cpu/aarch64/include', '-I../../../
↪cpukit/score/cpu/aarch64/include', '-Ibsps/include', '-I../../../bsps/
↪include', '-Ibsps/aarch64/include', '-I../../../bsps/aarch64/include',
↪ '-Ibsps/aarch64/xilinx-zynqmp/include', '-I../../../bsps/aarch64/
↪xilinx-zynqmp/include', '../../../bsps/aarch64/shared/start/start.S',
↪'-c', '-ostart.o']
../../../bsps/aarch64/shared/start/start.S: Assembler messages:
../../../bsps/aarch64/shared/start/start.S:223: Error: undefined symbol␣
↪BOOT_PARAM_CPUN_OFFSET used as an immediate value
```

Author: xiaojun zheng 2024-09-13T05:33:49.148Z

BOOT_PARAM_CPUN_OFFSET is defined in start.h. Please paste your command line here, so I can give it a try.

Author: Sebastian Huber 2024-09-13T05:36:24.567Z

My config.ini is simply:

```
[aarch64/xilinx_zynqmp_lp64_a53]
RTEMS_SMP = True
BUILD_TESTS = True
```

Author: xiaojun zheng 2024-09-13T06:49:23.219Z

I moved '#include <bsp/start.h>' outside of '#ifndef ASM' in my rockchip BSP file bsp.h, so it can build on my own BSP. Two ways to solve this error,add a include line in start.S or modify all aarch64 bsp.h. Which one should I take?

Author: Sebastian Huber 2024-09-13T04:59:47.212Z

No blank line before the end of the file. Add spaces similar to the code above.

Author: xiaojun zheng 2024-09-13T06:59:37.515Z

changed this line in version 13 of the diff

Author: Sebastian Huber 2024-09-13T05:01:22.931Z

Add a comment that this function depends on _CPU_Get_current_per_CPU_control() and that it shall not be used before the

TPIDR_EL1 is initialized.

Author: xiaojun zheng 2024-09-13T06:59:38.147Z

added 1 commit

- 34d27bab - bsp/aarch64:SMP improvement on aarch64

Compare with previous version

Author: Kinsey Moore 2024-09-17T22:40:25.831Z

added 16 commits

- 34d27bab...d304a817 - 14 commits from branch `rtems/rtos:main`
- c73c219e - bsp/aarch64:use _Per_CPU_Get_index() to get current processor index
- 1e5fb256 - bsp/aarch64:SMP improvement on aarch64

Compare with previous version

Author: xiaojun zheng 2024-09-18T00:05:31.165Z

added 2 commits

- e6ddc9f0 - bsp/aarch64:use _Per_CPU_Get_index() to get current processor index
- 711fdeb2 - bsp/aarch64:SMP improvement on aarch64

Compare with previous version

Author: Sebastian Huber 2024-09-18T00:24:48.844Z

The approach with this table is quite complicated and not necessary for most systems. Why can't you simply call a function which is provided by the BSP? For example:

```
#ifdef RTEMS_SMP
bl _AArch64_Get_current_processor
...
```

The default implementation is:

```
FUNCTION_ENTRY(_AArch64_Get_current_processor)
mrs x0, mpidr_el1
and x0, x0, #0xff
FUNCTION_END(_AArch64_Get_current_processor)
```

Author: xiaojun zheng 2024-09-18T00:40:11.813Z

The value of MPIDR could be 0x100,0x200 . . . , just as #5064 said.

Author: xiaojun zheng 2024-09-18T00:48:01.632Z

I learned this method from Zephyr. Linux set hwid in dts file, but not all RTEMS's bsp use dts file.

Author: Sebastian Huber 2024-09-18T01:24:23.858Z

Yes, this is fine, but I would like to keep the shared code simple. With this function call you can hide the BSP-specific details.

Author: xiaojun zheng 2024-09-18T01:48:44.324Z

Oh, I understand your point. I'll reconsider the implementation method.

Author: xiaojun zheng 2024-09-18T02:48:47.100Z

The map is still needed. When core 0 tries to start other cores, the PSCI command requires target core's MPIDR.

Author: Sebastian Huber 2024-09-18T03:15:34.886Z

You can abstract this with a function call as well.

Author: xiaojun zheng 2024-09-19T00:48:40.429Z

I think it can not simplify the implementation. The default implementation is simple. But if the hwid is 0x100 . . . , The map should be setup before `_el1_start:`. I think the setup may be complex(if I want ot load the hwid from dts, etc), because the runtime environment has not been established yet.

Author: Sebastian Huber 2024-09-19T01:07:45.822Z

Yes, it could be complex, so it is important to hide this complexity behind function calls. So, instead of accessing your map from everywhere, you should define a function call based API with currently two implementations: 1. the simple one we have right now which just uses the mpidr_el1, 2. the one with this map table. A third one could use a device tree or whatever in the future.

Author: Sebastian Huber 2024-09-19T02:07:28.535Z

Implementation 1. should be in a separate commit and not cause any regressions for existing BSPs. Implementation 2. should be in a follow up commit.

Author: xiaojun zheng 2024-09-19T04:01:20.443Z

`aarch64_cpu_boot_params` is not the map table, it is a global variable used to store the core index that core0 want to start, so the core can setup stack pointer correctly. If call `_AArch64_Get_current_processor` here, how to decide whether to call default implementation or the map implementation? And the function should be callable from assembly code, I think use a global variable here can reduce complexity.

The patch provided two functions aarch64_get/set_cpu_hwid() to visit the map table, in fact, only the get function is nessary for now, if the hwid is loaded from dts maybe set function is needed. And the map table can be static.

Author: Sebastian Huber 2024-09-19T04:10:07.152Z

The _AArch64_Get_current_processor() implementation is selected by the build configuration for a particular BSP. It needs to be implemented in assembly code. This single aarch64_cpu_boot_params object is very brittle. You may have a situation where the boot is done in parallel.

Author: xiaojun zheng 2024-09-19T05:47:04.798Z

Since the MR is quite diffrent from the method you mentioned, and I'm not familiar with assembly code. So I can not move on, should I closed it? I'm sorry to take up so much of your review time.

Author: Sebastian Huber 2024-09-19T05:55:29.131Z

Ok, no problem. Could you please move your first commit into a separate MR and address the review comments specific to this commit. I will work on a patch, which implements the _AArch64_Get_current_processor() approach with a default implementation.

Author: xiaojun zheng 2024-09-19T07:30:20.942Z

OK,done.

Author: Sebastian Huber 2024-09-18T00:27:45.247Z

This file is shared with the arm target. This needs to be done in the architecture-specific part.

Author: Sebastian Huber 2024-09-20T04:22:47.557Z

See also !233.

3.9.2.295 159 - objectinitializeinformation.c: Add Assert for API index too high (closed)

Id	159
State	closed
Assignee(s)	Joel Sherrill
Closed by	Amar Takhar
Created	2024-08-02T16:18:14.313Z
Closed	2024-08-11T02:44:26.265Z
Updated	2024-08-11T03:08:38.995Z
Milestone	6.1
Labels	rtems::testing, scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/159
Commit	e5e3ae1bd2bbb959dae444b7475cc413a75c43b1

Summary

objectinitializeinformation.c: Add Assert for API index too high

Coverity Scan spotted the possibility that the _Objects_Information_table could be over-indexed if the API value provided was too high. This function is only used during initialization and the input should be trusted. Adding a debug _Assert() emphasizes this trust.

Coverity CID 1512508

Closes #5084.

Author: Joel Sherrill 2024-08-02T16:18:14.578Z

assigned to @joel

Author: Amar Takhar 2024-08-02T16:54:59.484Z

approved this merge request

Author: Chris Johns 2024-08-11T02:43:45.999Z

Hows does this resolve the Coverity issue if it is in an assert?

If this cannot be an error could it the assert be triggered for the same reason?

Author: Amar Takhar 2024-08-11T02:44:22.373Z

This should have been closed it was resolved elsewhere. Joel accidentally opened a 2nd MR

Author: Amar Takhar 2024-08-11T02:43:46.018Z

resolved all threads

Author: Joel Sherrill 2024-08-11T03:08:38.970Z

@chris Coverity sees assert as an indicator that we know the case cannot occur. Worst case, it indicates we know it should not happen because initialization is trusted arguments.

3.9.2.296 173 - ftpd.c: Do not use negative socket descriptor (closed)

Id	173
State	closed
Assignee(s)	Joel Sherrill
Closed by	Amar Takhar
Created	2024-08-07T18:56:46.335Z
Closed	2024-08-09T19:09:37.446Z
Updated	2024-08-09T19:09:37.433Z
Milestone	6.1
Labels	cpukit, scan::coverity
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/173
Commit	0a9b06f2e820945103f00b52910f2bf40fcb5c77

Summary

ftpd.c: Do not use negative socket descriptor

Coverity CIDs 1592926 and 1592930

The set_socket_timeout() function was called in two places which potentially could pass in -1. Adding a check to set_socket_timeout() was a simple solution to protect all path.

Closes #5104,

Author: Joel Sherrill 2024-08-07T18:56:46.562Z

assigned to @joel

Author: Amar Takhar 2024-08-09T19:09:34.208Z

Is it worth a comment as to why that's there? Seems pretty random in context.

Author: Joel Sherrill 2024-08-09T19:09:34.208Z

If I add a comment, Coverity will still think it is an issue. And I have to do a commit, cynically it is about the same work as adding the if. I can add a comment if you like but the if probably should stay.

Author: Amar Takhar 2024-08-09T19:09:34.208Z

No I mean keeping the code but adding a comment that it was added due to a Coverity highlight about -1 possibly being passed in. To me at least it seems like an out of place check I'd want to know why it's there.

Author: Amar Takhar 2024-08-09T19:09:34.208Z

Fixed in !181

Author: Amar Takhar 2024-08-08T23:49:52.623Z

approved this merge request

Author: Amar Takhar 2024-08-09T19:09:03.342Z

mentioned in merge request !181

Author: Amar Takhar 2024-08-09T19:09:34.233Z

resolved all threads

3.9.2.297 60 - Resolve "MicroBlaze BSPs modify carry flag before MSR is saved" (closed)

Id	60
State	closed
Closed by	Kinsey Moore
Created	2024-06-06T23:34:26.152Z
Closed	2024-06-11T14:47:20.912Z
Updated	2024-06-11T14:47:20.897Z
Milestone	6.1
Labels	bsp, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/60
Commit	4492fc1d66863846867e010619dda167e04bd6d2

Summary

Closes #4962

Author: Kinsey Moore 2024-06-06T23:38:08.399Z

added 1 commit

- 87ee0df9 - microblaze: Move interrupt context save to BSP

Compare with previous version

Author: Kinsey Moore 2024-06-06T23:38:19.095Z

marked this merge request as **ready**

Author: Sebastian Huber 2024-06-07T13:17:05.879Z

I suggest to remove `bsps/microblaze/microblaze_fpga/start/_interrupt_handler.S` and move the prologue to `_ISR_Handler`. Then rename `_ISR_Handler` to `_interrupt_handler` (or replace the uses of `_interrupt_handler` with `_ISR_Handler`.

Author: Gedare Bloom 2024-06-11T14:49:46.171Z

mixing tabs and spaces

Author: Gedare Bloom 2024-06-10T17:34:52.835Z

requested changes

Author: Kinsey Moore 2024-06-10T19:19:00.963Z

added 20 commits

- 87ee0df9...28c7475b - 19 commits from branch `main`
- 4492fc1d - microblaze: Move interrupt context save to BSP

Compare with previous version

Author: Kinsey Moore 2024-06-11T14:47:20.359Z

Closing this MR to move it to my personal branch since branches in the public repo are against policy.

3.9.2.298 61 - Draft: Resolve “User manual test documentation update” (closed)

Id	61
State	closed
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2024-06-07T01:40:18.847Z
Closed	2024-06-07T01:41:19.142Z
Updated	2024-06-07T01:41:19.133Z
Milestone	6.1
Labels	doc, priority::normal, tickettype::defect, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/61
Commit	cbe60cea71a07106922b4b4db52a912216987962

Summary

Closes #4960

Author: Kinsey Moore 2024-06-07T01:40:18.997Z

assigned to @opticron

3.9.2.299 32 - This is a test MR, do not merge (closed)

Id	32
State	closed
Assignee(s)	Kinsey Moore
Reviewer(s)	Sebastian Huber
Closed by	Kinsey Moore
Created	2024-05-14T20:53:44.387Z
Closed	2024-05-22T14:28:39.692Z
Updated	2024-05-22T14:28:39.668Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/32
Commit	32d9ccd44ee654a191846a054748a8cc819be69b

Summary

bsps/aarch64/a72: Avoid use of reserved INTIDs

Interrupt IDs 1020, 1021, 1022, and 1023 are reserved as special INTIDs and should be ignored for normal RTEMS operation as they signal internal changes in the interrupt controller that RTEMS itself is directly causing.

Author: Kinsey Moore 2024-05-14T20:53:44.833Z

assigned to @opticron

Author: Kinsey Moore 2024-05-14T20:53:55.266Z

requested review from @sebhub

Author: Kinsey Moore 2024-05-22T14:28:39.253Z

I think we're done testing for now.

3.9.2.300 19 - testsuites/libtest/dl12: add DL test for incrementally linked objects (closed)

Id	19
State	closed
Reviewer(s)	Chris Johns
Closed by	Ranulfo Raphael
Created	2024-05-06T11:19:44.443Z
Closed	2024-05-07T21:26:48.628Z
Updated	2024-05-17T01:11:20.589Z
Milestone	6.1
Labels	cpukit::dl
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/19
Commit	e5a8afa75b9e6e943b56f8bca0c99ca0091265e3

Summary

testsuites/libtest/dl12: add DL test for incrementally linked objects

This commit adds a test to validate the incremental linking functionality in RTL. The test is related to issue #3740.

Author: Chris Johns 2024-05-06T23:38:32.038Z

Looks good. Thanks

Author: Chris Johns 2024-05-06T23:38:35.477Z

approved this merge request

Author: Chris Johns 2024-05-06T23:38:54.307Z

requested review from @chris

Author: Ranulfo Raphael 2024-05-07T12:08:27.159Z

added 9 commits

- 7f7841b9...f5b52a3a - 6 commits from branch `rtems/rtos:main`
- 9cc36ee2 - bsps/powerpc: Introduction of interrupt locks
- 10fa3406 - bsps: Use interrupt entry in clock driver
- 3cb44356 - testsuites/libtest/dl12: add DL test for incrementally linked objects

Compare with previous version

Author: Ranulfo Raphael 2024-05-07T12:21:57.154Z

added 1 commit

- e5a8afa7 - testsuites/libtest/dl12: add DL test for incrementally linked objects

Compare with previous version

Author: Ranulfo Raphael 2024-05-07T12:24:40.777Z

Merge request updated to the new main.

Author: Ranulfo Raphael 2024-05-07T21:44:05.198Z

Reopened on a new fork in !25.

Author: Ranulfo Raphael 2024-05-17T01:11:20.524Z

mentioned in merge request !25

3.9.2.301 6 - Resolve “Migrate commits from master to main after gitlab transition” (closed)

Id	6
State	closed
Assignee(s)	Gedare Bloom
Reviewer(s)	Chris Johns, Joel Sherrill, Kinsey Moore
Closed by	Gedare Bloom
Created	2024-04-29T15:48:23.823Z
Closed	2024-04-30T15:03:22.124Z
Updated	2024-05-02T04:21:44.104Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/6
Commit	00f0d307b49097236dd10329456bb4103c283024

Summary

Closes #5005

Author: Gedare Bloom 2024-04-29T15:48:24.003Z

assigned to @gedare

Author: Gedare Bloom 2024-04-29T15:49:31.182Z

added 23 commits

- 3d8ddd62...87f25b54 - 13 earlier commits
- daf59b80 - bsps/arm: Improve GICv2 support
- e0b298e6 - dev/irq: Improve Doxgyen group assignments
- 1b74de95 - validation: Test global construction on aarch64
- 69d4ea91 - validation: Improve bad thread dispatch validation
- 45eb7065 - arm/xen: Fix BSP_INTERRUPT_VECTOR_COUNT
- 25531a95 - bsps/arm: Improve GICv3 support
- ecc6647e - bsp/qoriq: Include missing processormaskimpl.h
- ff3b11c1 - doxygen: Fix constraints
- 5fdd48b3 - validation: Fix typo
- 9654b310 - bsps/aarch64/raspberrypi: Add system timer support

Compare with previous version

Author: Gedare Bloom 2024-04-29T15:49:46.015Z

marked this merge request as **ready**

Author: Gedare Bloom 2024-04-29T15:49:58.955Z

requested review from @chris, @joel, and @opticron

Author: Chris Johns 2024-04-30T07:35:47.276Z

approved this merge request

Author: Kinsey Moore 2024-04-30T14:23:55.448Z

added 23 commits

- 9654b310...00f0d307 - 23 commits from branch `main`

Compare with previous version

Author: Gedare Bloom 2024-05-02T04:21:44.078Z

reset approvals from @chris by pushing to the branch

3.9.2.302 8 - Fix how GitLab picks up our license. (closed)

Id	8
State	closed
Closed by	Amar Takhar
Created	2024-04-30T21:37:50.207Z
Closed	2024-04-30T22:24:40.915Z
Updated	2024-04-30T22:24:40.895Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/8
Commit	a73624734f5a33396d3244f6dcdfb12f2ef3589c

Summary

Fix how GitLab picks up our license.

Most of the code in RTEMS is 2BSD we are switching the LICENSE file to 2BSD with an SPDX identifier.

The old license is now LICENSE_GPLw_exception.

Author: Amar Takhar 2024-04-30T22:24:40.429Z

We will not be addressing this now but at a later date.

Refs https://gitlab.rtems.org/administration/gitlab/-/issues/7

Author: Sam Price 2026-08-21T17:04:58.866Z

mentioned in merge request !1445

3.9.2.303 3 - Add an additional line for consistency. (closed)

Id	3
State	closed
Closed by	Amar Takhar
Created	2024-04-26T17:44:32.680Z
Closed	2024-04-26T17:53:31.788Z
Updated	2024-04-26T17:53:31.778Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/3
Commit	fb3d4a8f5abf116905c18e69c7bdf755d04e0dd6

Summary

Add an additional line for consistency.

This is also to test the merge template which just sets the milestone.

Author: Amar Takhar 2024-04-26T17:45:59.958Z

changed the description

Author: Amar Takhar 2024-04-26T17:46:50.717Z

Interesting the milestone is not setting itself from the default ticket template.

3.10 RTEMS / RTOS / Examples

Go to *Issues* (page 3291) or *Merge Requests* (page 3300)

Issues Summary

6 - Add Portable Hello World Example (page 3291)
5 - Update waf to 2.1.4 : rtems/rtos/rtems-examples (page 3292)
4 - Build fails on regulator test (page 3298)
1 - Update rtems_waf to gitlab (page 3299)

Merge Requests Summary

12 - waf: Update waf to waf-2.1.4 (page 3302)
11 - portable_hello: Add example of using standard portable POSIX source. (page 3302)
10 - regulator: Update for a change in attributes (page 3303)
9 - Fix warnings in other examples (page 3304)
8 - Fix regulator compile problem and warnings in other examples (page 3300)
3 - Convert LICENSE. to MarkDown* (page 3306)
2 - Convert README to MarkDown.* (page 3305)
1 - Update rtems_waf location (page 3307)

3.10.1 Issues

3.10.1.1 6 - Add Portable Hello World Example

Id	6
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Gedare Bloom
Created	2024-12-06T18:30:23.188Z
Closed	2024-12-07T02:56:57.187Z
Updated	2025-02-14T06:37:15.112Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-examples/-/work_items/6
Merges	0

Summary

Add an example hello world that shows how a “normal” POSIX program can be used with RTEMS. The pattern of putting RTEMS initialisation and configuration in a dedicated file (e.g. rtems_config.c) is done in some other examples but not in a simple one just to highlight this pattern.

3.10.1.1.1.1 Pre-set options

Author: Joel Sherrill 2024-12-06T18:30:28.380Z

assigned to @joel

Author: Joel Sherrill 2024-12-06T18:30:28.789Z

Author: Joel Sherrill 2024-12-06T18:30:33.013Z

created branch 6-add-portable-hello-world-example to address this issue

Author: Joel Sherrill 2024-12-06T18:50:23.094Z

mentioned in merge request !11

Author: Amar Takhar 2025-02-14T06:37:15.031Z

mentioned in merge request !17

3.10.1.2 5 - Update waf to 2.1.4 : rtems/rtos/rtems-examples

Id	5
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-12-04T22:18:05.464Z
Closed	2024-12-22T03:35:27.317Z
Updated	2024-12-22T03:35:27.328Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/rtos/rtems-examples/-/work_items/5
Merges	0

Summary

The latest verison of waf fixes several issues on Windows. We also have a huge inconsistency in the version we're running which we should probably fix:

```
./rtems-deployment/waf       waf 2.0.24 (1af97c71f5a6756abf36d0f78ed8fd551596d7cb)
./rtems-docs/waf             waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
./rtems-examples/waf         waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-libbsd/waf           waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
```

(continues on next page)

(continued from previous page)

```
./rtems-littlevgl/waf          waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-lwip/waf               waf 2.0.18 (314689b8994259a84f0de0aaef74d7ce91f541ad)
./rtems-net-legacy/waf         waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems-net-services/waf       waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-tools/waf              waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems/waf                    waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
```

Steps to reproduce

3.10.1.2.2.1 Pre-set options

Author: Amar Takhar 2024-11-16T20:21:25.689Z

marked this issue as blocking rtems/docs/rtems-docs#54

Author: Amar Takhar 2024-11-16T20:21:31.439Z

changed the description

Author: Gedare Bloom 2024-11-17T00:11:44.128Z

Should we automate an approach to keep all our repos in sync with waf version?

Author: Amar Takhar 2024-11-17T00:19:39.724Z

Yeah I already have that written down but it's not that easy. We need to think about the workflow of how this should happen. There needs to be a process to test the new version against all the repositories to make sure it works and then update so we need to be more deliberate about it.

I have some ideas about it but the procedural part needs to be discussed: what's important enough to upgrade for and do we want to support one repo getting ahead of others to avoid increasing the size of our repositories or whether we care or not. Clearly the above is not great having `2.0` vs `2.1` Having said that `2.1.4` has fixes we really want for Windows.

Author: Amar Takhar 2024-11-17T01:08:46.506Z

See also: https://gitlab.com/ita1024/waf/-/issues/2452

Author: Amar Takhar 2024-11-17T03:50:21.836Z

assigned to @amar

Author: Amar Takhar 2024-11-17T04:22:19.639Z

After this update is done I'll create another issue for the next update. As we require an update we should collect reasons, issues and MRs until we trigger the next update. Of course a critical issue should be an immediate update but smaller things for instance if it's specific to one repo we can let that one repo get out of sync until we have more of are reason to update project-wide. otherwise we may end up update too often.

Author: Amar Takhar 2024-11-18T20:19:26.807Z

mentioned in merge request rtems!318

Author: Amar Takhar 2024-11-20T23:35:55.569Z

mentioned in commit amar/rtems-deployment@c8fd177b03fb5130697a7411d716f1542c6175b1

Author: Amar Takhar 2024-11-20T23:36:01.722Z

mentioned in commit amar/rtems-docs@ff70333104a0aaa05877df336d1bb1672b205b73

Author: Amar Takhar 2024-11-20T23:36:04.790Z

mentioned in commit amar/rtems-examples@8056cf5ccaaff51477096bdd3ae3850cecee957d

Author: Amar Takhar 2024-11-20T23:36:05.900Z

mentioned in commit amar/rtems-libbsd@2cac334d6a21b6006dfee4613d3da78eec26b1c8

Author: Amar Takhar 2024-11-20T23:36:08.424Z

mentioned in commit amar/rtems-littlevgl@7831e7125a6efe283e3c65efec1e24a96fdfc2ac

Author: Amar Takhar 2024-11-20T23:36:10.195Z

mentioned in commit amar/rtems-lwip@24f46d35dedf08807d6088443ab5c82e95c36ed8

Author: Amar Takhar 2024-11-20T23:36:12.174Z

mentioned in commit amar/rtems-net-legacy@8845824db452168140610db037ea0359e363cf1d

Author: Amar Takhar 2024-11-20T23:36:14.636Z

mentioned in commit amar/rtems-net-services@7bcc152d49267e5b5ca3c00c1707cc40b2ef95b6

Author: Amar Takhar 2024-11-20T23:36:17.086Z

mentioned in commit amar/rtems-tools@12a94b63506ad84ec1c4feed56d3ce2e85475d85

Author: Amar Takhar 2024-11-20T23:36:21.347Z

mentioned in commit amar/rtems@62baa874b823fea35b7cdea78734d277ada7b455

Author: Amar Takhar 2024-11-20T23:39:31.029Z

mentioned in merge request rtems!323

Author: Amar Takhar 2024-11-20T23:39:48.843Z

mentioned in merge request rtems/tools/rtems-tools!44

Author: Amar Takhar 2024-11-20T23:40:09.031Z

mentioned in merge request rtems/pkg/rtems-net-services!9

Author: Amar Takhar 2024-11-20T23:40:25.975Z

mentioned in merge request rtems/pkg/rtems-net-legacy!6

Author: Amar Takhar 2024-11-20T23:40:33.280Z

mentioned in merge request rtems/pkg/rtems-lwip!11

Author: Amar Takhar 2024-11-20T23:40:41.082Z

mentioned in merge request rtems/pkg/rtems-littlevgl!4

Author: Amar Takhar 2024-11-20T23:40:53.742Z

mentioned in merge request rtems/pkg/rtems-libbsd!25

Author: Amar Takhar 2024-11-20T23:41:01.964Z

mentioned in merge request rtems-examples!5

Author: Amar Takhar 2024-11-20T23:41:10.912Z

mentioned in merge request rtems/docs/rtems-docs!89

Author: Amar Takhar 2024-11-20T23:41:24.453Z

mentioned in merge request rtems/tools/rtems-deployment!13

Author: Gedare Bloom 2024-11-21T00:03:44.787Z

mentioned in commit gedare/rtems-docs@2f1694269539dc59177b203df1b8481ee52f989a

Author: Gedare Bloom 2024-11-21T00:04:29.322Z

mentioned in merge request rtems/docs/rtems-docs!85

Author: Gedare Bloom 2024-11-21T00:06:48.926Z

mentioned in commit gedare/rtems-docs@816d14787b8bb89e7830c9885946fa8dc6dadf79

Author: Amar Takhar 2024-11-22T10:02:29.944Z

mentioned in commit amar/rtems-docs@24cf46b966d77bada338422de2ead632f79beb89

Author: Amar Takhar 2024-11-24T23:02:01.254Z

mentioned in commit amar/rtems-docs@7582461dbcff0287bb8bc1a615734696a416b266

Author: Amar Takhar 2024-11-24T23:03:10.673Z

mentioned in commit amar/rtems-examples@ac68170083fc3b2e5ce9a63a6c64b4b2e5d7915f

Author: Amar Takhar 2024-11-24T23:03:49.371Z

mentioned in commit amar/rtems-libbsd@a2d65d78fbe832a50ca6c986936c9b0c16647739

Author: Amar Takhar 2024-11-24T23:06:27.181Z

mentioned in commit amar/rtems@03c5b7e88f165ea56487e78822cf0b8595c79cfa

Author: Amar Takhar 2024-11-25T01:33:09.501Z

mentioned in commit amar/rtems-docs@b9af7d8fad94c310f7d973c10b5a7c2da8d4e7e8

Author: Amar Takhar 2024-12-04T21:56:00.650Z

mentioned in commit amar/rtems@8d71cc5dc4a0e11fd7b8d7b5b94bb2e54d3a6f9e

Author: Gedare Bloom 2024-12-04T22:16:38.325Z

cloned to rtems/docs/rtems-docs#62

Author: Gedare Bloom 2024-12-04T22:17:50.530Z

cloned to rtems/tools/rtems-deployment#3

Author: Gedare Bloom 2024-12-04T22:18:09.529Z

cloned from rtems#5153

Author: Gedare Bloom 2024-12-04T22:18:05.641Z

assigned to @amar

Author: Gedare Bloom 2024-12-04T22:21:47.621Z

Author: Gedare Bloom 2024-12-04T22:46:42.192Z

Author: Chris Johns 2024-12-21T23:36:30.621Z

changed title from **Update waf to 2.1.4** to **Update waf to 2.1.4{+ : rtems/rtos/rtems-examples+}**

Author: Chris Johns 2024-12-22T00:44:33.977Z

mentioned in merge request !12

3.10.1.3 4 - Build fails on regulator test

Id	4
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Chris Johns
Created	2024-11-15T20:45:18.209Z
Closed	2024-11-22T02:58:09.523Z
Updated	2024-11-26T15:32:00.307Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-examples/-/work_items/4
Merges	1

Summary

This currently fails to build when it gets to misc/regulator due to what appears to be a renamed struct member.

Steps to reproduce

3.10.1.3.2.1 Pre-set options

Author: Kinsey Moore 2024-11-15T20:45:18.298Z

assigned to @opticron

Author: Amar Takhar 2024-11-15T21:00:14.910Z

Doesn't this get included with the release are we okay not having this for %6.1 @chris ??

Author: Kinsey Moore 2024-11-15T21:00:14.876Z

I was going to ask. If it's included with the release it needs to get fixed.

Author: Kinsey Moore 2024-11-15T21:01:16.222Z

Yeah, it's part of RC4.

Author: Joel Sherrill 2024-11-15T21:32:47.780Z

I'm sorry. I think I had a branch with this fixed but between switching development OSes and removing and cloning after moving to Gitlab, I must have lost it.

It is just renaming from what I recall.

If @opticron doesn't fix it first you can assign it to me.

Author: Kinsey Moore 2024-11-22T02:49:04.479Z

mentioned in merge request !6

Author: Chris Johns 2024-11-22T02:58:21.702Z

mentioned in commit 4fad14ae6476a9314ab99efe2534310ab2c03bb2

Author: Chris Johns 2024-11-22T02:58:55.742Z

mentioned in merge request !7

Author: Kinsey Moore 2024-11-26T15:32:00.281Z

mentioned in merge request !10

3.10.1.4 1 - Update rtems_waf to gitlab

Id	1
State	closed
Type	ISSUE
Author	Chris Johns
Closed by	Chris Johns
Created	2024-06-11T09:49:09.224Z
Closed	2024-06-13T02:21:29.300Z
Updated	2024-06-13T02:21:29.353Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-examples/-/work_items/1
Merges	1

Update the `rtems_waf` submodule to point to `gitlab.rtems.org`

Author: Kinsey Moore 2024-06-12T15:48:59.280Z

mentioned in merge request !1

3.10.2 Merge Requests

3.10.2.1 8 - Fix regulator compile problem and warnings in other examples

Id	8
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-25T03:08:27.883Z
Assignee(s)	Joel Sherrill
Created	2024-11-22T17:22:38.337Z
Updated	2025-09-19T00:49:26.800Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-examples/-/merge_requests/8
Commit	c03799ad80276ef11b460b6ae272214ef476401c

Summary

Fixed regulator_example.c to use delivery not output thread in structure member names

Fixed warnings in other examples.

Close #3.

Author: Joel Sherrill 2024-11-22T17:24:20.677Z

changed title from **regulator{-_exa-}mple{-.c: Update to use delivery not output thread-}** to **{+Fix +}regulator{+ co+}mp{+i+}le{+ problem and warnings in other examples+}**

Author: Joel Sherrill 2024-11-22T17:24:20.704Z

changed the description

Author: Joel Sherrill 2024-11-22T17:24:20.754Z

assigned to @joel

Author: Kinsey Moore 2024-11-22T17:57:22.367Z

added 4 commits

- 664ea942 - 1 commit from branch `rtems/rtos:main`
- c250628b - psx_sched_report.c: Include unistd.h for getpid()
- f151e33b - psx_example_3: Fix warnings from printf format specifiers
- 84278630 - LocalMessageQueuePOSIX10031c.h: Address used before initialized warning

Compare with previous version

Author: Chris Johns 2024-11-22T23:45:15.138Z

Is this to be back ported to 6?

Author: Kinsey Moore 2024-11-25T03:03:35.915Z

added 4 commits

- ac681700 - 1 commit from branch `rtems/rtos:main`
- 864ccbbd - psx_sched_report.c: Include unistd.h for getpid()
- 5d4dd01c - psx_example_3: Fix warnings from printf format specifiers
- c03799ad - LocalMessageQueuePOSIX10031c.h: Address used before initialized warning

Compare with previous version

Author: Kinsey Moore 2024-11-25T03:08:18.157Z

approved this merge request

Author: Chris Johns 2025-09-19T00:49:26.761Z

@opticron a new MR for %”6.1” needs to be created

Author: Kinsey Moore 2025-09-19T00:49:26.761Z

It looks like 2 of these commits are already on 6 branch. I’ll create a MR for the missing one.

Author: Kinsey Moore 2024-11-26T15:32:00.341Z

mentioned in merge request !10

Author: Chris Johns 2025-09-19T00:49:26.779Z

resolved all threads

3.10.2.2 12 - waf: Update waf to waf-2.1.4

Id	12
State	merged
Merged by	Amar Takhar
Merged at	2024-12-22T02:18:13.884Z
Assignee(s)	Chris Johns
Reviewer(s)	Joel Sherrill, Kinsey Moore, Amar Takhar
Created	2024-12-22T00:44:26.091Z
Updated	2024-12-22T02:18:20.260Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/rtos/rtems-examples/-/merge_requests/12
Commit	45383537299d39ab877c8ac54bad4cd5d3f8dcf0

Summary

Update waf to waf-2.1.4

Closes #5

Author: Chris Johns 2024-12-22T00:44:26.258Z

requested review from @amar, @joel, and @opticron

Author: Chris Johns 2024-12-22T00:44:26.274Z

assigned to @chris

Author: Amar Takhar 2024-12-22T02:17:45.881Z

approved this merge request

3.10.2.3 11 - portable_hello: Add example of using standard portable POSIX source.

Id	11
State	merged
Merged by	Gedare Bloom
Merged at	2024-12-07T02:56:49.105Z
Assignee(s)	Joel Sherrill
Created	2024-12-06T18:50:08.067Z
Updated	2024-12-07T02:56:50.726Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-examples/-/merge_requests/11
Commit	1ac669e38803ac0edc7a43d69bc85bf2f7573d2e

Summary

portable_hello: Add example of using standard portable POSIX source.

Closes #6

Author: Joel Sherrill 2024-12-06T18:50:10.819Z

assigned to @joel

Author: Gedare Bloom 2024-12-07T02:56:44.679Z

approved this merge request

3.10.2.4 10 - regulator: Update for a change in attributes

Id	10
State	merged
Merged by	Chris Johns
Merged at	2024-11-27T02:16:47.455Z
Assignee(s)	Kinsey Moore
Created	2024-11-26T15:31:54.228Z
Updated	2024-11-27T02:16:48.792Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-examples/-/merge_requests/10
Commit	e17511a3429d4d055b6ddcea93940050aac7ab94

Summary

regulator: Update for a change in attributes

Closes #4 Updates !8

(cherry picked from commit 664ea9425d7d986df96d6fe3e23c646bf9938808)

Co-authored-by: Kinsey Moore <kinsey.moore@oarcorp.com>

Author: Kinsey Moore 2024-11-26T15:31:54.639Z

assigned to @opticron

Author: Kinsey Moore 2024-11-26T15:32:52.802Z

changed target branch from `main` to `6`

Author: Chris Johns 2024-11-27T02:16:42.742Z

approved this merge request

3.10.2.5 9 - Fix warnings in other examples

Id	9
State	merged
Merged by	Joel Sherrill
Merged at	2024-11-25T22:31:08.135Z
Assignee(s)	Chris Johns
Reviewer(s)	Joel Sherrill
Created	2024-11-25T22:00:27.316Z
Updated	2024-11-25T22:31:09.388Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-examples/-/merge_requests/9
Commit	4a87b22159bb9b3000b95dac46cae550197ce932

Fix warnings in examples

(cherry picked from commit c03799ad80276ef11b460b6ae272214ef476401c)

Co-authored-by: Joel Sherrill joel@rtems.org

Author: Chris Johns 2024-11-25T22:00:27.492Z

assigned to @joel

Author: Chris Johns 2024-11-25T22:24:41.677Z

added 1 commit

- 4a87b221 - psx_example_3: Fix warnings from printf format specifiers

Compare with previous version

Author: Chris Johns 2024-11-25T22:27:56.474Z

changed title from **Fix {-regulator compile problem and -}warnings in other examples** to **Fix warnings in other examples**

Author: Chris Johns 2024-11-25T22:27:56.496Z

changed the description

Author: Chris Johns 2024-11-25T22:27:56.521Z

requested review from @joel

Author: Chris Johns 2024-11-25T22:27:56.539Z

assigned to @chris and unassigned @joel

Author: Joel Sherrill 2024-11-25T22:31:01.649Z

approved this merge request

3.10.2.6 2 - Convert README* to MarkDown.

Id	2
State	merged
Merged by	Gedare Bloom
Merged at	2024-07-10T06:04:30.898Z
Assignee(s)	Amar Takhar
Created	2024-07-08T00:47:32.314Z
Updated	2024-08-10T00:40:02.693Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems-examples/-/merge_requests/2
Commit	437d3c945c70209a3cea9606e5f6615b74b280bb

Summary

Convert README* to MarkDown.

Coalesce the three README files into one. Does not make sense to have them seperate especially with MarkDown.

This does not make any other changes.

Author: Amar Takhar 2024-07-08T00:47:32.467Z

assigned to @amar

Author: Amar Takhar 2024-07-08T08:15:42.191Z

added 1 commit

- 98b8da78 - Convert README* to MarkDown.

Compare with previous version

Author: Amar Takhar 2024-07-08T08:17:40.938Z

Updated to fix two of the `shell` block markers. I looked at it online and saw it was still broken `grip` showed it as broken to me locally but I thought maybe it was a

rendering issue. It wasn't the issue was the level was off by 1 character needed to be indented further in the list.

Author: Amar Takhar 2024-07-08T08:19:36.600Z

added 1 commit

- 437d3c94 - Convert README* to MarkDown.

Compare with previous version

Author: Gedare Bloom 2024-07-10T06:04:23.558Z

approved this merge request

3.10.2.7 3 - Convert LICENSE.* to MarkDown

Id	3
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-25T22:32:05.036Z
Assignee(s)	Amar Takhar
Created	2024-07-20T05:02:03.445Z
Updated	2024-07-25T22:32:08.265Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems-examples/-/merge_requests/3
Commit	2438af24e0027746c5601386b0776a2b11eb9e6a

Summary

Author: Amar Takhar 2024-07-20T05:02:03.616Z

assigned to @amar

Author: Kinsey Moore 2024-07-25T22:32:01.528Z

approved this merge request

3.10.2.8 1 - Update rtems_waf location

Id	1
State	merged
Merged by	Chris Johns
Merged at	2024-06-13T02:21:28.694Z
Assignee(s)	Kinsey Moore
Created	2024-06-12T15:48:55.861Z
Updated	2024-06-13T02:21:30.829Z
Milestone	6.1
Labels	tool::waf
Link	https://gitlab.rtems.org/rtems/rtos/rtems-examples/-/merge_requests/1
Commit	20a40125c53121058bd4c0e73152e7c62af2b1c8

Summary

Closes #1

Author: Kinsey Moore 2024-06-12T15:48:56.001Z

assigned to @opticron

Author: Chris Johns 2024-06-13T02:21:25.628Z

approved this merge request

3.11 RTEMS / RTOS / Release

Go to *Issues* (page 3309) or *Merge Requests* (page 3317)

Issues Summary

11 - rtems-net-services is missing from 6.1RC7 (page 3311)
10 - rtems-lwip is not listed under the source downloads in the main index for RC7 (page 3310)
9 - rc6 web list of documents includes broken links to network guide (page 3312)
8 - rc6 Broken Process of the VERSION file (page 3313)
7 - Disable singlehtml for releases until fixed (page 3309)
6 - Add rtems-lwip to release packages (page 3314)
4 - Add NIOS V to release notes once BSP is merged (page 3316)
2 - Add config.ini option to release script (page 3316)

Merge Requests Summary

22 - Fixes to make 6.1-rc8 (page 3318)
18 - Release process fixes (page 3319)
17 - rtems-notes-6.1: update for issue rtems/rtos/rtems#5118 (page 3320)
14 - rtems-notes-6.1.md: Add NIOS-V to added BSPs (page 3323)
13 - rtems-notes-6.1.md: Update Versal BSP naming (page 3324)
12 - rtems-notes-6.1: Update for recent pre-release BSP churn (page 3324)
11 - note: added a note for the new stack checker reporter configuration macro (page 3325)
9 - Added GDB pretty-printing feature to 6.1 release notes (page 3321)
8 - rtems-notes-6.1.md: Add missing BSPs to added and removed lists (page 3326)
7 - rtems-notes-6.1.md: Added 14 m68k BSPs for Deprecation (page 3327)
6 - Update Deprecation of BSPs and Architectures (page 3328)
4 - Update RTEMS 6.1 release notes (page 3317)
3 - Add merge requests to Release Notes (page 3331)
2 - Update URLs to GitLab (page 3330)
1 - Update the release notes to GitLab (page 3334)

3.11.1 Issues

3.11.1.1 7 - Disable singlehtml for releases until fixed

Id	7
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2024-11-27T02:14:17.961Z
Closed	2024-12-21T01:39:19.610Z
Updated	2025-03-04T13:40:43.392Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/work_items/7
Merges	2

Summary

The single HTML documentation is not working on all machines including the one to create the release. This issue covers not building with `--singlehtml` for releases until the issue can be resolved.

Steps to reproduce

The failing environment is:

1. FreeBSD 14.1
2. Python 3.9 or 3.22
3. Package install `npm-node18`, `npm-node20` or `npm-node22`. All fail.
4. NPM install `inliner` using `npm install -g inliner`

The failure is the generated HTML file is empty. If the commands are run manually a suitable HTML is created.

Author: Chris Johns 2024-11-27T02:14:18.068Z

assigned to @chris

Author: Gedare Bloom 2024-12-04T21:39:42.183Z

Author: Frank Kuehndel 2024-12-18T21:43:28.839Z

mentioned in commit frank_k/rtems-docs@ad252abbb8e7dfd5d220408f6152aae051a000c8

Author: Frank Kuehndel 2024-12-18T21:44:45.301Z

mentioned in merge request rtems/docs/rtems-docs!104

Author: Chris Johns 2024-12-21T01:20:24.475Z

mentioned in merge request !18

Author: Joel Sherrill 2025-01-31T17:56:49.244Z

mentioned in merge request !23

Author: Frank Kuehndel 2025-02-10T18:21:13.353Z

mentioned in commit frank_k/rtems-docs@30e3e6b6611f321d29837587bd3fcb937cfdc1f3

Author: Joel Sherrill 2025-02-26T22:19:00.993Z

mentioned in merge request !26

Author: Frank Kuehndel 2025-03-04T13:11:12.611Z

mentioned in commit amar/rtems-docs@9658daaa56569738ab24a474a83ed0fadc0d16d9

Author: Frank Kuehndel 2025-03-04T13:19:40.802Z

mentioned in commit frank_k/rtems-docs@1dd7891d4eef06d744ea4d3cd8b5363e9f0f49f5

Author: Frank Kuehndel 2025-03-04T13:40:43.035Z

mentioned in commit frank_k/rtems-docs@5f7f03f1439e6af07b68c79caeaa64f7d4e19604

3.11.1.2 10 - rtems-lwip is not listed under the source downloads in the main index for RC7

Id	10
State	closed
Type	ISSUE
Author	Kinsey Moore
Closed by	Joel Sherrill
Created	2024-12-21T04:34:45.129Z
Closed	2025-01-10T23:45:35.185Z
Updated	2025-01-10T23:45:35.334Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/work_items/10
Merges	1

Summary

Steps to reproduce

3.11.1.2.2.1 Pre-set options

Author: Kinsey Moore 2024-12-21T04:34:56.172Z

Author: Chris Johns 2025-01-10T22:59:20.379Z

mentioned in merge request !22

3.11.1.3 11 - rtems-net-services is missing from 6.1RC7

Id	11
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Chris Johns
Closed by	Joel Sherrill
Created	2024-12-21T04:36:03.109Z
Closed	2025-01-10T23:45:35.172Z
Updated	2025-01-10T23:45:35.331Z
Milestone	6.1
Labels	pkg::network-services
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/work_items/11
Merges	1

Summary

net services is missing from the main source listing and is not present in the sources listing available by clicking the “sources” link.

Steps to reproduce

3.11.1.3.2.1 Pre-set options

Author: Kinsey Moore 2024-12-21T04:36:04.256Z

Author: Chris Johns 2024-12-22T03:38:14.564Z

assigned to @chris

Author: Chris Johns 2025-01-10T22:59:20.310Z

mentioned in merge request !22

3.11.1.4 9 - rc6 web list of documents includes broken links to network guide

Id	9
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Chris Johns
Closed by	Joel Sherrill
Created	2024-12-18T20:50:47.290Z
Closed	2025-01-10T23:45:35.177Z
Updated	2025-01-10T23:45:35.330Z
Milestone	6.1
Labels	release
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/work_items/9
Merges	1

Summary

https://ftp.rtems.org/pub/rtems/releases/6/rc/6.1-rc6/ includes this section which references non-existent documents. Remove these. We do not package legacy networking or this manual anymore.

```
RTEMS Networking User Manual
docs/html/networking
docs/rtems-6.1-rc6-networking.pdf
docs/rtems-6.1-rc6-networking-html.tar.xz
```

Steps to reproduce

Visit the above URL

3.11.1.4.2.1 Pre-set options

Author: Joel Sherrill 2024-12-18T20:50:47.451Z

assigned to @chris

Author: Joel Sherrill 2024-12-18T20:50:47.889Z

Author: Chris Johns 2025-01-10T22:59:20.429Z

mentioned in merge request !22

3.11.1.5 8 - rc6 Broken Process of the VERSION file

Id	8
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2024-12-18T16:34:16.060Z
Closed	2024-12-21T01:39:19.552Z
Updated	2024-12-21T01:39:19.792Z
Milestone	6.1
Labels	release
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/work_items/8
Merges	1

Summary

Every invocation of waf from the rtems source tree out of the rc6 tarball fails. @opticron says the VERSION file is using the wrong section names and key names.

This will have to be fixed on main as well.

```
[joel@gitlab rtems-6.1-rc6]$ ./waf distclean
Traceback (most recent call last):
File "/home/joel/rtems-cron-6.1-rc6/rtems-6.1-rc6/.waf3-2.1.3-
↪9bb4ce978ce08636ef790135d3c297a6/waflib/Scripting.py", line 122, in waf_entry_
↪point
run_commands()
File "/home/joel/rtems-cron-6.1-rc6/rtems-6.1-rc6/.waf3-2.1.3-
↪9bb4ce978ce08636ef790135d3c297a6/waflib/Scripting.py", line 181, in run_commands
parse_options()
File "/home/joel/rtems-cron-6.1-rc6/rtems-6.1-rc6/.waf3-2.1.3-
↪9bb4ce978ce08636ef790135d3c297a6/waflib/Scripting.py", line 161, in parse_
↪options
ctx.execute()
File "/home/joel/rtems-cron-6.1-rc6/rtems-6.1-rc6/.waf3-2.1.3-
↪9bb4ce978ce08636ef790135d3c297a6/waflib/Options.py", line 202, in execute
super(OptionsContext,self).execute()
File "/home/joel/rtems-cron-6.1-rc6/rtems-6.1-rc6/.waf3-2.1.3-
↪9bb4ce978ce08636ef790135d3c297a6/waflib/Context.py", line 92, in execute
self.recurse([os.path.dirname(g_module.root_path)])
File "/home/joel/rtems-cron-6.1-rc6/rtems-6.1-rc6/.waf3-2.1.3-
↪9bb4ce978ce08636ef790135d3c297a6/waflib/Context.py", line 133, in recurse
user_function(self)
File "/home/joel/rtems-cron-6.1-rc6/rtems-6.1-rc6/wscript", line 1310, in options
load_version(ctx)
File "/home/joel/rtems-cron-6.1-rc6/rtems-6.1-rc6/wscript", line 1397, in load_
↪version
value = cp.get("version", "revision")
```

(continues on next page)

(continued from previous page)

```
File "/usr/lib64/python3.9/configparser.py", line 781, in get
d = self._unify_values(section, vars)
File "/usr/lib64/python3.9/configparser.py", line 1152, in _unify_values
raise NoSectionError(section) from None
configparser.NoSectionError: No section: 'version'
```

Steps to reproduce

3.11.1.5.2.1 Pre-set options

Author: Joel Sherrill 2024-12-18T16:34:16.359Z

assigned to @opticron

Author: Joel Sherrill 2024-12-18T16:34:16.743Z

Author: Kinsey Moore 2024-12-18T16:37:10.333Z

The release process created a VERSION file with the old format for the 6 RC6 release instead of the new version with section [version] and key "revision". This new expectation was introduced by commit 3d782180eae14... in RTEMS. The current file for RC6 contains RTEMS_VERSION and RTEMS_VERSION_CONTROL_KEY.

Author: Chris Johns 2024-12-21T01:20:24.537Z

mentioned in merge request !18

3.11.1.6 6 - Add rtems-lwip to release packages

Id	6
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2022-11-30T20:56:56.000Z
Closed	2024-12-21T01:39:19.601Z
Updated	2024-12-21T01:39:19.777Z
Milestone	6.1
Labels	priority::normal, tickettype::enhancement, tool, version::6
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/work_items/6
Merges	1

The rtems-lwip repository is young but mature enough now to include in the release package. Please add it.

This should primarily related to the rtems-release repository.

Author: Chris Johns 2024-11-22T01:06:31.307Z

assigned to @chris

Author: Joel Sherrill 2023-01-04T22:39:43.000Z

- **Description** changed

```
The rtems-lwip repository is young but mature enough now to include in␣
↪the release package. Please add it.
+
+ This should primarily related to the [rtems-release](https://git.
↪rtems.org/rtems-release/) repository.
```

Author: Chris Johns 2024-10-18T00:17:14.984Z

It is in the `sources` but it is not listed in the front page. Add to the coverpage of the release.

Author: Chris Johns 2024-11-22T01:06:31.553Z

moved from rtems#4767

Author: Gedare Bloom 2024-12-04T21:39:40.853Z

changed the description

Author: Gedare Bloom 2024-12-04T21:39:41.698Z

Author: Chris Johns 2024-12-05T23:15:30.323Z

marked this issue as blocked by rtems/tools/rtems-source-builder#57

Author: Chris Johns 2024-12-05T23:15:48.043Z

The RTEMS LWIP package is not being included in the release because there is no package in the RSB. It needs to be added.

Author: Chris Johns 2024-12-21T01:20:24.578Z

mentioned in merge request !18

3.11.1.7 4 - Add NIOS V to release notes once BSP is merged

Id	4
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Kinsey Moore, Joel Sherrill
Closed by	Chris Johns
Created	2024-10-17T22:46:38.780Z
Closed	2024-10-31T22:48:15.439Z
Updated	2024-10-31T22:48:15.525Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/work_items/4
Merges	1

Add something to the release notes.

Author: Chris Johns 2024-10-17T22:46:38.874Z

assigned to @joel

Author: Amar Takhar 2024-10-17T22:54:12.286Z

The MR is https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/174

Author: Kinsey Moore 2024-10-26T20:53:48.604Z

mentioned in merge request !14

Author: Kinsey Moore 2024-10-26T20:54:09.409Z

assigned to @opticron

3.11.1.8 2 - Add config.ini option to release script

Id	2
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-06-13T01:57:09.901Z
Closed	2024-10-18T00:11:55.014Z
Updated	2024-10-18T00:11:55.026Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/work_items/2
Merges	0

The release note generator uses the Gitlab API and this requires an API key. Update the release scripts to:

1. Require a `config.ini` file be supplied or
2. A JSON file of the milestone issues data used by the release generator

Author: Chris Johns 2024-06-13T02:19:52.330Z

assigned to @chris

Author: Chris Johns 2024-06-13T01:57:09.979Z

assigned to @chris

Author: Chris Johns 2024-06-13T02:19:52.598Z

moved from chris/rtems-release#1

Author: Chris Johns 2024-10-18T00:11:54.585Z

Sorted in current release repo

3.11.2 Merge Requests

3.11.2.1 4 - Update RTEMS 6.1 release notes

Id	4
State	merged
Merged by	Chris Johns
Merged at	2024-09-20T22:47:20.206Z
Assignee(s)	Sebastian Huber
Created	2024-08-15T00:42:18.458Z
Updated	2025-09-19T02:36:43.218Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/4
Commit	cdb340a22378c90fd28522ae77afa1251bb3cd2f

Summary

Author: Sebastian Huber 2024-08-15T00:42:18.582Z

assigned to @sebhub

Author: Amar Takhar 2024-08-16T19:51:43.564Z

@chris given how comprehensive the new release notes are based off of GitLab do manual release notes make sense anymore? I don't think it's worth it and we should focus on having better MR, Issue and commit titles.

Author: Sebastian Huber 2024-08-17T06:46:11.600Z

We should definitely have some high level release notes which are structured in the usual way.

Author: Gedare Bloom 2024-09-14T21:37:54.664Z

approved this merge request

Author: Chris Johns 2024-09-20T22:47:05.727Z

We have the support for the 6 branch and I agree we should maintain the file. It is up to people to add notes.

Author: Chris Johns 2024-09-20T22:47:13.476Z

approved this merge request

3.11.2.2 22 - Fixes to make 6.1-rc8

Id	22
State	merged
Merged by	Joel Sherrill
Merged at	2025-01-10T23:45:34.604Z
Assignee(s)	Chris Johns
Created	2025-01-10T22:59:00.295Z
Updated	2025-01-10T23:45:34.580Z
Milestone	6.1
Labels	pkg::network-services
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/22
Commit	1288aecc7ea4770c58681d3f11a8e71ffe0da947

Various fixes needed to make 6.1-rc8.

Closes #11 #10 #9

Author: Chris Johns 2025-01-10T22:59:00.674Z

assigned to @chris

Author: Chris Johns 2025-01-10T22:59:43.414Z

added 7 commits

- 1288aecc...2409ab2d - 2 commits from branch `rtems/rtos:main`
- c2333c64 - Add rtems-net-services to sources
- 82971f21 - Add net-services and lwip to the packages list
- 7d604b4d - Move networking to legacy-networking
- fdae6c0e - Fix packaging of RTEMS repos
- fde9a2b9 - Fix rtems-net-services link in coverpage

Compare with previous version

Author: Joel Sherrill 2025-01-10T23:20:05.678Z

approved this merge request

Author: Joel Sherrill 2025-01-10T23:20:34.738Z

unapproved this merge request

Author: Joel Sherrill 2025-01-10T23:45:12.346Z

approved this merge request

3.11.2.3 18 - Release process fixes

Id	18
State	merged
Merged by	Kinsey Moore
Merged at	2024-12-21T01:39:19.177Z
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar, Joel Sherrill, Kinsey Moore
Created	2024-12-21T01:20:08.825Z
Updated	2024-12-21T01:39:24.984Z
Milestone	6.1
Labels	release
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/18
Commit	ccc89a87dfcac338e61cba9305692efae5eaf251

1. Do not build `singlehtml`
2. Add `rtems-lwip`
3. Fix kernel `VERSION` file

Closes #7 #8 #6

Author: Chris Johns 2024-12-21T01:20:08.998Z

requested review from @amar, @joel, and @opticron

Author: Chris Johns 2024-12-21T01:20:09.466Z

assigned to @chris

Author: Kinsey Moore 2024-12-21T01:39:15.140Z

approved this merge request

3.11.2.4 17 - rtems-notes-6.1: update for issue rtems/rtos/rtems#5118

Id	17
State	merged
Merged by	Chris Johns
Merged at	2024-11-22T00:05:24.433Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Chris Johns
Created	2024-11-17T00:25:27.237Z
Updated	2024-11-22T00:05:26.544Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/17
Commit	8118cbff51ae1adfbe889b6cb9559f75d395a6e0

Summary

Release note update for change to `RTEMS_FILESYSTEM_ALL`

Author: Gedare Bloom 2024-11-17T00:25:27.434Z

assigned to @chris

Author: Gedare Bloom 2024-11-17T00:26:56.364Z

mentioned in merge request rtems!317

Author: Gedare Bloom 2024-11-17T22:40:17.711Z

assigned to @gedare and unassigned @chris

Author: Gedare Bloom 2024-11-17T22:40:37.014Z

requested review from @chris

Author: Kinsey Moore 2024-11-20T15:04:31.931Z

approved this merge request

Author: Kinsey Moore 2024-11-20T15:04:39.644Z

added 2 commits

- 0f013333 - 1 commit from branch `rtems/rtos:main`
- 8118cbff - rtems-notes-6.1: update for issue rtems/rots/rtems#5118

Compare with previous version

Author: Kinsey Moore 2024-11-22T00:00:18.686Z

changed title from **rtems-notes-6.1: update for issue rtems/r{-o-}ts/rtems#5118** to **rtems-notes-6.1: update for issue rtems/rt{+o+}s/rtems#5118**

Author: Chris Johns 2024-11-22T00:05:19.569Z

approved this merge request

3.11.2.5 9 - Added GDB pretty-printing feature to 6.1 release notes

Id	9
State	merged
Merged by	Chris Johns
Merged at	2024-11-17T22:49:24.844Z
Assignee(s)	Chris Johns
Reviewer(s)	Chris Johns
Created	2024-10-10T12:11:03.732Z
Updated	2024-11-17T22:49:27.531Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/9
Commit	0f0133339dc5ecc2e7f4728f85aea0b6fd20c5b0

Summary

Author: Amar Takhar 2024-10-16T05:49:17.648Z

assigned to @chris

Author: Kinsey Moore 2024-10-24T23:29:22.793Z

approved this merge request

Author: Kinsey Moore 2024-10-24T23:29:39.249Z

added 4 commits

- 4f875b66...28476fbf - 3 commits from branch `rtems/rtos:main`
- 457f687a - Added GDB pretty-printing feature to 6.1 release notes

Compare with previous version

Author: Kinsey Moore 2024-11-01T14:05:38.388Z

added 3 commits

- 457f687a...a4b693bc - 2 commits from branch `rtems/rtos:main`
- 1f65243b - Added GDB pretty-printing feature to 6.1 release notes

Compare with previous version

Author: Kinsey Moore 2024-11-15T00:45:43.217Z

added 2 commits

- fa40edb9 - 1 commit from branch `rtems/rtos:main`
- 0f013333 - Added GDB pretty-printing feature to 6.1 release notes

Compare with previous version

Author: Chris Johns 2024-11-15T01:47:48.860Z

This is blocked by this appearing when running GDB:

```
Python Exception <class 'ModuleNotFoundError'>: No module named 'rtems.
↪pprinter'
```

Something is not being installed or there to be installed. I am not sure.

Author: Chris Johns 2024-11-15T05:29:13.479Z

mentioned in issue rtems/tools/rtems-tools#17

Author: Chris Johns 2024-11-17T22:48:56.216Z

requested review from @chris

Author: Chris Johns 2024-11-17T22:49:19.792Z

approved this merge request

3.11.2.6 14 - rtems-notes-6.1.md: Add NIOS-V to added BSPs

Id	14
State	merged
Merged by	Chris Johns
Merged at	2024-10-31T22:48:15.175Z
Assignee(s)	Kinsey Moore
Created	2024-10-26T20:53:44.298Z
Updated	2024-10-31T22:48:18.531Z
Milestone	6.1
Labels	arch:riscv
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/14
Commit	a4b693bc900f837cea94d0d513048afe7ed9e534

Summary

rtems-notes-6.1.md: Add NIOS-V to added BSPs

Closes #4

Author: Kinsey Moore 2024-10-26T20:53:44.615Z

assigned to @opticron

Author: Amar Takhar 2024-10-26T20:55:20.885Z

approved this merge request

Author: Joel Sherrill 2024-10-31T22:35:11.686Z

approved this merge request

Author: Kinsey Moore 2024-10-31T22:36:01.467Z

added 2 commits

- 40ce52fb - 1 commit from branch `rtems/rtos:main`
- a4b693bc - rtems-notes-6.1.md: Add NIOS-V to added BSPs

Compare with previous version

Author: Chris Johns 2024-10-31T22:46:46.544Z

approved this merge request

3.11.2.7 13 - rtems-notes-6.1.md: Update Versal BSP naming

Id	13
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-28T15:10:46.119Z
Assignee(s)	Kinsey Moore
Created	2024-10-25T20:02:07.238Z
Updated	2024-10-28T15:10:47.686Z
Milestone	6.1
Labels	arch:aarch64, doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/13
Commit	40ce52fb5e552715e08bfcae94b79de4483f715e

Summary

Author: Kinsey Moore 2024-10-25T20:02:07.534Z

assigned to @opticron

Author: Amar Takhar 2024-10-25T20:04:32.990Z

approved this merge request

Author: Chris Johns 2024-10-25T21:04:01.875Z

approved this merge request

3.11.2.8 12 - rtems-notes-6.1: Update for recent pre-release BSP churn

Id	12
State	merged
Merged by	Chris Johns
Merged at	2024-10-22T23:19:32.907Z
Assignee(s)	Kinsey Moore
Created	2024-10-22T22:22:06.264Z
Updated	2024-10-22T23:19:34.935Z
Milestone	6.1
Labels	arch:aarch64, arch:arm
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/12
Commit	28476fbfe95055e1a7bf447ee6d6f3fced5018fa

Summary

Author: Kinsey Moore 2024-10-22T22:22:06.566Z

assigned to @opticron

Author: Chris Johns 2024-10-22T23:19:27.496Z

approved this merge request

3.11.2.9 11 - note: added a note for the new stack checker reporter configuration macro

Id	11
State	merged
Merged by	Chris Johns
Merged at	2024-10-17T22:48:07.453Z
Assignee(s)	Chris Johns
Created	2024-10-11T22:16:57.938Z
Updated	2024-10-17T22:48:09.203Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/11
Commit	e01b0a84678504dc7d6636003c417cde32931e3d

Summary

Add a new note at `rtems-notes-6.1.md` for the new configuration macro that selects the stack checker reporter function.

Author: Amar Takhar 2024-10-16T04:31:24.524Z

@Hamzi any reason this is set to draft?

Author: Mohamed Hassan 2024-10-16T04:31:24.524Z

Actually no, I was used to that. Removed, thanks.

Author: Joel Sherrill 2024-10-15T14:50:39.241Z

approved this merge request

Author: Mohamed Hassan 2024-10-15T17:38:55.929Z

marked this merge request as **ready**

Author: Amar Takhar 2024-10-16T04:31:24.540Z

resolved all threads

Author: Amar Takhar 2024-10-16T05:49:28.694Z

assigned to @chris

Author: Chris Johns 2024-10-17T22:48:00.880Z

approved this merge request

3.11.2.10 8 - rtems-notes-6.1.md: Add missing BSPs to added and removed lists

Id	8
State	merged
Merged by	Chris Johns
Merged at	2024-10-09T16:16:21.015Z
Assignee(s)	Joel Sherrill
Reviewer(s)	Chris Johns
Created	2024-10-09T15:55:50.595Z
Updated	2024-10-09T16:16:22.208Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/8
Commit	126e080370c0c3af7ff9513ac9f600bb093e9d8b

Summary

The lists of added and deleted architectures and BSPs was missing some. I compared the rtems-bsps report for both 5 and 6 and updated the file accordingly.

Author: Joel Sherrill 2024-10-09T15:55:50.842Z

requested review from @chris

Author: Joel Sherrill 2024-10-09T15:55:50.858Z

assigned to @joel

Author: Chris Johns 2024-10-09T16:16:06.076Z

Awesome and thanks

Author: Chris Johns 2024-10-09T16:16:13.051Z

approved this merge request

3.11.2.11 7 - rtems-notes-6.1.md: Added 14 m68k BSPs for Deprecation

Id	7
State	merged
Merged by	Chris Johns
Merged at	2024-10-08T21:57:56.479Z
Assignee(s)	Joel Sherrill
Reviewer(s)	Chris Johns
Created	2024-10-08T21:52:27.080Z
Updated	2024-10-08T21:57:58.146Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/7
Commit	60626b1b7a6acdb67ecdc95d020c9c0be272200f

Summary

rtems-notes-6.1.md: Added 14 m68k BSPs for Deprecation

- `m68k/csb360`
- `m68k/gen68340`
- `m68k/gen68360`
- `m68k/gen68360_040`
- `m68k/pgh360`
- `m68k/mcf5206elite`
- `m68k/mcf52235`
- `m68k/mcf5225x`
- `m68k/mrm332`
- `m68k/mvme147`
- `m68k/mvme147s`
- `m68k/mvme162`
- `m68k/mvme162lx`
- `m68k/mvme167`

Closes rtems/rtos/rtems#5030.

Author: Joel Sherrill 2024-10-08T21:52:27.306Z

requested review from @chris

Author: Joel Sherrill 2024-10-08T21:52:27.323Z

assigned to @joel

Author: Chris Johns 2024-10-08T21:57:34.697Z

changed the description

Author: Chris Johns 2024-10-08T21:57:46.571Z

approved this merge request

3.11.2.12 6 - Update Deprecation of BSPs and Architectures

Id	6
State	merged
Merged by	Chris Johns
Merged at	2024-10-08T21:00:25.608Z
Assignee(s)	Joel Sherrill
Reviewer(s)	Gedare Bloom
Created	2024-10-06T18:46:44.703Z
Updated	2024-10-08T21:00:33.626Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/6
Commit	1495c190f78a38e11f18bdf72a5553bb258ccff3

Summary

Update Deprecation of BSPs and Architectures

Add bfin and lm32 to deprecated architectures list.

Add mrm332 to deprecated BSPs list.

Closes rtems/rtos/rtems#5019, rtems/rtos/rtems#5020, rtems/rtos/rtems#5030.

Author: Joel Sherrill 2024-10-06T18:46:44.913Z

requested review from @gedare

Author: Joel Sherrill 2024-10-06T18:46:44.927Z

assigned to @joel

Author: Gedare Bloom 2024-10-06T21:47:05.488Z

changed the description

Author: Gedare Bloom 2024-10-06T22:02:34.522Z

This should go in a separate section for “Obsoleted BSPs” (that haven’t been removed yet)

Author: Joel Sherrill 2024-10-06T22:00:40.152Z

changed this line in version 2 of the diff

Author: Gedare Bloom 2024-10-06T21:48:54.412Z

requested changes

Author: Joel Sherrill 2024-10-06T22:00:40.449Z

added 1 commit

- 1495c190 - Update Lists of BSPs and Architectures Deprecated

Compare with previous version

Author: Gedare Bloom 2024-10-06T22:02:34.538Z

resolved all threads

Author: Gedare Bloom 2024-10-06T22:02:44.266Z

approved this merge request

Author: Amar Takhar 2024-10-06T23:23:06.878Z

@chris needs to approve this.

Author: Chris Johns 2024-10-08T20:55:40.293Z

changed the description

Author: Chris Johns 2024-10-08T21:00:01.013Z

approved this merge request

3.11.2.13 2 - Update URLs to GitLab

Id	2
State	merged
Merged by	Chris Johns
Merged at	2024-08-05T06:47:45.124Z
Assignee(s)	Amar Takhar
Created	2024-07-27T04:39:11.971Z
Updated	2024-08-05T06:47:46.816Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/2
Commit	c6ddd287e0eefe3849bc9b725dc6bb9cf992541e

Summary

Update URLs to GitLab

I didn't touch the scripts because some of the logic needs to be changed since we have groups now.

Author: Amar Takhar 2024-07-27T04:39:12.150Z

assigned to @amar

Author: Kinsey Moore 2024-07-27T21:30:54.783Z

approved this merge request

Author: Joel Sherrill 2024-08-02T16:59:59.357Z

rtems.org/logos/... was intended to be a set of permanent URLs for logos. Are we breaking that for the more complex ones?

Author: Amar Takhar 2024-08-02T16:59:59.357Z

First I've heard of that! Yes it's going to be broken according to the web logs nobody is using it so I didn't think it was important? It is not typical for someone to link to your logo but copy the file and use it that way because you can never guarantee the link will work. I do not know why `devel.rtems.org` was taken here you'd have to ask @chris

The URL I put in is much worse but I wanted something that would work for now because the old one is 100% dead, anyway.

Author: Joel Sherrill 2024-08-02T14:14:35.536Z

resolved all threads

Author: Joel Sherrill 2024-08-02T14:14:39.487Z

approved this merge request

Author: Amar Takhar 2024-08-02T16:59:59.375Z

resolved all threads

Author: Amar Takhar 2024-08-02T17:00:23.232Z

added 2 commits

- 43c984a5 - 1 commit from branch `rtems/rtos:main`
- c6ddd287 - Update URLs to GitLab

Compare with previous version

Author: Chris Johns 2024-08-05T06:47:41.727Z

approved this merge request

3.11.2.14 3 - Add merge requests to Release Notes

Id	3
State	merged
Merged by	Amar Takhar
Merged at	2024-08-02T04:32:24.104Z
Assignee(s)	Chris Johns
Created	2024-07-28T06:59:29.403Z
Updated	2024-08-02T04:32:25.769Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/3
Commit	43c984a5a8a94088fae936bcfd1e1aae332c66a1

Add merge requests to the release notes.

Author: Chris Johns 2024-07-28T06:59:29.577Z

assigned to @chris

Author: Chris Johns 2024-07-28T07:00:11.107Z

You can view the HTML with Issues and Merge Requests here https://ftp.rtems.org/pub/rtems/people/chrisj/releases/test/html

Author: Amar Takhar 2024-08-02T04:25:36.850Z

Looks good but the HTML code when people are set to the rich text editor is coming through. I'm guessing it's delimiting the HTML tags.

Scroll a bit down from here:

- https://ftp.rtems.org/pub/rtems/people/chrisj/releases/test/html/r-6-1-rtems-rtos-rtems.html#rn-14-66402033

Author: Chris Johns 2024-08-02T04:25:36.850Z

This is not nice. The exported data has embedded HTML in it. Escaping the HTML is easy for HTML output but that does not work for PDF output.

Author: Amar Takhar 2024-08-02T04:25:36.850Z

It will have it based on whether the user is using the rich editor or not this is actually the normal way it works. The API probably has a way to know which editor the user used so you can base it off of that.

Author: Chris Johns 2024-08-02T04:25:36.850Z

It does not seem to be so in this case. It is from the rebasing of merge requests.

Author: Amar Takhar 2024-08-02T04:25:36.850Z

What do you mean? There is no way to tell if it's rich or not? There are python libraries to strip HTML I would just do that then for non-html versions like PDF.

Author: Chris Johns 2024-08-02T04:25:36.850Z

The HTML is in automatically added notes as a result of rebasing the MR. No one entered it.

Author: Amar Takhar 2024-08-02T04:25:36.850Z

Ahh I see what you mean. It must use MarkDown or otherwise for the rich comments. Well that's easily stripped you can convert it to monospace text using a python library to convert it and keep formatting.

Author: Chris Johns 2024-08-02T04:25:36.850Z

I have added support to handle the HTML and convert it to sphinx.

The change also fixes links and adds support for references. Replies have been fixed.

Author: Kinsey Moore 2024-08-02T04:26:59.663Z

Was this change intentional? It seems like something that might have been changed during development for testing purposes.

Author: Chris Johns 2024-08-02T04:26:46.268Z

changed this line in version 3 of the diff

Author: Chris Johns 2024-08-02T04:26:59.663Z

No and thanks. This has been fixed.

Author: Chris Johns 2024-08-02T04:24:34.492Z

added 1 commit

- 5696f584 - release-notes: Add merge requests

Compare with previous version

Author: Chris Johns 2024-08-02T04:26:46.461Z

added 1 commit

- e592557c - release-notes: Add merge requests

Compare with previous version

Author: Chris Johns 2024-08-02T04:26:59.690Z

resolved all threads

Author: Chris Johns 2024-08-02T04:28:25.276Z

added 1 commit

- 1fdbcc34 - release-notes: Add merge requests

Compare with previous version

Author: Chris Johns 2024-08-02T04:31:02.440Z

added 1 commit

- 43c984a5 - release-notes: Add merge requests

Compare with previous version

Author: Amar Takhar 2024-08-02T04:32:19.860Z

approved this merge request

3.11.2.15 1 - Update the release notes to GitLab

Id	1
State	merged
Merged by	Amar Takhar
Merged at	2024-06-13T02:13:27.924Z
Assignee(s)	Chris Johns
Created	2024-06-13T01:33:46.510Z
Updated	2024-06-13T02:13:28.786Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/1
Commit	b6f5b626aae1b50b6ac5b7ec3e35469ae6d074e6

Update the release notes to GitLab. The generator is Sphinx.

The issue for this work is https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/5013

Author: Chris Johns 2024-06-13T01:33:46.701Z

assigned to @chris

Author: Chris Johns 2024-06-13T01:37:45.368Z

added 1 commit

- 16e848b7 - Update the release notes to GitLab

Compare with previous version

Author: Chris Johns 2024-06-13T01:52:16.549Z

added 1 commit

- b2ffb9fc - Update the release notes to GitLab

Compare with previous version

Author: Chris Johns 2024-06-13T01:52:53.164Z

added 3 commits

- acc0505f - 1 commit from branch `rtems/rtos:main`
- 540c0e1f - Remove trac files
- b6f5b626 - Update the release notes to GitLab

Compare with previous version

Author: Amar Takhar 2024-06-13T02:13:24.439Z

approved this merge request

3.12 RTEMS / Tools / RTEMS Deployment

Go to *Issues* (page 3336) or *Merge Requests* (page 3344)

Issues Summary

4 - Backport wscript: fix text for help (page 3336)
3 - Update waf to 2.1.4 : rtems/tools/rtems-deployment (page 3338)
2 - Add option to pass the RSB options (page 3344)

Merge Requests Summary

17 - waf: Update waf to waf-2.1.4 (page 3344)
16 - wscript: fix text for help (page 3345)
12 - config/amd/k26: Rename to the correct K26 SOM name (page 3347)
10 - amd: Add civetweb package to the package stack (page 3348)
9 - amd: Add yaml-cpp package to the package stack (page 3349)
8 - amd/kr26: Name the BSP kr26 (page 3349)
7 - beagle: Add Beaglebone Black (page 3350)
6 - amd/kr26: Set the console to UART1 (page 3351)
5 - Enable SMP for kria/kr26 and microzed BSPs (page 3351)
4 - AMD updates (page 3352)
3 - Add KR60 (KR260) (page 3353)
2 - waf: Fix pandoc check (page 3353)
1 - Support RSB options (page 3355)

11 - Amd add yaml cpp (closed) (page 3356)

3.12.1 Issues

3.12.1.1 4 - Backport wscript: fix text for help

Id	4
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Gedare Bloom
Closed by	Kinsey Moore
Created	2024-12-05T00:19:18.234Z
Closed	2025-01-14T03:07:14.393Z
Updated	2025-01-14T03:07:14.404Z
Milestone	6.1
Labels	backport
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/work_items/4
Merges	0

Summary

In order to update to waf-2.1.4, we need to backport the fix for

```
$ ./waf --help
Traceback (most recent call last):
File "/mnt/devel/rtems/rtems-deployment/.waf3-2.1.4-
↪72787ce48f227ac42c4b0da24e780694/waflib/Scripting.py", line 122, in waf_entry_
↪point
run_commands()
File "/mnt/devel/rtems/rtems-deployment/.waf3-2.1.4-
↪72787ce48f227ac42c4b0da24e780694/waflib/Scripting.py", line 181, in run_commands
parse_options()
File "/mnt/devel/rtems/rtems-deployment/.waf3-2.1.4-
↪72787ce48f227ac42c4b0da24e780694/waflib/Scripting.py", line 168, in parse_
↪options
ctx.parser.print_help()
File "/usr/lib/python3.10/argparse.py", line 2579, in print_help
self._print_message(self.format_help(), file)
File "/mnt/devel/rtems/rtems-deployment/.waf3-2.1.4-
↪72787ce48f227ac42c4b0da24e780694/waflib/Options.py", line 19, in format_help
return super(ArgParser,self).format_help()
File "/usr/lib/python3.10/argparse.py", line 2563, in format_help
return formatter.format_help()
File "/usr/lib/python3.10/argparse.py", line 295, in format_help
help = self._root_section.format_help()
File "/usr/lib/python3.10/argparse.py", line 226, in format_help
item_help = join([func(*args) for func, args in self.items])
File "/usr/lib/python3.10/argparse.py", line 226, in <listcomp>
item_help = join([func(*args) for func, args in self.items])
File "/usr/lib/python3.10/argparse.py", line 226, in format_help
item_help = join([func(*args) for func, args in self.items])
File "/usr/lib/python3.10/argparse.py", line 226, in <listcomp>
item_help = join([func(*args) for func, args in self.items])
File "/usr/lib/python3.10/argparse.py", line 552, in _format_action
help_text = self._expand_help(action)
File "/usr/lib/python3.10/argparse.py", line 649, in _expand_help
return self._get_help_string(action) % params
TypeError: %d format: a real number is required, not dict
```

Steps to reproduce

3.12.1.1.2.1 Pre-set options

Author: Gedare Bloom	2024-12-05T00:19:23.595Z

assigned to @gedare

Author: Gedare Bloom	2024-12-05T00:19:24.031Z

Author: Gedare Bloom 2024-12-05T00:20:23.937Z

See also !14

Author: Gedare Bloom 2024-12-05T00:22:51.387Z

mentioned in merge request !16

Author: Kinsey Moore 2025-01-14T03:07:14.147Z

The associated MR has been merged.

3.12.1.2 3 - Update waf to 2.1.4 : rtems/tools/rtems-deployment

Id	3
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-12-04T22:17:46.796Z
Closed	2024-12-22T03:35:39.758Z
Updated	2024-12-22T03:35:39.770Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/work_items/3
Merges	0

Summary

The latest verison of waf fixes several issues on Windows. We also have a huge inconsistency in the version we're running which we should probably fix:

```
./rtems-deployment/waf       waf 2.0.24 (1af97c71f5a6756abf36d0f78ed8fd551596d7cb)
./rtems-docs/waf             waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
./rtems-examples/waf         waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-libbsd/waf           waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-littlevgl/waf        waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-lwip/waf             waf 2.0.18 (314689b8994259a84f0de0aaef74d7ce91f541ad)
./rtems-net-legacy/waf       waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems-net-services/waf     waf 2.0.25 (2db0b41b2805cd5db3b55476c06b23c1e46d319f)
./rtems-tools/waf            waf 2.1.2 (8504c212ce81919a5858a5118570613422338852)
./rtems/waf                  waf 2.1.3 (ee9a11d51e94d31c548fd5b6a8103c68327b3354)
```

Steps to reproduce

3.12.1.2.2.1 Pre-set options

Author: Amar Takhar 2024-11-16T20:21:25.689Z

marked this issue as blocking rtems/docs/rtems-docs#54

Author: Amar Takhar 2024-11-16T20:21:31.439Z

changed the description

Author: Gedare Bloom 2024-11-17T00:11:44.128Z

Should we automate an approach to keep all our repos in sync with waf version?

Author: Amar Takhar 2024-11-17T00:19:39.724Z

Yeah I already have that written down but it's not that easy. We need to think about the workflow of how this should happen. There needs to be a process to test the new version against all the repositories to make sure it works and then update so we need to be more deliberate about it.

I have some ideas about it but the procedural part needs to be discussed: what's important enough to upgrade for and do we want to support one repo getting ahead of others to avoid increasing the size of our repositories or whether we care or not. Clearly the above is not great having `2.0` vs `2.1` Having said that `2.1.4` has fixes we really want for Windows.

Author: Amar Takhar 2024-11-17T01:08:46.506Z

See also: https://gitlab.com/ita1024/waf/-/issues/2452

Author: Amar Takhar 2024-11-17T03:50:21.836Z

assigned to @amar

Author: Amar Takhar 2024-11-17T04:22:19.639Z

After this update is done I'll create another issue for the next update. As we require an update we should collect reasons, issues and MRs until we trigger the next update. Of course a critical issue should be an immediate update but smaller things for instance if it's specific to one repo we can let that one repo get out of sync until we have more of are reason to update project-wide. otherwise we may end up update too often.

Author: Amar Takhar 2024-11-18T20:19:26.807Z

mentioned in merge request rtems/rtos/rtems!318

Author: Amar Takhar 2024-11-20T23:35:55.569Z

mentioned in commit amar/rtems-deployment@c8fd177b03fb5130697a7411d716f1542c6175b1

Author: Amar Takhar 2024-11-20T23:36:01.722Z

mentioned in commit amar/rtems-docs@ff70333104a0aaa05877df336d1bb1672b205b73

Author: Amar Takhar 2024-11-20T23:36:04.790Z

mentioned in commit amar/rtems-examples@8056cf5ccaaff51477096bdd3ae3850cecee957d

Author: Amar Takhar 2024-11-20T23:36:05.900Z

mentioned in commit amar/rtems-libbsd@2cac334d6a21b6006dfee4613d3da78eec26b1c8

Author: Amar Takhar 2024-11-20T23:36:08.424Z

mentioned in commit amar/rtems-littlevgl@7831e7125a6efe283e3c65efec1e24a96fdfc2ac

Author: Amar Takhar 2024-11-20T23:36:10.195Z

mentioned in commit amar/rtems-lwip@24f46d35dedf08807d6088443ab5c82e95c36ed8

Author: Amar Takhar 2024-11-20T23:36:12.174Z

mentioned in commit amar/rtems-net-legacy@8845824db452168140610db037ea0359e363cf1d

Author: Amar Takhar 2024-11-20T23:36:14.636Z

mentioned in commit amar/rtems-net-services@7bcc152d49267e5b5ca3c00c1707cc40b2ef95b6

Author: Amar Takhar 2024-11-20T23:36:17.086Z

mentioned in commit amar/rtems-tools@12a94b63506ad84ec1c4feed56d3ce2e85475d85

Author: Amar Takhar 2024-11-20T23:36:21.347Z

mentioned in commit amar/rtems@62baa874b823fea35b7cdea78734d277ada7b455

Author: Amar Takhar 2024-11-20T23:39:31.029Z

mentioned in merge request rtems/rtos/rtems!323

Author: Amar Takhar 2024-11-20T23:39:48.843Z

mentioned in merge request rtems/tools/rtems-tools!44

Author: Amar Takhar 2024-11-20T23:40:09.031Z

mentioned in merge request rtems/pkg/rtems-net-services!9

Author: Amar Takhar 2024-11-20T23:40:25.975Z

mentioned in merge request rtems/pkg/rtems-net-legacy!6

Author: Amar Takhar 2024-11-20T23:40:33.280Z

mentioned in merge request rtems/pkg/rtems-lwip!11

Author: Amar Takhar 2024-11-20T23:40:41.082Z

mentioned in merge request rtems/pkg/rtems-littlevgl!4

Author: Amar Takhar 2024-11-20T23:40:53.742Z

mentioned in merge request rtems/pkg/rtems-libbsd!25

Author: Amar Takhar 2024-11-20T23:41:01.964Z

mentioned in merge request rtems/rtos/rtems-examples!5

Author: Amar Takhar 2024-11-20T23:41:10.912Z

mentioned in merge request rtems/docs/rtems-docs!89

Author: Amar Takhar 2024-11-20T23:41:24.453Z

mentioned in merge request rtems/tools/rtems-deployment!13

Author: Gedare Bloom 2024-11-21T00:03:44.787Z

mentioned in commit gedare/rtems-docs@2f1694269539dc59177b203df1b8481ee52f989a

Author: Gedare Bloom 2024-11-21T00:04:29.322Z

mentioned in merge request rtems/docs/rtems-docs!85

Author: Gedare Bloom 2024-11-21T00:06:48.926Z

mentioned in commit gedare/rtems-docs@816d14787b8bb89e7830c9885946fa8dc6dadf79

Author: Amar Takhar 2024-11-22T10:02:29.944Z

mentioned in commit amar/rtems-docs@24cf46b966d77bada338422de2ead632f79beb89

Author: Amar Takhar 2024-11-24T23:02:01.254Z

mentioned in commit amar/rtems-docs@7582461dbcff0287bb8bc1a615734696a416b266

Author: Amar Takhar 2024-11-24T23:03:10.673Z

mentioned in commit amar/rtems-examples@ac68170083fc3b2e5ce9a63a6c64b4b2e5d7915f

Author: Amar Takhar 2024-11-24T23:03:49.371Z

mentioned in commit amar/rtems-libbsd@a2d65d78fbe832a50ca6c986936c9b0c16647739

Author: Amar Takhar 2024-11-24T23:06:27.181Z

mentioned in commit amar/rtems@03c5b7e88f165ea56487e78822cf0b8595c79cfa

Author: Amar Takhar 2024-11-25T01:33:09.501Z

mentioned in commit amar/rtems-docs@b9af7d8fad94c310f7d973c10b5a7c2da8d4e7e8

Author: Amar Takhar 2024-12-04T21:56:00.650Z

mentioned in commit amar/rtems@8d71cc5dc4a0e11fd7b8d7b5b94bb2e54d3a6f9e

Author: Gedare Bloom 2024-12-04T22:16:38.325Z

cloned to rtems/docs/rtems-docs#62

Author: Gedare Bloom 2024-12-04T22:17:50.489Z

cloned from rtems/rtos/rtems#5153

Author: Gedare Bloom 2024-12-04T22:17:46.927Z

assigned to @amar

Author: Gedare Bloom 2024-12-04T22:21:47.254Z

Author: Gedare Bloom 2024-12-04T22:46:41.787Z

Author: Chris Johns 2024-12-21T23:37:11.935Z

changed title from **Update waf to 2.1.4** to **Update waf to 2.1.4{+ : rtems/tools/rtems-deployment+}**

Author: Chris Johns 2024-12-22T00:48:06.756Z

mentioned in merge request !17

3.12.1.3 2 - Add option to pass the RSB options

Id	2
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-06-06T01:40:22.697Z
Closed	2024-06-13T02:55:30.642Z
Updated	2024-06-13T02:55:30.652Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/work_items/2
Merges	0

Summary

Provide a deployment option to specify options to pass to the RSB. For example the RSB `--url` option to specify an alternative cache of sources for the RSB to use.

Author: Chris Johns	2024-06-06T01:40:22.784Z

assigned to @chris

3.12.2 Merge Requests

3.12.2.1 17 - waf: Update waf to waf-2.1.4

Id	17
State	merged
Merged by	Amar Takhar
Merged at	2024-12-22T02:18:09.191Z
Assignee(s)	Chris Johns
Reviewer(s)	Joel Sherrill, Kinsey Moore, Amar Takhar
Created	2024-12-22T00:47:57.863Z
Updated	2024-12-22T02:18:13.796Z
Milestone	6.1
Labels	backport, tool::waf
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/17
Commit	c08707d4047d000375767822a9672b8d9ba79a47

Summary

Update waf to waf-2.1.4

Closes #3

Author: Chris Johns 2024-12-22T00:47:58.059Z

requested review from @amar, @joel, and @opticron

Author: Chris Johns 2024-12-22T00:47:58.075Z

assigned to @chris

Author: Amar Takhar 2024-12-22T02:17:44.824Z

approved this merge request

3.12.2.2 16 - wscript: fix text for help

Id	16
State	merged
Merged by	Kinsey Moore
Merged at	2024-12-05T19:51:59.656Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Chris Johns
Created	2024-12-05T00:22:45.120Z
Updated	2024-12-05T19:52:00.650Z
Milestone	6.1
Labels	backport
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/16
Commit	f7762c2d97915cedf843805d5e85cc3ab3ca281e

Summary

wscript: fix text for help

closes #4

Closes #4

Author: Gedare Bloom 2024-12-05T00:22:45.287Z

requested review from @chris

Author: Gedare Bloom 2024-12-05T00:22:45.300Z

assigned to @gedare

Author: Gedare Bloom 2024-12-05T00:24:10.586Z

added 1 commit

- f7762c2d - wscript: fix text for help

Compare with previous version

Author: Chris Johns 2024-12-05T00:26:47.995Z

approved this merge request

Author: Chris Johns 2024-12-05T00:26:57.757Z

added 2 commits

- f7762c2d...efe5aa70 - 2 commits from branch `rtems/tools:main`

Compare with previous version

Author: Chris Johns 2024-12-05T01:26:11.174Z

This MR is to the wrong branch.

Author: Gedare Bloom 2024-12-05T01:26:11.174Z

Please set to a draft when you see this in the future

Author: Gedare Bloom 2024-12-05T01:13:21.736Z

marked this merge request as **draft**

Author: Chris Johns 2024-12-05T01:26:11.190Z

resolved all threads

Author: Gedare Bloom 2024-12-05T06:31:02.604Z

added 1 commit

- f7762c2d - wscript: fix text for help

Compare with previous version

Author: Gedare Bloom 2024-12-05T06:31:37.742Z

changed target branch from `main` to `6`

Author: Gedare Bloom 2024-12-05T06:32:13.987Z

marked this merge request as **ready**

Author: Kinsey Moore 2024-12-05T19:51:56.103Z

approved this merge request

3.12.2.3 12 - config/amd/k26: Rename to the correct K26 SOM name

Id	12
State	merged
Merged by	Amar Takhar
Merged at	2024-10-25T08:20:30.521Z
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Created	2024-10-24T05:54:30.384Z
Updated	2024-10-25T08:20:32.216Z
Milestone	6.1
Labels	tool::rtems-deployment
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/12
Commit	ad8364278ce605a9cc43a05805fff836fea1810b

I got the name wrong. It should be K26. This is the AMD SOM product name.

Author: Chris Johns 2024-10-24T05:54:30.731Z

assigned to @chris

Author: Chris Johns 2024-10-24T05:56:20.913Z

Hmm I think the BSP name has changed that is used but the RSB is not updated? I will check.

Author: Chris Johns 2024-10-24T05:56:25.589Z

marked this merge request as **draft**

Author: Chris Johns 2024-10-25T06:28:17.665Z

added 1 commit

- ad836427 - config/amd/k26: Rename to the correct K26 SOM name

Compare with previous version

Author: Chris Johns 2024-10-25T06:28:25.175Z

marked this merge request as **ready**

Author: Chris Johns 2024-10-25T06:29:11.679Z

I have tested with https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/71.

Author: Chris Johns 2024-10-25T06:29:17.118Z

requested review from @amar

Author: Amar Takhar 2024-10-25T08:20:08.251Z

approved this merge request

3.12.2.4 10 - amd: Add civetweb package to the package stack

Id	10
State	merged
Merged by	Chris Johns
Merged at	2024-09-30T06:35:26.691Z
Assignee(s)	Chris Johns
Created	2024-09-30T06:05:15.823Z
Updated	2024-09-30T06:35:26.664Z
Milestone	6.1
Labels	arch:aarch64, arch:arm, tool::rtems-deployment
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/10
Commit	76552d56975aceae36ec68e890c440fb7ef74228

Add the `civetweb` package to the AMD BSP's software stack.

Author: Chris Johns 2024-09-30T06:05:17.966Z

assigned to @chris

Author: Chris Johns 2024-09-30T06:07:11.741Z

enabled an automatic merge when all merge checks for 76552d56975aceae36ec68e890c440fb7ef74228 pass

Author: Amar Takhar 2024-09-30T06:35:21.407Z

approved this merge request

3.12.2.5 9 - amd: Add yaml-cpp package to the package stack

Id	9
State	merged
Merged by	Amar Takhar
Merged at	2024-09-27T04:37:28.969Z
Assignee(s)	Chris Johns
Created	2024-09-27T04:32:49.168Z
Updated	2024-09-27T04:37:30.826Z
Milestone	6.1
Labels	tool::rtems-deployment
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/9
Commit	273feee80327fadac6eb857095cc0d07ed67eff7

Add `yaml-cpp` as a patch to the vertical stack to the AMD BSPs.

Author: Chris Johns 2024-09-27T04:32:49.390Z

assigned to @chris

Author: Amar Takhar 2024-09-27T04:37:22.888Z

approved this merge request

3.12.2.6 8 - amd/kr26: Name the BSP kr26

Id	8
State	merged
Merged by	Amar Takhar
Merged at	2024-09-20T23:57:41.445Z
Assignee(s)	Chris Johns
Created	2024-09-20T23:05:43.526Z
Updated	2024-09-20T23:57:42.827Z
Milestone	6.1
Labels	arch:aarch64, tool::rtems-deployment
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/8
Commit	774ef9298d647858177fbca7a177f4a7f8330d0b

Use `INHERIT` in an INI config file to create a new BSP name.

Author: Chris Johns 2024-09-20T23:05:44.071Z

assigned to @chris

Author: Amar Takhar 2024-09-20T23:57:33.128Z

approved this merge request

3.12.2.7 7 - beagle: Add Beaglebone Black

Id	7
State	merged
Merged by	Joel Sherrill
Merged at	2024-09-12T22:13:28.564Z
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Created	2024-08-29T23:08:31.633Z
Updated	2024-09-12T22:13:29.725Z
Milestone	6.1
Labels	arch:arm, tool::rtems-deployment
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/7
Commit	0a6214beeec77f6c1742f9f0b205b6c473030a77

This change adds Beaglebone Black to the builds.

Author: Chris Johns 2024-08-29T23:08:31.774Z

requested review from @amar

Author: Chris Johns 2024-08-29T23:08:31.819Z

assigned to @chris

Author: Joel Sherrill 2024-09-12T22:13:24.590Z

approved this merge request

3.12.2.8 6 - amd/kr26: Set the console to UART1

Id	6
State	merged
Merged by	Amar Takhar
Merged at	2024-08-28T06:17:47.538Z
Assignee(s)	Chris Johns
Created	2024-08-28T05:42:10.841Z
Updated	2024-08-28T06:17:48.464Z
Milestone	6.1
Labels	arch:aarch64, tool::rtems-deployment
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/6
Commit	4e1f030633b1e25eada0e3a909c391124750f480

The console is UART1 on the KR26

Author: Chris Johns 2024-08-28T05:42:11.028Z

assigned to @chris

Author: Amar Takhar 2024-08-28T06:17:26.858Z

approved this merge request

Author: Amar Takhar 2024-08-28T06:17:37.509Z

added 2 commits

- 35d27737 - 1 commit from branch `rtems/tools:main`
- 4e1f0306 - amd/kr26: Set the console to UART1

Compare with previous version

3.12.2.9 5 - Enable SMP for kria/kr26 and microzed BSPs

Id	5
State	merged
Merged by	Amar Takhar
Merged at	2024-08-18T05:35:58.263Z
Assignee(s)	Chris Johns
Created	2024-08-18T05:08:10.730Z
Updated	2024-08-18T05:35:59.223Z
Milestone	6.1
Labels	smp, tool::rtems-deployment
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/5
Commit	35d2773726c6d87aaebbc87e1ff2e71e5536b220

Enable SMP for ADM Kria KR26 and Microzed BSPs.

Author: Chris Johns 2024-08-18T05:08:10.885Z

assigned to @chris

Author: Amar Takhar 2024-08-18T05:35:53.688Z

approved this merge request

3.12.2.10 4 - AMD updates

Id	4
State	merged
Merged by	Amar Takhar
Merged at	2024-08-16T03:45:59.230Z
Assignee(s)	Chris Johns
Created	2024-08-16T03:38:40.730Z
Updated	2024-08-16T03:46:00.176Z
Milestone	6.1
Labels	arch:aarch64, arch:arm, tool::rtems-deployment
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/4
Commit	f8a6b6a13b2518e7a3e1b808a59afbdbcba25340

1. Correctly name the Kria K26 SOM
2. Change the BSP to be `xilinx_zynqmp_lp64_zu3eg`
3. Add Avnet Microzed

Author: Chris Johns 2024-08-16T03:38:40.892Z

assigned to @chris

Author: Amar Takhar 2024-08-16T03:45:55.580Z

approved this merge request

3.12.2.11 2 - waf: Fix pandoc check

Id	2
State	merged
Merged by	Amar Takhar
Merged at	2024-08-09T06:36:47.151Z
Assignee(s)	Chris Johns
Created	2024-08-09T05:54:57.715Z
Updated	2024-08-09T06:40:27.116Z
Milestone	6.1
Labels	doc, tool::rtems-deployment
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/2
Commit	106d7003e3b02a6647c6f88bbee6a78db1c7ce14

Fix the arg spelling and let the configure pass without pandoc being installed

Author: Chris Johns 2024-08-09T05:54:57.888Z

assigned to @chris

Author: Amar Takhar 2024-08-09T06:36:40.568Z

Oh man, I always spell that word wrong and I fixed it but I remember going back and modifying something then I must have retyped it wrong! Thanks for fixing this.

Author: Amar Takhar 2024-08-09T06:36:42.718Z

approved this merge request

3.12.2.12 3 - Add KR60 (KR260)

Id	3
State	merged
Merged by	Amar Takhar
Merged at	2024-08-09T06:38:37.547Z
Assignee(s)	Chris Johns
Created	2024-08-09T06:20:58.630Z
Updated	2024-08-09T06:40:16.465Z
Milestone	6.1
Labels	tool::rtems-deployment
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/3
Commit	fc76672cb18708138b70852f28fc1c80ff423c18

Add support for the Kria KR60. This is used on the KR260 kit

Author: Chris Johns 2024-08-09T06:20:59.123Z

assigned to @chris

Author: Chris Johns 2024-08-09T06:21:18.176Z

changed title from **Add {-kr-}260** to **Add {+KR60 (KR+}260{+)+}**

Author: Chris Johns 2024-08-09T06:21:49.340Z

marked this merge request as **draft**

Author: Chris Johns 2024-08-09T06:22:13.884Z

I was based on another MR and it is included.I will fix this.

Author: Chris Johns 2024-08-09T06:23:53.485Z

added 1 commit

- 6b4df4a3 - config/amd: Add AMD Kria KR60

Compare with previous version

Author: Chris Johns 2024-08-09T06:24:10.696Z

marked this merge request as **ready**

Author: Amar Takhar 2024-08-09T06:37:12.744Z

approved this merge request

Author: Amar Takhar 2024-08-09T06:38:28.277Z

added 2 commits

- 106d7003 - 1 commit from branch `rtems/tools:main`
- fc76672c - config/amd: Add AMD Kria KR60

Compare with previous version

3.12.2.13 1 - Support RSB options

Id	1
State	merged
Merged by	Amar Takhar
Merged at	2024-06-12T04:38:38.800Z
Assignee(s)	Chris Johns
Created	2024-06-12T04:24:33.052Z
Updated	2024-06-12T13:40:19.382Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/1
Commit	a949ba80d19739d7471eaf8c08ebec158e09d5b4

Support RSB options by adding an option to provide options passed through to the RSB. This lets you specify the URL, eg `--url=somewhere`.

Author: Chris Johns 2024-06-12T04:24:33.608Z

assigned to @chris

Author: Amar Takhar 2024-06-12T04:38:33.088Z

approved this merge request

Author: Amar Takhar 2024-06-12T04:38:38.755Z

mentioned in commit ae9d645739d264395274db67902fc1573656ce61

Author: Amar Takhar 2024-06-12T04:56:14.124Z

FYI for some reason this created a merge commit which I deleted manually. Still not sure why it happened.

Author: Kinsey Moore 2024-06-12T13:35:48.384Z

The default merge method for this repo is set to “merge commit”.

Author: Kinsey Moore 2024-06-12T13:36:46.372Z

I have updated that setting for this repo. I suppose we need to do an audit of all our current repos to make sure we don’t have any others with that setting.

Author: Kinsey Moore 2024-06-12T13:40:19.365Z

I fixed a few others as well. Hopefully they're all set to FF now.

3.12.2.14 11 - Amd add yaml cpp (closed)

Id	11
State	closed
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-10-24T03:37:47.256Z
Closed	2024-10-24T03:38:38.013Z
Updated	2024-10-24T03:38:37.958Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-deployment/-/merge_requests/11
Commit	76552d56975aceae36ec68e890c440fb7ef74228

Add the Yaml CPP package to the AMD configs

Author: Chris Johns 2024-10-24T03:37:47.708Z

assigned to @chris

Author: Chris Johns 2024-10-24T03:38:37.265Z

The code is merged.

3.13 RTEMS / Tools / SIS

Go to rtems/tools/rtems-sis-issues or *Merge Requests* (page 3357)

Issues Summary

Merge Requests Summary

2 - Add build files to .gitignore (page 3357)
1 - Convert README to MarkDown. (page 3359)

3.13.1 Merge Requests

3.13.1.1 2 - Add build files to .gitignore

Id	2
State	merged
Merged by	Chris Johns
Merged at	2024-07-20T07:13:35.839Z
Assignee(s)	Amar Takhar
Created	2024-07-19T21:28:27.376Z
Updated	2024-08-10T00:40:05.929Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-sis/-/merge_requests/2
Commit	9957963b631bc15227399934472480df0c5ae6e1

Summary

Add build files to .gitignore

This doesn't deal with the fact that we have pre-built files in the repository when you build some files will get modified like the documentation.

If you regen configure and it's friends will get modified, too.

Author: Amar Takhar 2024-07-19T21:28:27.533Z

assigned to @amar

Author: Chris Johns 2024-07-20T06:43:33.708Z

These are to be added to you local ignore as they are editor specific

Author: Amar Takhar 2024-07-20T06:43:25.164Z

changed this line in version 2 of the diff

Author: Amar Takhar 2024-07-20T06:43:33.708Z

That's weird I have no idea where that ~ file came from I have no editors that create files like this. I went through all the steps I did before and it's not showing up again how strange.

I have removed them.

Author: Chris Johns 2024-07-20T07:12:54.164Z

I suspect you see this because you have configured in the source. I normal avoid this.

The only change needed is the editor specific files which we do not add to pre repo ignores.

Author: Amar Takhar 2024-07-20T07:12:54.164Z

Yes, there are other in-source files in .gitignore so why not add the rest? I've never configured out of source I don't see the harm in adding them as it makes for easier development.

Author: Chris Johns 2024-07-20T07:12:54.164Z

I am fine with them being added.

RTEMS had a policy of not configuring in source to avoid generated files being added as it became a problem over time.

Author: Chris Johns 2024-07-20T06:26:05.120Z

requested changes

Author: Amar Takhar 2024-07-20T06:43:25.389Z

added 1 commit

- ae3cb164 - Add build files to .gitignore

Compare with previous version

Author: Amar Takhar 2024-07-20T06:43:33.734Z

resolved all threads

Author: Chris Johns 2024-07-20T07:12:54.182Z

resolved all threads

Author: Chris Johns 2024-07-20T07:13:05.229Z

added 2 commits

- fa779965 - 1 commit from branch `rtems/tools:main`
- 9957963b - Add build files to .gitignore

Compare with previous version

Author: Chris Johns 2024-07-20T07:13:31.369Z

approved this merge request

3.13.1.2 1 - Convert README to MarkDown.

Id	1
State	merged
Merged by	Gedare Bloom
Merged at	2024-07-10T06:06:01.156Z
Assignee(s)	Amar Takhar
Created	2024-07-09T18:02:48.001Z
Updated	2024-07-10T06:06:02.976Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/tools/rtems-sis/-/merge_requests/1
Commit	b3ad4cb18a9eac8f1038cdb03978e4951f026908

Summary

Author: Amar Takhar 2024-07-09T18:02:48.162Z

assigned to @amar

Author: Gedare Bloom 2024-07-10T06:05:57.772Z

approved this merge request

3.14 RTEMS / Tools / RTEMS Source Builder

Go to *Issues* (page 302) or *Merge Requests* (page 319)

Issues Summary

76 - Release builds of rtems-net-legacy references rtems_waf (page 3381)
74 - simhost is broken with build errors (page 3387)
72 - NTP is now in net-services, remove as a 3rd pary package (page 3385)
70 - The –with-rtems-tests flag does not cause tests to be installed appropriately (page 3383)
69 - GCC does not build on FreeBSD on arm64 systems (page 3384)
68 - Version's _top() call does not find the top (page 3382)
66 - Non-simhost builds fail with force_package_build error (page 3386)
62 - RSB: All toolset builds fail on 6.1rc4 looking for texinfo (page 3401)
61 - RSB: All toolset builds fail on 6.1rc5 looking for texinfo (page 3391)
60 - RSB: All toolset builds fail on 6.1rc4 looking for texinfo (page 3392)
57 - Add rtems-lwip build set (page 3388)
55 - Remove upstream lwIP from build configurations in favor of using rtems-lwip (page 3394)
53 - RSB: clean unused buildsets and configurations (page 3395)
52 - 6: Add –release-branch option to use on release branches (page 3390)
46 - Add std::filesystem chdir and mkdir support to libstdc++v3 (page 3402)
44 - expat picking up dockbook2man and erroring when XML support is not enabled. (page 3410)
42 - gaisler.se qemu patch download fails (page 3397)
40 - Adding a hash in a release build generates an error (page 3416)
38 - Windows only code in common area in path.py (page 3417)
36 - dtc build failure on msys2 - all rtems6 target tools fail to build on Windows 10 (page 3411)
35 - x86_64 breaks on MacOS M machines (page 3407)
32 - Can't build everything with all locales (page 3418)
29 - cannot create /opt/rtems/6/share/gdb/python/rtems/stdcxx.py: Directory nonexistent (page 3375)
28 - Update to binutils 2.34 for rtems 6 (page 3421)
27 - GDB builds fail on MSYS2 for RTEMS 6 (page 3363)
26 - gsed,texinfo builds fail on MSYS2 for RTEMS 6 (page 3365)
25 - dtc builds fail on MSYS2 for RTEMS 6 (page 3415)
24 - Update newlib hash for RUSAGE_PTHREAD and remove sys/tree.h (page 3420)
23 - Microblaze Tools Fails to Build (page 3422)
22 - All Builds Fail on Cygwin From chmod Returning an Error (page 3424)
19 - RTEMS source builder is not compiling GCC correctly (Failed to obtain rtems-tools from previous repository) (page 3367)
17 - newLib fails to build with shellcmd cmd failed error (page 3370)
13 - sb-rtems-pkg does not update rtems-tools checksum (page 3419)
12 - GIT links to gitlab.rtems.org need to use protocol=https (page 3426)
11 - Source downloads fail (page 3429)
10 - Provide an RTEMS STD C++ script in Python (page 3374)
9 - GDB 14.2 fails to build on MacOS (page 3431)
8 - Change GDB back to 13 (page 3435)

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Table 5 – continued from previous page

7 - GDB requires GMP 4.2+, and MPFR 3.1.0+ (page 3433)
6 - CI to update file cache on ftp.rtems.org (page 3379)
5 - The –url command line option does not dowload all paths (page 3399)
4 - Move devel.rtems.org patches to gitlab.rtems.org (page 3436)
3 - Move git.rtems.org configurations to gitlab.rtems.org (page 3437)
2 - QEMU failed to build on FreeBSD 14 (page 3439)
1 - Migrate commits from master to main after gitlab transition (page 3396)

Merge Requests Summary

116 - rtems/net-legacy: Do not reference rtems_waf when released (page 3464)
113 - sb: Fix version finding the top when invoked with VERSION externally (page 3464)
109 - rtems/net: Remove NTP as a 3rd party package (page 3466)
107 - sb: A build does not accumulate errors, remove assignment (page 3467)
105 - rtems/config/rtems-kernel-common: Parse –with-rtems-tests correctly (page 3462)
102 - config/gcc-13: Add support in ISL for FreeBSD on arm64 systems (page 3465)
99 - source-builder: Set default for force_package_build (page 3467)
98 - source-builder: Set default for force_package_build (page 3468)
97 - sb/simhost: Fix bset parsing in simhost and improve error handling (page 3469)
93 - bare/texinfo: Add back texinfo-1.cfg which was removed by sb-track (page 3471)
92 - rtems/config: Add rtems-lwip build set (page 3472)
89 - bare/texinfo: Add back texinfo-7.0.3.cfg which was removed by sb-track (page 3470)
87 - Remove lwIP build set (page 3476)
85 - RTEMS: Remove 7 build sets (page 3477)
84 - RTEMS Packages: Add support for –release-branch (page 3473)
81 - RTEMS Packages Update to the 6 branch packages (page 3479)
80 - RTEMS C++ Patch to support C++17 filesystem namespace calls (page 3478)
77 - rtems/x86_64: Do not build grub or makefs on MacOS (page 3480)
76 - RTEMS Packages Updates for 6 (page 3481)
74 - Fix sb-rtems-pkg and update the packages (page 3481)
73 - expat: disable docbook to avoid man page generation error (page 3483)
72 - Updated qemu patch to point to rtems.org domain from geisler.se which now 404s (page 3490)
71 - rtems: Update packages (page 3488)
70 - rtems-tools needs the Waf build root workaround for windows (page 3494)
67 - rtems-gdb-15.2.cfg: Correct using 14.2 instead of 15.2 (page 3496)
66 - dtc: do not attempt to build on windows (page 3494)
65 - sb:sources: Do not raise an error adding a hash if one is present (page 3498)
64 - sys.getwindowsversion only exists on Windows. (page 3498)
63 - Fixes for Windows 10 and Windows 11 (page 3499)
62 - Update to GDB 15.2 (page 3496)
61 - linux.py: Recognize Rocky Linux distribution (page 3500)
60 - rtems/www: Add civetweb web server package (page 3501)
59 - rtems/devel: Add yaml-cpp package (page 3502)

continues on next page

Table 6 – continued from previous page

58 - rtems: Update kernel and libbsd (page 3502)
57 - rtems: Update kernel and libbsd (page 3503)
56 - Keep RTEMS up to date with the upstream development (page 3504)
55 - rtems: Update tools to fix #13 (closed) console.open() (page 3461)
54 - 6/7: Fix Newlib update (page 3459)
53 - config: Update GCC 10 dependencies (page 3458)
52 - replaced hardwired sis version in the migrated gitlab path (page 3460)
51 - rtems: Package updates (page 3505)
50 - Use 4.11 branch for rtems-tools automake patch URL (page 3485)
49 - Fix config file directive processing in includes (page 3510)
48 - rtems/config/tools: Add checks to stdcxx.py install script (page 3450)
47 - Update tools, rtems, libbsd, net legacy and net services (page 3534)
46 - sb: Pull the repos after fetching (page 3533)
45 - add patch file for including rv32imf in the riscv multilib (page 3506)
44 - Update rtems6 tools to binutils 2.43 (page 3535)
42 - rtems-tools: Fetch rtems-syms fixes (page 3532)
41 - Convert LICENSE to MarkDown (page 3536)
40 - sb/build:Fix reference a null object when a package is unnecessary. (page 3532)
39 - rtems/6: Update MicroBlaze GCC to 12 (page 3531)
37 - rtems-gcc-13.3-newlib-head.cfg: Update hash to 1339af4 (page 3530)
36 - rtems-tools: Fetch rtems-syms improvements (page 3529)
35 - RSB modifications to install stdcxx.py in gdb/python/rtems (page 3511)
33 - windows.py: Disable chmod on Cygwin (page 3527)
32 - rsb(rtems-build-dep): handle multiple library paths (page 3483)
31 - rtems-tools-6.cfg: Bump hash to fix build issue on Cygwin (page 3529)
30 - rtems/tools,kernel: Update tools after elftoolchain update (page 3537)
29 - Fix the handling of the hash in sb-rtems-pkg (page 3536)
28 - RSB tar strip components double percent (page 3538)
27 - rtems-tools-6.cfg: Checksum updated (page 3538)
26 - Update RTEMS packages after moving to gitlab.rtems.org (page 3539)
25 - sb/rtemspkg: Use git:// paths for download URLs (page 3540)
24 - rsb: Add makefs to tools and use it in 6/rtems-x86_64 (page 3527)
23 - base/glib: Do not check for meson when getting sources (page 3526)
22 - Source downloads fail (page 3525)
21 - Fix MacOS python patch to the GDB 14.2 build and reduce down tar output (page 3540)
20 - Update RSB 4.11 for the gitlab migration (page 3522)
19 - Update RSB 5 branch for gitlab migration (page 3525)
18 - Bump newlib head hash to 1ed1516 in mulitple cfgs (page 3523)
16 - gdb: Build MPFR before GDB as it now depeneds on it (page 3542)
15 - Update for gitlab changes and fix minor issues (page 3543)
14 - gdb: Split python's version into major/minor and check for embed option (page 3524)
13 - Update binutils, gdb, and gcc (page 3547)
12 - Format all code with yapf defaults (page 3548)
11 - Fix –url paths so they download the –rsb-file (page 3548)
10 - Update QEMU to build on FreeBSD 14.0 (page 3550)
9 - qemu-xilinx: Allow build with conflicting libspice (page 3551)
8 - Update Newlib, Binutils, GDB, GCC for RTEMS 6/7 (page 3552)

continues on next page

Table 6 – continued from previous page

7 - sync in changes from master (page 3553)
2 - Change README to markdown (page 3554)

91 - bare/texinfo: Add back texinfo-1.cfg which was removed by sb-track (closed) (page 3556)
83 - Draft: RTEMS Package Add support for –release-branch (closed) (page 3557)
17 - Fix ncpu on FreeBSD so default jobs works. (closed) (page 3555)
6 - rsb: Minor README change (closed) (page 3555)
5 - rsb: Minor README change (closed) (page 3559)
4 - rsb: Minor README change (closed) (page 3560)
3 - rsb: Minor README change (closed) (page 3560)
1 - Resolve "Migrate commits from master to main after gitlab transition" (closed) (page 3558)

3.14.1 Issues

3.14.1.1 27 - GDB builds fail on MSYS2 for RTEMS 6

Id	27
State	closed
Type	ISSUE
Author	xiaojun zheng
Closed by	Amar Takhar
Created	2024-07-19T03:22:05.601Z
Closed	2024-10-06T23:24:32.821Z
Updated	2025-09-19T01:03:39.924Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/27
Merges	1

Summary

MSYS2, target arm,aarch64

build command

```
../source-builder/sb-set-builder --log=l-arm.txt --prefix=/opt/rtems/6.1 6/rtems-arm
```

There are 2 issues.

3.14.1.1.1.1 awk command

This is same as https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/4191

```
RTEMS Source Builder - Set Builder, 6 (c4975f3bc2a9 modified)
Build Set: 6/rtems-arm
Build Set: tools/rtems-default-tools.bset
config: tools/rtems-gdb-14.2.cfg
error: shell macro failed: sh -c "/usr/bin/python3-config --ldflags --embed | awk
↪'{for(i=1;i<NF;++i)if(match($i,\\".*lpython.*\\")) print \\"lib\\"substr($i,3)\\
↪"\\\\*\\";}'": 1: awk: cmd. line:1: {for(i=1;i<NF;++i)if(match(,".*lpython.*"))␣
↪print "lib"substr(,3)"\\*";}
awk: cmd. line:1:                              ^ syntax error
Build FAILED
Build Set: Time 0:00:02.209720
error: shell macro failed: sh -c "/usr/bin/python3-config --ldflags --embed | awk
↪'{for(i=1;i<NF;++i)if(match($i,\\".*lpython.*\\")) print \\"lib\\"substr($i,3)\\
↪"\\\\*\\";}'": 1: awk: cmd. line:1: {for(i=1;i<NF;++i)if(match(,".*lpython.*"))␣
↪print "lib"substr(,3)"\\*";}
awk: cmd. line:1:                              ^ syntax error
Build Set: Time 0:00:02.218058
Build FAILED
```

" should be added before '$i' and '*' in gdb-common-1.cfg:line131-132

when fixed this, there is another error.

3.14.1.1.1.2 no usable python found at /usr/bin/python3

rsb-report-arm-rtems6-gdb-14.2-x86_64-w64-mingw32-1.txt

But python3 is there.

```
MINGW64 ~/rtems-source-builder/rtems$ whereis python3
python3: /usr/bin/python3.11-config /usr/bin/python3.exe /usr/lib/python3.11 /usr/
↪include/python3.11 /usr/share/man/man1/python3.1.gz
```

Author: Frank Kuehndel 2024-07-29T00:49:44.971Z

Hi Xiaojun Zheng,

> when fixed this, there is another error. no usable python found at /usr/bin/python3
>
> This is most likely a follow up error from the awk command failing or not working correctly. The lines where the awk command fails, look like the source builder tries to figure out which Python library to use. If the awk command does not understand the syntax, may be you do not use GNU awk. If not, it may be worth trying to install GNU awk and make sure its the one actually used by the source builder.
>
> My recommendation would be to first follow the instructions in the *Quick Start* section strictly and if these work, change to your needs:
>
> https://docs.rtems.org/branches/master/user/start/index.html#quick-start

On my machine (OpenSUSE 15.5), git commit 892e966e4331f977cca8c83fc3bc22c8fa9d2754 builds without trouble:

../source-builder/sb-set-builder –log=/tmp/l-arm.txt –prefix=/tmp/build-sb/rtems/6 6/rtems-arm

Greetings, Frank

Author: xiaojun zheng 2024-07-29T00:49:44.937Z

Thanks, The awk is GNU awk

```
~$ awk -V
GNU Awk 5.3.0, API 4.0, PMA Avon 8-g1, (GNU MPFR 4.2.1, GNU MP 6.3.0)
Copyright (C) 1989, 1991-2023 Free Software Foundation.
```

Building in windows is not as easy as in Linux.

Author: Gedare Bloom 2024-10-06T22:11:07.401Z

mentioned in merge request !63

3.14.1.2 26 - gsed,texinfo builds fail on MSYS2 for RTEMS 6

Id	26
State	closed
Type	ISSUE
Author	xiaojun zheng
Closed by	Chris Johns
Created	2024-07-19T02:26:03.872Z
Closed	2024-08-07T02:48:39.109Z
Updated	2025-09-19T01:03:39.812Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/26
Merges	1

Summary

MSYS2, target arm,aarch64

build command

```
../source-builder/sb-set-builder --log=l-arm.txt --prefix=/opt/rtems/6.1 6/rtems-
↪arm
```

build gsed and texinfo has the same error messages.

error message:

```
RTEMS Source Builder - Set Builder, 6 (c4975f3bc2a9 modified)
Build Set: 6/rtems-arm
Build Set: tools/rtems-default-tools.bset
Build Set: textproc/gsed-internal.bset
config: textproc/gsed.cfg
Build Set: Time 0:00:00.161234
Build Set: Time 0:00:00.167836
Build Set: Time 0:00:00.175380
Traceback (most recent call last):
File "/home/ZXJ/rtems-source-builder/rtems/../source-builder/sb-set-builder", line 25, in <module>
sb.setbuilder.run()
File "/home/ZXJ/rtems-source-builder/source-builder/sb/setbuilder.py", line 812, in run
b.build(deps, mail=mail)
File "/home/ZXJ/rtems-source-builder/source-builder/sb/setbuilder.py", line 489, in build
bs.build(deps, nesting_count, mail)
File "/home/ZXJ/rtems-source-builder/source-builder/sb/setbuilder.py", line 489, in build
bs.build(deps, nesting_count, mail)
File "/home/ZXJ/rtems-source-builder/source-builder/sb/setbuilder.py", line 498, in build
b = build.build(
^^^^^^^^^^^^
File "/home/ZXJ/rtems-source-builder/source-builder/sb/build.py", line 151, in __init__
self.macros['buildname'] = short_name(self.macros['name'])
^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
File "/home/ZXJ/rtems-source-builder/source-builder/sb/build.py", line 70, in short_name
buildname += n[0]
~^^^
IndexError: string index out of range
```

Author: xiaojun zheng	2024-07-19T02:28:46.071Z

changed title from **gsed builds fail on MSYS2 for RTEMS 6** to **gsed{+,texinfo+} builds fail on MSYS2 for RTEMS 6**

Author: xiaojun zheng	2024-07-19T02:28:46.103Z

changed the description

Author: xiaojun zheng	2024-07-19T09:46:27.322Z

when build a package is unnecessary, n is null but is referenced [https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/blob/main/source-builder/

sb/build.py?ref_type=heads#L69]

Author: xiaojun zheng 2024-07-19T09:53:09.510Z

mentioned in merge request !40

3.14.1.3 19 - RTEMS source builder is not compiling GCC correctly (Failed to obtain rtems-tools from previous repository)

Id	19
State	closed
Type	ISSUE
Author	Brais Solla
Closed by	Brais Solla
Created	2024-06-28T11:19:23.149Z
Closed	2024-07-01T08:01:51.549Z
Updated	2025-09-19T01:03:39.713Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/19
Merges	0

Summary

I have an issue trying to prepare a Docker environment for RTEMS development.

For what I can see the rtems-source-builder is failing to download the following file: https://git.rtems.org/rtems-tools/snapshot/rtems-tools-04d6aa3ada572c1fd7352e3a95775824679c0aa0.tar.bz2

Im using repository https://gitlab.rtems.org/rtems/tools/rtems-source-builder.git with branch 5.3, here is the log of the process that's giving me the error

Log

```
building: arm-rtems5-gcc-7.5.0-newlib-7947581-x86_64-linux-gnu-1
#13 1137.1 sizes: arm-rtems5-gcc-7.5.0-newlib-7947581-x86_64-linux-gnu-1: 6.648GB (installed: 1.471GB)
#13 1137.1 cleaning: arm-rtems5-gcc-7.5.0-newlib-7947581-x86_64-linux-gnu-1
#13 1138.4 reporting: tools/rtems-gcc-7.5.0-newlib-7947581.cfg -> arm-rtems5-gcc-7.5.0-newlib-7947581-x86_64-linux-gnu-1.txt
#13 1138.4 reporting: tools/rtems-gcc-7.5.0-newlib-7947581.cfg -> arm-rtems5-gcc-7.5.0-newlib-7947581-x86_64-linux-gnu-1.xml
#13 1138.5 config: tools/rtems-tools-5-1.cfg
#13 1138.5 package: rtems-tools-04d6aa3ada572c1fd7352e3a95775824679c0aa0-1
#13 1138.5 download: https://git.rtems.org/rtems-tools/snapshot/rtems-tools-04d6aa3ada572c1fd7352e3a9577582...<see log> -> sources/rtems-tools-04d6aa3ada572c1fd7352e3a95775824679c0aa0.tar.bz2
```

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```
#13 1140.2 download: https://git.rtems.org/rtems-tools/snapshot/rtems-tools-
↪04d6aa3ada572c1fd7352e3a9577582...<see log>: error: HTTP Error 410: Gone
#13 1140.2 Build FAILED
#13 1140.2 error: downloading https://git.rtems.org/rtems-tools/snapshot/rtems-
↪tools-04d6aa3ada572c1fd7352e3a95775824679c0aa0.tar.bz2: all paths have failed,␣
↪giving up
#13 1140.2   See error report: rsb-report-rtems-tools-
↪04d6aa3ada572c1fd7352e3a95775824679c0aa0-1.txt
#13 1140.2 error: downloading https://git.rtems.org/rtems-tools/snapshot/rtems-
↪tools-04d6aa3ada572c1fd7352e3a95775824679c0aa0.tar.bz2: all paths have failed,␣
↪giving up
#13 1140.2 Build Set: Time 0:18:56.790955
#13 1140.2 Build FAILED
```

Steps to reproduce

Follow the RTEMS build procedure for RTEMS 5.3. The error is generated when running

```
../source-builder/sb-set-builder --prefix=/opt/rtems/5 5/rtems-arm
```

`

Author: Kinsey Moore 2024-06-28T13:54:23.559Z

Hello, 5.3 is a tag that was released before the gitlab transition. If you look on the 5 branch, the latest commit resolves this issue. Please verify that you can build with that patch.

Author: Brais Solla 2024-07-01T06:50:25.691Z

Hello @opticron, I'm trying to build using the branch 5 of rsb, but now I have a new issue, the patches are not getting downloaded and applied correctly.

```
RTEMS Source Builder - Set Builder, 5.not_released
Build Set: 5/rtems-arm
Build Set: 5/rtems-autotools.bset
Build Set: 5/rtems-autotools-internal.bset
config: tools/rtems-autoconf-2.69-1.cfg
package: autoconf-2.69-x86_64-linux-gnu-1
Creating source directory: sources
download: https://ftp.gnu.org/gnu/autoconf/autoconf-2.69.tar.gz ->␣
↪sources/autoconf-2.69.tar.gz
downloading: sources/autoconf-2.69.tar.gz - 1.8MB of 1.8MB (100%)
building: autoconf-2.69-x86_64-linux-gnu-1
sizes: autoconf-2.69-x86_64-linux-gnu-1: 7.495MB (installed: 0.000B)
cleaning: autoconf-2.69-x86_64-linux-gnu-1
config: tools/rtems-automake-1.12.6-1.cfg
package: automake-1.12.6-x86_64-linux-gnu-1
```

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```
download: https://ftp.gnu.org/gnu/automake/automake-1.12.6.tar.gz ->␣
↪sources/automake-1.12.6.tar.gz
downloading: sources/automake-1.12.6.tar.gz - 2.0MB of 2.0MB (100%)
Creating source directory: patches
download: https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/assets/
↪tracmigration/ticket_atta...<see log> -> patches/automake-1.12.6-
↪bugzilla.redhat.com-1239379.diff
redirect: https://gitlab.rtems.org/explore/
downloading: patches/automake-1.12.6-bugzilla.redhat.com-1239379.diff -␣
↪104.5kB of 104.5kB (100%)
warning: checksum error: automake-1.12.6-bugzilla.redhat.com-1239379.
↪diff
error: checksum failure file: patches/automake-1.12.6-bugzilla.redhat.
↪com-1239379.diff
Build FAILED
See error report: rsb-report-automake-1.12.6-x86_64-linux-gnu-1.txt
error: checksum failure file: patches/automake-1.12.6-bugzilla.redhat.
↪com-1239379.diff
Build Set: Time 0:00:09.394941
error: checksum failure file: patches/automake-1.12.6-bugzilla.redhat.
↪com-1239379.diff
Build Set: Time 0:00:09.395717
error: checksum failure file: patches/automake-1.12.6-bugzilla.redhat.
↪com-1239379.diff
Build Set: Time 0:00:09.397423
Build FAILED
```

The file automake-1.12.6-bugzilla.redhat.com-1239379.diff is not downloading correctly, opening it on a text editor reveals it's an HTML

rsb-log-20240701-082236.txt

rsb-report-automake-1.12.6-x86_64-linux-gnu-1.txt

Author: Amar Takhar 2024-07-01T07:00:16.384Z

Hello @brais.solla this was my mistake I was doing some system maintenance earlier and a permission got set wrong I was overzealous in my safety. It should work fine now!

Author: Brais Solla 2024-07-01T08:01:51.156Z

Nice! That solved it!

Thanks for everything @amar

3.14.1.4 17 - newLib fails to build with shellcmd cmd failed error

Id	17
State	closed
Type	ISSUE
Author	Gheorghiu Cristiana Andreea
Closed by	Gheorghiu Cristiana Andreea
Created	2024-06-27T14:10:27.563Z
Closed	2024-07-04T07:31:43.039Z
Updated	2025-09-19T01:03:39.607Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/17
Merges	0

Summary

I am trying to build newLib with rtems source builder in cygwin64 and Linux, but in both situations the build fails. I use the `rtems-gcc-13.3-newlib-head.cfg` file and I get the error:

```
Makefile:1040: recipe for target 'all' failed
make: \\*\\*\\* \\[all\\] Error 2 make: Leaving directory '/home/jenkins/agent/workspace/\\_RiscV_Tools_Update-to-gcc-to-13/riscvtools/rtems/build/riscv-rtems6-gcc-13.3.0-newlib-1ed1516-x86_64-linux-gnu-1/build'
shell cmd failed: /bin/sh -ex /home/jenkins/agent/workspace/\\_RiscV_Tools_Update-to-gcc-to-13/riscvtools/rtems/build/riscv-rtems6-gcc-13.3.0-newlib-1ed1516-x86_64-linux-gnu-1/do-build
error: building riscv-rtems6-gcc-13.3.0-newlib-1ed1516-x86_64-linux-gnu-1
See error report: rsb-report-riscv-rtems6-gcc-13.3.0-newlib-1ed1516-x86_64-linux-gnu-1.txt
Note: In some cases the error appears only in the complete build log (see --log option)
```

I've noticed in the Makefile created there is an extra '+' character. The previous Makefile was created after rtems-gcc-9.3.0-newlib-7947581.cfg and doesn't have that '+' character. !`image <https://gitlab.rtems.org/-/project/uploads/35afeadfb4b1fc95ba1260b76996980b/image.png>`_

Steps to reproduce

Author: Chris Johns 2024-06-27T22:09:38.616Z

changed the description

Author: Chris Johns 2024-06-27T22:10:34.139Z

changed the description

Author: Chris Johns 2024-06-27T22:11:09.402Z

changed the description

Author: Joel Sherrill 2024-06-28T13:57:26.651Z

I've started builds to attempt to duplicate this failure but have a few questions:

- First, why is this marked confidential?
- What Linux distribution?
- What directory is this Makefile with the "+ sign in?

Author: Joel Sherrill 2024-06-28T16:43:40.014Z

I grep'ed to find that the top level Makefile has the "+". It is legal per the GNU make manual. I found this:

"As a special feature, using the variable MAKE in the recipe of a rule alters the effects of the '-t' ('–touch'), '-n' ('–just-print'), or '-q' ('–question') option. Using the MAKE variable has the same effect as using a '+' character at the beginning of the recipe line. See Instead of Executing the Recipes. This special feature is only enabled if the MAKE variable appears directly in the recipe: it does not apply if the MAKE variable is referenced through expansion of another variable. In the latter case you must use the '+' token to get these special effects."

What make are you using?

I still have the various builds going and will follow up.

Author: Joel Sherrill 2024-06-28T21:27:27.945Z

The build of riscv-rtems6 tools successfully completed on Cygwin and CentOS 7 for me. On CentOS 7, I have the Software Collections to get a Python 3 and GCC 11. The build time on Cygwin isn't going to win awards (7:17:00.959216) but was only 38m0.527s on the Linux machine. Cygwin builds have a history of being unstable using more than -j1.

At this point, this is "works for me." Any other variables?

Author: Gheorghiu Cristiana Andreea 2024-07-01T07:38:32.008Z

Hi! Could you change confidentiality level to public?

Author: Gheorghiu Cristiana Andreea 2024-07-01T07:49:57.113Z

The Makefile file is from "rtemsbuildriscv-rtems6-gcc-13.3.0-newlib-1ed1516-x86_64-pc-cygwin-1buildMakefile"

Author: Gheorghiu Cristiana Andreea 2024-07-01T11:03:01.651Z

Actually I am not building riscv-rtems6 tools, I am building tools/rtems-gcc-13.3-newlib-head and I get the same error on Cygwin and Linux

Author: Gheorghiu Cristiana Andreea 2024-07-01T11:06:19.508Z

The make version I am using on cygwin is 4.4.1.

Author: Amar Takhar 2024-07-01T23:36:55.531Z

made the issue visible to everyone

Author: Amar Takhar 2024-07-02T07:22:00.987Z

Hello, Confidentiality has been disabled for this issue thanks.

Author: Amar Takhar 2024-07-02T01:51:01.176Z

Which version/distrubtion of Linux and Cygwin? Thank you.

Author: Chris Johns 2024-07-02T01:51:01.147Z

Cygwin is a rolling release so there is none you can reference.

Author: Amar Takhar 2024-07-02T01:54:41.512Z

Yes this is true for packages I should have specified the kernel as some are running ancient kernels which can restrict you to older packages. There is a FAQ entry about this:

- https://www.cygwin.com/faq.html#faq.what.version

Author: Gheorghiu Cristiana Andreea 2024-07-02T18:32:09.964Z

Hello everybody!

The same issue appear:

- on Cygwin64 terminal (3.5.3-1.x86_64 version) which is installed on a windows 11 enterprise machine
- on a dockerImage with openSuse 12 which is running on jenkins

I think, this potential issue, is not operating system dependent. On Cygwin, I run this command from `rtems` folder:

```
../source-builder/sb-set-builder                          --log=l-riscv32.txt
--prefix=StagingArea/linux64/riscv-rtems6-13.3.0 6/rtems-gcc-newlib
```

The file``[rtems-gcc-newlib.bset](/uploads/fdaaf2066cecb2cf6df8591ada18b18e/rtems-gcc-newlib.bset) attached is placed in the ``rtemsconfig6` folder

Can you try it on your machine to see if you manage to reproduce it? Thanks.

Author: Joel Sherrill 2024-07-02T18:32:09.931Z

I think the –prefix has to be a fully qualified path. This is the behavior of the gcc, binutils, etc. configure/build setup. Try something like ${HOME}/... or /opt/...

You can also build a tarball and/or not install with the RSB.

Author: Gheorghiu Cristiana Andreea 2024-07-02T18:19:39.481Z

I've found out the gmp is needed, but the download it is not working

download: https://gmplib.org/download/gmp/gmp-6.3.0.tar.bz2 -> sources/gmp-6.3.0.tar.bz2 download: https://gmplib.org/download/gmp/gmp-6.3.0.tar.bz2: error: <urlopen error [Errno 116] Connection timed out> error: downloading https://gmplib.org/download/gmp/gmp-6.3.0.tar.bz2: all paths have failed, giving up

Author: Amar Takhar 2024-07-02T18:19:39.440Z

The site appears to be down you can fetch it from our FTP or the gnu mirror:

- https://ftp.rtems.org/pub/rtems/cache/rsb/main/
- https://ftp.gnu.org/pub/gnu/gmp/

Place it in the sources directory once done

Author: Gheorghiu Cristiana Andreea 2024-07-04T07:41:13.613Z

Hi! Finally I've managed to build the rtems-gcc-13.3-newlib-head with success. There were gmp and mpfr packages missing, after adding them every thing was good. Thanks for your help!

I am going to close this issue too.

Author: Amar Takhar 2024-07-05T08:14:29.997Z

No problem it's great you were able to get it sorted thanks for the report.

Author: Joel Sherrill 2024-07-08T06:55:38.440Z

Thanks for closing this when it worked for you. I just wanted to follow up and ask if the only issue was the relative path on the configure line and gmplib.org being down.

FYI: gmplib.org has a news item on what happened. It's an interesting example of unintended consequences.

3.14.1.5 10 - Provide an RTEMS STD C++ script in Python

Id	10
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-06-11T06:07:08.930Z
Closed	2024-06-11T06:17:49.645Z
Updated	2025-09-19T01:03:39.497Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/10
Merges	0

Summary

This issue is for the development of a python script called `stdcxx.py` that lives under the installed prefix of the RTEMS built tools. The script is to load the GCC libstdc++ pretty printers.

3.14.1.5.1.1 Script Requirements

1. The script is called by the `.debug_gdb_scripts` python text when the executable loads
2. Determine the path to the GCC libstdc++ pretty printer scripts. These will installed and available however they are under the version of GCC built for the `$prefix`
3. There is only ever be one version of GCC installed under a `$prefix`
4. Inspect the GCC pretty printer scripts and determine what they require

Author: Chris Johns 2024-06-11T06:07:09.335Z

Author: Chris Johns 2024-06-11T06:07:26.158Z

assigned to @chris

Author: Chris Johns 2024-06-11T06:12:57.056Z

changed the description

Author: Suraj Kumar 2024-06-11T06:17:16.533Z

@chris Question: the GCC path and and GDB path would both live under the `share` directory in the installed `$prefix`, so the GCC path would be relatively the same always from the path provided by `gdb.PYTHONDIR`. Could that be a possible solution to finding the location of the installed pretty-printer scripts?

Author: Chris Johns 2024-06-11T06:17:49.762Z

moved to rtems-tools#5

3.14.1.6 29 - cannot create /opt/rtems/6/share/gdb/python/rtems/stdcxx.py: Directory nonexistent

Id	29
State	closed
Type	ISSUE
Author	Frank Kuehndel
Closed by	Amar Takhar
Created	2024-08-19T08:55:10.083Z
Closed	2024-08-23T21:48:45.432Z
Updated	2025-09-19T01:02:12.159Z
Milestone	6.1
Labels	python::gdb
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/29
Merges	1

Summary

We have a CI job which regular checks the Rust documentation in the RTEMS user manual. It failed this morning at 2024-08-19T02:38:22+02:00 with the following Error:

```
+ git clone https://gitlab.rtems.org/rtems/tools/rtems-source-builder.git rsb
Cloning into 'rsb'...
+ true .. code-block:: shell --- '[rtems-docs/user/rust/bare-metal.rst:141]'
+ cd rsb/rtems
+ ../source-builder/sb-set-builder --prefix /opt/rtems/6 6/rtems-sparc 6/rtems-
↪riscv
RTEMS Source Builder - Set Builder, 6 (632ccda714fd)
Build Set: 6/rtems-sparc
Build Set: tools/rtems-default-tools.bset
config: devel/dtc-1.6.1-1.cfg

[...]

```

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```
error: shell macro failed: cat "/home/ferris/rsb/rtems/config/stdcxx-template.py"␣
↪| sed "s/@RSB_GCC_VERSION@//bin/sh: 1: /opt/rtems/6/bin/sparc-rtems6-gcc: not␣
↪found/g" > "/opt/rtems/6/share/gdb/python/rtems/stdcxx.py": 2: /bin/sh: 1:␣
↪cannot create /opt/rtems/6/share/gdb/python/rtems/stdcxx.py: Directory␣
↪nonexistent
Build Set: Time 0:03:13.027483
Build FAILED
```

The last successful run of this CI job was on 2024-08-15T02:33:07+02:00. I assume the error is triggered by the merge yesterday of https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/35

Steps to reproduce

The CI job I mentioned in https://gitlab.rtems.org/rtems/docs/rtems-docs/-/merge_requests/9#note_110876 found this issue. It carries out the exact instructions you can find in section Bare Metal Rust with RTEMS. It actually extracts the instructions from the source code of the page in the `rtems-docs` repository.

Author: Amar Takhar 2024-08-19T18:34:16.297Z

@the.m3chanic this is something you will need to look at, thank you!

Author: Suraj Kumar 2024-08-19T18:34:16.265Z

I am on it

Author: Amar Takhar 2024-08-19T18:41:38.825Z

Great thanks!

Author: Suraj Kumar 2024-08-19T20:38:50.079Z

I think the issue is that on fresh builds, it does not seem to be able to run `sparc-rtems6-gcc`, hence the odd string that `sed` is trying to replace with. That seems to be the one causing the issue here. Also, the script install location does not exist yet, since the RSB only writes at the end of the build - I have fixed this issue.

@chris For cases like this (where `sparc-rtems6-gcc` is not yet built), can a fall back option be to use the `gcc_version` macro defined in the corresponding `newlib` file for that build? Please let me know, thanks

@amar After I had moved files around, I had only re-built current toolchains I already had built, I had forgotten to re-test for this case. That is my bad and this will be fixed ASAP

Author: Suraj Kumar 2024-08-19T21:19:13.617Z

I have created a merge request to patch this: https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/48

Author: Joel Sherrill 2024-08-19T21:19:21.701Z

Now that I have written it, it feels a bit rambling. There may not be a real solution in here. It is just background which might help figure out a workable solution.

@the.m3chanic GDB is built relatively early in the set of tools because it often fails to build because the python development package isn't installed (e.g. Python.h). At some point, Chris/I moved gdb up from last to near first so if this failure occurred, it wouldn't waste as much of the user's time.

It is possible to move gdb back toward the end of the list. This may fix this problem if the cross gcc is visible while building. This may work but it doesn't address the small elephant left in the room which is why we moved the order of gdb back then...

We wanted gdb to be early because the sb-check tool only checks for installed program executables. It does not check for needed libraries/headers. You can run sb-check and get an "ok" but fail because you are missing python-devel. Enhancing sb-check to check for libraries/headers would help users avoid starting a build they don't have all the dependencies to finish.

Author: Suraj Kumar 2024-08-19T21:12:28.950Z

mentioned in merge request !48

Author: Chris Johns 2024-08-21T06:31:41.495Z

mentioned in commit fc5ad5930421d28d0c3c3861def4fec6a62f5300

Author: Chris Johns 2024-08-21T06:33:15.646Z

mentioned in merge request !49

Author: Amar Takhar 2024-08-22T01:13:38.831Z

mentioned in issue #30

Author: Amar Takhar 2024-08-22T01:15:32.127Z

marked #30 as a duplicate of this issue

Author: Amar Takhar 2024-08-22T01:15:32.379Z

marked this issue as related to #30

Author: Frank Kuehndel 2024-08-23T13:37:20.636Z

2024-08-23: Retested with RSB commit fc5ad5930421d28d0c3c3861def4fec6a62f5300 “sb: Fix config file directive processing in includes”. Bug persists.

Author: Suraj Kumar 2024-08-23T13:37:20.636Z

@frank_k Could you please tell me what error you are getting? And the command that you ran

Author: Frank Kuehndel 2024-08-23T13:37:20.636Z

@the.m3chanic The exact same command and error noted in the summary of this bug. The CI creates a new docker container and then runs in the container:

```
git clone https://gitlab.rtems.org/rtems/tools/rtems-source-builder.git␣
↪rsb
cd rsb/rtems
../source-builder/sb-set-builder --prefix /opt/rtems/6 6/rtems-sparc 6/
↪rtems-riscv
```

The error is:

```
error: shell macro failed: cat "/home/ferris/rsb/rtems/config/stdcxx-
↪template.py" | sed "s/@RSB_GCC_VERSION@//bin/sh: 1: /opt/rtems/6/bin/
↪sparc-rtems6-gcc: not found/g" > "/opt/rtems/6/share/gdb/python/rtems/
↪stdcxx.py": 2: /bin/sh: 1: cannot create /opt/rtems/6/share/gdb/
↪python/rtems/stdcxx.py: Directory nonexistent
```

Note: The CI run does not apply the patch from @chris https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/48#note_111355 . With that patch the RSB builds successfully.

Author: Suraj Kumar 2024-08-23T13:37:20.636Z

If I’m not wrong I applied those patches to this MR !48 . Could you please check out the changes on this branch and try again? Please let me know if I am mistaken but when I tested with these exact conditions it worked for me

Author: Frank Kuehndel 2024-08-23T13:37:20.636Z

@the.m3chanic Please, give me some time to do it. The continuous integration job cannot do this. (It may be an idea for another day to try to improve the CI job in this regard.) Note that !48 is not yet merged.

Author: Frank Kuehndel 2024-08-23T13:37:20.636Z

@the.m3chanic Yes, that RSB builds without producing #29 . To be sure, I tested this RSB:

```
$ git -C rsb status
On branch rtems-source-builder-the-m3chanic
nothing to commit, working tree clean

$ git -C rsb log -1
commit 80ea5fa58e58ab94692bf8ca458a5b8cf1edcfcb (HEAD -> rtems-source-
↪builder-the-m3chanic)
Author: the-m3chanic <hisurajkumar2004@gmail.com>
Date:   Wed Aug 21 18:39:20 2024 +0530

Added install directive
```

3.14.1.7 6 - CI to update file cache on ftp.rtems.org

Id	6
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Amar Takhar
Closed by	Amar Takhar
Created	2024-05-24T06:35:32.626Z
Closed	2024-05-26T19:27:41.058Z
Updated	2025-09-16T17:49:08.261Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/6
Merges	0

Summary

This issue is to add a CI that runs after a merge is pushed to the repo. It runs the RSB's source download. There is a file cache per active branch in the RSB.

The URL is https://ftp.rtems.org/pub/rtems/cache/rsb and branches are subdirectories under this. For example the `main` branch is https://ftp.rtems.org/pub/rtems/cache/rsb/main

Reason for the Cache

The cache is provided for user sites that are locked down. The RSB will not work because it fetches source from a number of hosts and IT support staff tend to not want to add the list of places the RSB references. The cache provides a single machine which is can be made accessible allowing the RSB to build tools.

Command

The command to run is:

```
cd rtems-source-builder/rtems
../source-builder/sb-get-sources
```

The command will check all buildsets and configuration files for all support hosts.

The files can be found in `sources` and `patches` and the contents of both can be copied to the cache directory.

Author: Chris Johns 2024-05-24T06:35:32.739Z

assigned to @amar

Author: Amar Takhar 2024-05-26T19:27:41.184Z

moved to administration/integration#6

Author: Amar Takhar 2024-05-26T19:29:13.796Z

Moved because the correct place for these issues is in the integration group otherwise they will get lost.

Author: Kinsey Moore 2024-12-06T03:46:27.545Z

mentioned in merge request !87

Author: Kinsey Moore 2024-12-16T23:01:53.996Z

mentioned in merge request !92

Author: Kinsey Moore 2025-01-03T20:59:50.428Z

mentioned in merge request !105

Author: Amar Takhar 2025-02-14T10:37:50.816Z

mentioned in merge request !128

Author: Joel Sherrill 2025-09-16T17:49:07.551Z

mentioned in merge request !175

Author: Joel Sherrill 2026-07-01T15:50:44.726Z

mentioned in merge request !282

Author: Joel Sherrill 2026-09-02T12:54:35.113Z

mentioned in merge request !302

Author: Joel Sherrill 2026-09-02T13:41:34.081Z

mentioned in merge request !303

Author: Sam Price 2026-10-26T01:48:10.388Z

mentioned in merge request !309

3.14.1.8 76 - Release builds of rtems-net-legacy references rtems_waf

Id	76
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2025-01-07T03:35:05.032Z
Closed	2025-01-07T03:43:50.070Z
Updated	2025-09-16T17:48:58.155Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/76
Merges	1

Summary

A release build of `rtems-net-legacy` uses a released tar file that contains the `rtems_waf` submodule. The configure logic should not reference `rtems_waf` source if the RSB is released.

Author: Chris Johns 2025-01-07T03:35:05.249Z

cloned from #75

Author: Chris Johns 2025-01-07T03:35:05.136Z

assigned to @chris

Author: Chris Johns	2025-01-07T03:35:26.736Z

Author: Chris Johns	2025-01-07T03:42:59.493Z

mentioned in merge request !116

Author: Chris Johns	2025-09-16T17:48:57.607Z

mentioned in commit b1aec32059aa0e86385ff75ec01daf93713fa382

3.14.1.9 68 - Version's _top() call does not find the top

Id	68
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2024-12-25T01:34:34.818Z
Closed	2025-01-07T03:12:29.570Z
Updated	2025-09-16T17:48:57.613Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/68
Merges	1

Summary

The `version.py` function does not find the top of the RSB when calling an RSB command because the commands are in `source-builder`. This means a released RSB does not find the released `VERSION` file. It has worked with the release because invoking `../source-builder/sb-set-builder` from the `rtems` directory caused `_top()` to return `..` which happened to work. Calling the RSB externally like `rtems-deployment` does breaks this.

Steps to reproduce

1. Run a released `rtems-deployment` and then grep the log with `grep '^download:' out/out/amd/amd-kria-k26.txt` and check the download paths.

Running deployment on a release do

```
wget https://ftp.rtems.org/pub/rtems/releases/6/rc/6.1-rc8/sources/rtems-source-builder-6.1-rc8.tar.xz
wget https://ftp.rtems.org/pub/rtems/releases/6/rc/6.1-rc8/sources/rtems-deployment-6.1-rc8.tar.xz
tar jxf rtems-source-builder-6.1-rc8.tar.xz
```

(continues on next page)

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```
tar jxf rtems-deployment-6.1-rc8.tar.xz
cd rtems-deployment-6.1-rc8
./waf configure --rsb ../rtems-source-builder-6.1-rc8
./waf --targets=amd/amd-kria-k26,amd/avnet-microzed
```

Author: Chris Johns 2024-12-25T01:34:34.947Z

cloned from #67

Author: Chris Johns 2024-12-25T01:34:34.879Z

assigned to @chris

Author: Chris Johns 2024-12-25T01:34:44.090Z

Author: Chris Johns 2025-01-07T02:50:39.307Z

mentioned in merge request !113

Author: Chris Johns 2025-09-16T17:48:56.864Z

mentioned in commit 1bd2a19e8c3a307204d62e5b7dd3d22820d8ba32

3.14.1.10 70 - The –with-rtems-tests flag does not cause tests to be installed appropriately

Id	70
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Chris Johns
Created	2025-01-03T20:58:38.652Z
Closed	2025-01-16T23:32:16.164Z
Updated	2025-09-16T17:48:57.075Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/70
Merges	1

Summary

Steps to reproduce

3.14.1.10.2.1 Pre-set options

Author: Kinsey Moore	2025-01-03T20:58:38.844Z

assigned to @opticron

Author: Kinsey Moore	2025-01-03T20:58:39.372Z

Author: Kinsey Moore	2025-01-03T20:59:49.982Z

mentioned in merge request !105

Author: Joel Sherrill	2025-09-16T17:48:56.794Z

mentioned in commit fc16044911f20c4ed1c2c01dcabf40cc7bf254b6

3.14.1.11 69 - GCC does not build on FreeBSD on arm64 systems

Id	69
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2024-12-29T16:54:48.190Z
Closed	2025-01-14T03:06:37.244Z
Updated	2025-09-16T17:48:56.375Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/69
Merges	1

Summary

Building GCC on arm64/aarch64 FreeBSD systems fails due to a configuration error in ISL where the platform is not recognized.

Steps to reproduce

3.14.1.11.2.1 Pre-set options

Author: Kinsey Moore	2024-12-29T16:54:48.360Z

assigned to @opticron

Author: Kinsey Moore 2024-12-29T16:54:48.837Z

Author: Kinsey Moore 2024-12-29T17:14:45.463Z

mentioned in merge request !102

Author: Kinsey Moore 2025-01-14T03:06:36.938Z

The associated MR has been merged.

Author: Joel Sherrill 2025-09-16T17:48:56.087Z

mentioned in commit e4f17f38d0cb57aeaf9eb620f3d14f4d196256ca

3.14.1.12 72 - NTP is now in net-services, remove as a 3rd pary package

Id	72
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-01-06T01:00:14.289Z
Closed	2025-01-06T02:29:53.122Z
Updated	2025-09-16T17:48:55.974Z
Milestone	6.1
Labels	pkg::network-services, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/72
Merges	1

Summary

NTP is now part of net-services with the needed supported code. Remove the support for a 3rd party package

Author: Chris Johns 2025-01-06T01:00:14.554Z

cloned from #71

Author: Chris Johns 2025-01-06T01:00:14.431Z

assigned to @chris

Author: Chris Johns	2025-01-06T01:00:42.191Z

Author: Chris Johns	2025-01-06T01:28:48.668Z

mentioned in merge request !109

Author: Chris Johns	2025-09-16T17:48:54.952Z

mentioned in commit 356068bd3d25bff52cdda315016aac897ece658d

3.14.1.13 66 - Non-simhost builds fail with force_package_build error

Id	66
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2024-12-20T15:51:40.937Z
Closed	2024-12-21T22:25:02.994Z
Updated	2025-09-16T17:48:54.226Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/66
Merges	1

Summary

This is due to the changes made for RC6.

Steps to reproduce

Try to build tools on 6 or main outside of simhost.

3.14.1.13.2.1 Pre-set options

Author: Kinsey Moore	2024-12-20T15:51:41.130Z

assigned to @opticron

Author: Kinsey Moore	2024-12-20T15:51:41.611Z

Author: Kinsey Moore	2024-12-20T15:52:36.887Z

mentioned in merge request !99

Author: Chris Johns 2024-12-21T22:25:04.995Z

Is this milestone correct? I thought this was fixed on the 6 branch?

Author: Kinsey Moore 2024-12-21T22:25:04.995Z

Milestone fixed, I set it in the MR creation page and it undid it for me.

Author: Joel Sherrill 2025-09-16T17:48:53.940Z

mentioned in commit 1842d15b60141cccdbbc08c6d80d261ab48a87e8

3.14.1.14 74 - simhost is broken with build errors

Id	74
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-01-06T01:02:15.307Z
Closed	2025-01-06T02:30:42.751Z
Updated	2025-09-16T17:48:54.215Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/74
Merges	1

```
Traceback (most recent call last):
File "/opt/work/chris/rtems/releasing/rtems-release.git/6.1-rc8/ws-rtems-source-builder/rtems-source-builder-6.1-rc8/rtems/../source-builder/sb-get-sources", line 25, in <module>
sb.getsources.run()
File "/opt/work/chris/rtems/releasing/rtems-release.git/6.1-rc8/ws-rtems-source-builder/rtems-source-builder-6.1-rc8/source-builder/sb/getsources.py", line 141, in run
b.build(host)
File "/opt/work/chris/rtems/releasing/rtems-release.git/6.1-rc8/ws-rtems-source-builder/rtems-source-builder-6.1-rc8/source-builder/sb/simhost.py", line 700, in build
self._errors += b._errors
^^^^^^^^^
AttributeError: 'build' object has no attribute '_errors'
```

Author: Chris Johns	2025-01-06T01:02:15.670Z

cloned from #73

Author: Chris Johns	2025-01-06T01:02:15.475Z

assigned to @chris

Author: Chris Johns	2025-01-06T01:02:30.840Z

Author: Chris Johns	2025-01-06T01:15:41.675Z

mentioned in merge request !107

Author: Chris Johns	2025-09-16T17:48:53.905Z

mentioned in commit 8fc14dd8ae83db80dca8ca321f961d85b4d3824f

3.14.1.15 57 - Add rtems-lwip build set

Id	57
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Kinsey Moore
Closed by	Chris Johns
Created	2024-12-05T23:13:12.755Z
Closed	2024-12-19T23:22:49.105Z
Updated	2025-09-16T17:48:53.486Z
Milestone	6.1
Labels	network::lwip, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/57
Merges	1

Add an `rtems-lwip` build set to the `rtems/config/net` directory to build the RTEMS LWIP package.

Author: Chris Johns	2024-12-05T23:13:12.873Z

cloned from #56

Author: Chris Johns	2024-12-05T23:13:12.805Z

assigned to @opticron

Author: Chris Johns 2024-12-05T23:15:30.269Z

marked this issue as blocking rtems/rtos/rtems-release#6

Author: Chris Johns 2024-12-05T23:18:04.401Z

Author: Kinsey Moore 2024-12-05T23:20:29.411Z

marked this issue as blocking #55

Author: Kinsey Moore 2024-12-16T23:01:53.797Z

mentioned in merge request !92

Author: Chris Johns 2024-12-18T22:00:57.818Z

mentioned in merge request !97

Author: Chris Johns 2024-12-19T21:42:58.808Z

The updates to the RSB is not the issue with `rtems-lwip` in the release. It must be in the release scripts.

Author: Chris Johns 2025-09-16T17:48:53.090Z

mentioned in commit a77cacae3a86d96df2a1bcf13d9ac4582fb7ed92

Author: Joel Sherrill 2025-09-16T17:48:53.291Z

mentioned in commit d5849b56e48b6f68caeca11ec7458dfa297e5edf

3.14.1.16 52 - 6: Add –release-branch option to use on release branches

Id	52
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2024-11-26T03:43:51.598Z
Closed	2024-12-19T23:23:15.879Z
Updated	2025-09-16T17:48:53.033Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/52
Merges	1

Author: Chris Johns 2024-11-26T03:43:52.046Z

Author: Chris Johns 2024-11-26T03:44:31.371Z

assigned to @chris

Author: Chris Johns 2024-11-26T03:48:56.733Z

mentioned in merge request !83

Author: Chris Johns 2024-11-27T02:38:17.040Z

mentioned in merge request !84

Author: Gedare Bloom 2024-12-04T21:39:42.287Z

Author: Kinsey Moore 2024-12-19T23:23:15.556Z

The associated MR for this has been merged.

Author: Chris Johns 2025-09-16T17:48:52.752Z

mentioned in commit 7d8bc0afdc01f3b784e4b4302e1bb90b6ae494f3

3.14.1.17 61 - RSB: All toolset builds fail on 6.1rc5 looking for texinfo

Id	61
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2024-12-16T22:57:38.039Z
Closed	2024-12-17T16:24:20.054Z
Updated	2025-09-16T17:48:52.717Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/61
Merges	1

Summary

Attempting to build tools for rc4, set builder for all architectures failed with this output:

```
error: no config file found: .../rtems-source-builder/rtems/config/texinfo-1.cfg,.
↪../rtems-source-builder/source-builder/config/texinfo-1.cfg,.../rtems-source-
↪builder/bare/config/texinfo-1.cfg,.../rtems-source-builder/rtems/config/texinfo-
↪1.cfg
```

Steps to reproduce

Try to build tools on 6rc5.

3.14.1.17.2.1 Pre-set options

Author: Kinsey Moore 2024-12-16T22:57:43.519Z

Author: Kinsey Moore 2024-12-16T22:59:44.982Z

mentioned in merge request !91

Author: Chris Johns 2024-12-16T23:12:10.409Z

Author: Chris Johns 2024-12-16T23:12:54.051Z

assigned to @chris

Author: Chris Johns 2024-12-16T23:14:02.456Z

mentioned in merge request !93

Author: Kinsey Moore 2024-12-17T16:24:19.727Z

Closing since !93 has been merged.

Author: Chris Johns 2025-09-16T17:48:52.145Z

mentioned in commit 334e5e866c69cf7fcbdb560d71a01561e1471d5e

3.14.1.18 60 - RSB: All toolset builds fail on 6.1rc4 looking for texinfo

Id	60
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2024-12-15T23:25:49.007Z
Closed	2024-12-17T16:26:58.729Z
Updated	2025-09-16T17:48:52.673Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/60
Merges	1

Summary

Attempting to build tools for rc4, set builder for all architectures failed with this output:

```
Build Set: print/texinfo-internal.bset
config: print/texinfo.cfg
error: no config file found: /home/joel/rtems-cron-6.1-rc4/rtems-source-builder-6.
↪1-rc4/rtems/config/print/texinfo-7.0.3.cfg,/home/joel/rtems-cron-6.1-rc4/rtems-
↪source-builder-6.1-rc4/source-builder/config/print/texinfo-7.0.3.cfg,/home/joel/
↪rtems-cron-6.1-rc4/rtems-source-builder-6.1-rc4/bare/config/print/texinfo-7.0.3.
↪cfg,/home/joel/rtems-cron-6.1-rc4/rtems-source-builder-6.1-rc4/rtems/config/
↪print/texinfo-7.0.3.cfg
```

Steps to reproduce

```
../source-builder/sb-set-builder --prefix=/home/joel/rtems-cron-6.1-rc4//tools 6/
rtems-aarch64
```

3.14.1.18.2.1 Pre-set options

Author: Chris Johns 2024-12-15T23:25:49.160Z

cloned from #58

Author: Chris Johns 2024-12-15T23:25:49.076Z

assigned to @chris

Author: Chris Johns 2024-12-15T23:26:13.413Z

Author: Chris Johns 2024-12-15T23:27:45.012Z

The file was removed from the release after the branch because the track tool was run on FreeBSD that had a `texinfo` package installed. The issue #58 tracks the change needed to fix the tool on `main`.

Author: Chris Johns 2024-12-15T23:44:48.754Z

mentioned in merge request !89

Author: Kinsey Moore 2024-12-17T16:26:58.388Z

Closing since !89 has been merged.

Author: Chris Johns 2024-12-18T07:23:20.940Z

mentioned in issue #53

Author: Chris Johns 2025-09-16T17:48:52.324Z

mentioned in commit 7dd6535a46a08e80fb1bf7713899ed66df029bde

3.14.1.19 55 - Remove upstream lwIP from build configurations in favor of using rtems-lwip

Id	55
State	closed
Type	ISSUE
Author	Kinsey Moore
Assignee(s)	Kinsey Moore
Closed by	Gedare Bloom
Created	2024-12-05T23:03:45.565Z
Closed	2024-12-07T02:57:18.780Z
Updated	2025-09-16T17:48:52.601Z
Milestone	6.1
Labels	network::lwip
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/55
Merges	1

Summary

Having an upstream lwIP build package is confusing since we want to push users to rtems-lwip. The upstream lwIP build package should be removed.

Steps to reproduce

3.14.1.19.2.1 Pre-set options

Author: Kinsey Moore 2024-12-05T23:03:45.773Z

cloned from #54

Author: Kinsey Moore 2024-12-05T23:03:45.665Z

assigned to @opticron

Author: Kinsey Moore 2024-12-05T23:04:16.181Z

Author: Kinsey Moore 2024-12-05T23:10:08.141Z

Author: Kinsey Moore 2024-12-05T23:20:29.453Z

marked this issue as blocked by #57

Author: Kinsey Moore 2024-12-06T03:46:27.506Z

mentioned in merge request !87

Author: Joel Sherrill 2025-09-16T17:48:52.119Z

mentioned in commit 733a9b18b9e5ae9500f3adf903c0a94656d430e7

3.14.1.20 53 - RSB: clean unused buildsets and configurations

Id	53
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-11-27T04:05:26.733Z
Closed	2024-12-18T07:23:20.962Z
Updated	2025-09-16T17:48:52.551Z
Milestone	6.1
Labels	release, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/53
Merges	0

Remove buildset and configuration files not used by the RTEMS 6 release.

Author: Chris Johns 2024-11-27T04:05:27.225Z

Author: Chris Johns 2024-11-27T04:05:41.198Z

assigned to @chris

Author: Chris Johns 2024-11-27T04:06:30.717Z

changed the description

Author: Chris Johns 2024-11-27T05:52:54.211Z

The list of configuration files not referenced is rsb-6-cfgs-remove.txt. The list was created from the output of this command:

```
../source-builder/sb-track --not-referenced --output=rsb-6.txt
```

The list in from the un-referenced section of the output.

Author: Chris Johns 2024-11-28T01:02:20.465Z

mentioned in merge request !85

Author: Chris Johns 2024-12-04T00:30:32.924Z

Author: Chris Johns 2024-12-05T23:55:40.233Z

Author: Chris Johns 2024-12-18T07:23:20.566Z

Closes in #60

Author: Chris Johns 2025-09-16T17:48:51.902Z

mentioned in commit 30d2f8c39e615464fe71a1e5e8f86b49310aedb9

Author: Chris Johns 2025-09-16T17:48:52.081Z

mentioned in commit c8f5eea268f28f7ad4085671fc12a296d87858ef

3.14.1.21 1 - Migrate commits from master to main after gitlab transition

Id	1
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Chris Johns
Closed by	Gedare Bloom
Created	2024-04-29T15:53:22.953Z
Closed	2024-05-02T04:57:55.003Z
Updated	2025-04-23T21:45:17.757Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/1
Merges	2

Summary

sync commits from master

Steps to reproduce

Author: Gedare Bloom 2024-04-29T15:53:28.235Z

created branch 1-migrate-commits-from-master-to-main-after-gitlab-transition to address this issue

Author: Gedare Bloom 2024-04-29T15:54:05.830Z

mentioned in merge request !1

Author: Gedare Bloom 2024-05-01T16:12:37.261Z

assigned to @chris

Author: Chris Johns 2024-05-02T00:29:13.078Z

Is this issue done?

Author: Gedare Bloom 2024-05-02T00:46:20.672Z

No

Author: Gedare Bloom 2024-05-02T04:27:57.779Z

mentioned in merge request !7

Author: Alice Mao 2025-04-23T21:45:17.693Z

mentioned in issue #99

3.14.1.22 42 - gaisler.se qemu patch download fails

Id	42
State	closed
Type	ISSUE
Author	CHARLES TAYLOR
Closed by	Joel Sherrill
Created	2024-10-23T21:10:15.793Z
Closed	2024-10-24T22:24:09.301Z
Updated	2025-03-21T16:00:51.013Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/42
Merges	1

Summary

During the build process of the QEMU source builder, a patch fails to apply due to an unresolved link to a non-RTEMS resource. Specifically, the `gaisler.se` URL times out and returns a 404 error. This prevents the completion of the cross-compiler emulator tool suite installation.

```
Config: devel/qemu-5.2.0-1.cfg
package: qemu-5.2.0-rc1-x86_64-linux-gnu-1
download:
https://gaisler.se/qemu/qemu-5.2.0-leon3.patch
-> patches/qemu-5.2.0-leon3.patch
download:
https://gaisler.se/qemu/qemu-5.2.0-leon3.patch:
error: HTTP Error 404: Not Found
error: downloading
https://gaisler.se/qemu/qemu-5.2.0-leon3.patch:
all paths have failed, giving up
Build FAILED
See error report: rsb-report-qemu-5.2.0-rc1-x86_64-linux-gnu-1.txt
Note: In some cases the error appears only in
the complete build log (see --log option)
error: downloading
https://gaisler.se/qemu/qemu-5.2.0-leon3.patch:
all paths have failed, giving up
Build Set: Time 0:02:22.412941
Build FAILED
```

Steps to reproduce

1. Run `sudo ../source-builder/sb-set-builder --prefix=/opt/rtems/6 devel/qemu`
2. Encounter failure on download of the following qemu patch https://gaisler.se/qemu/qemu-5.2.0-leon3.patch

Workaround

1. Navigate to `https://ftp.rtems.org/pub/rtems/releases/5/5.2/sources/`
2. Download the relevant patch (qemu-5.2.0-leon3.patch)
3. Place it inside the patches directory under `patches/qemu-5.2.0-leon3.patch`
4. re-run install

Author: Amar Takhar 2024-10-23T21:28:58.896Z

marked this issue as related to #18

Author: Amar Takhar 2024-10-23T21:29:41.290Z

Thank you for the report

Author: Joel Sherrill 2024-10-24T14:41:55.142Z

We have the perception that content on the Internet is forever but things disappear or move. :disappointed:

You seem to be in a good position to fix and test this. The solution should be to just change the line in the RSB Qemu configuration file with the URL to point to the RTEMS release directory. The hash should not change.

I don't think using the patch from an RTEMS release directory is an issue. Those are intended to be very permanent.

If it works, just create a merge request and submit the fix.

Please and thank you.

Author: CHARLES TAYLOR 2024-10-24T14:41:41.147Z

@joel I updated the suggested file and posted the MR here: https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/72 let me know if I did anything out of style.

Author: CHARLES TAYLOR 2024-10-24T18:06:46.097Z

mentioned in merge request !72

Author: Kinsey Moore 2025-03-21T16:00:51.273Z

Author: Kinsey Moore 2025-03-21T16:01:50.645Z

3.14.1.23 5 - The –url command line option does not dowload all paths

Id	5
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-05-16T22:40:13.794Z
Closed	2024-05-23T22:08:28.464Z
Updated	2025-02-14T10:38:43.065Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/5
Merges	1

Summary

When using `--url` some paths are not redirected:

```
download: https://sourceware.org/bugzilla/attachment.cgi?id=14783&format=raw ->␣
↪patches/gdb-14067-python-config.diff
```

Steps to reproduce

Use:

```
../source-builder/sb-set-builder --log=ppc-6-ppc.txt --prefix=/opt/rtems/6 --
↪url=https://ftp.rtems.org/pub/rtems/cache/rsb/main 6/rtems-powerpc
```

Author: Chris Johns 2024-05-16T22:40:13.883Z

assigned to @chris

Author: Chris Johns 2024-05-17T05:59:35.715Z

changed title from **The –url command line option does not {-move-} all paths** to **The –url command line option does not {+dowload+} all paths**

Author: Chris Johns 2024-05-17T06:00:56.961Z

I will clean up releases with the change. Releases where being treated as special when the `--url` option should be the same.

The requirement for `--url` is the path is to a cache of all the files.

Author: Chris Johns 2024-05-17T06:03:35.561Z

mentioned in merge request !11

Author: Amar Takhar 2025-02-14T10:38:43.031Z

mentioned in merge request !129

Author: Joel Sherrill 2026-05-14T14:46:27.337Z

mentioned in merge request !249

3.14.1.24 62 - RSB: All toolset builds fail on 6.1rc4 looking for texinfo

Id	62
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2024-12-17T04:56:05.728Z
Closed	2024-12-17T16:26:37.956Z
Updated	2024-12-17T16:26:37.972Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/62
Merges	0

Summary

Attempting to build tools for rc4, set builder for all architectures failed with this output:

```
Build Set: print/texinfo-internal.bset
config: print/texinfo.cfg
error: no config file found: /home/joel/rtems-cron-6.1-rc4/rtems-source-builder-6.1-rc4/rtems/config/print/texinfo-7.0.3.cfg,/home/joel/rtems-cron-6.1-rc4/rtems-source-builder-6.1-rc4/source-builder/config/print/texinfo-7.0.3.cfg,/home/joel/rtems-cron-6.1-rc4/rtems-source-builder-6.1-rc4/bare/config/print/texinfo-7.0.3.cfg,/home/joel/rtems-cron-6.1-rc4/rtems-source-builder-6.1-rc4/rtems/config/print/texinfo-7.0.3.cfg
```

Steps to reproduce

```
../source-builder/sb-set-builder --prefix=/home/joel/rtems-cron-6.1-rc4//tools 6/rtems-aarch64
```

3.14.1.24.2.1 Pre-set options

Author: Chris Johns 2024-12-17T04:56:05.862Z

cloned from #58

Author: Chris Johns 2024-12-17T04:56:05.790Z

assigned to @chris

Author: Chris Johns 2024-12-17T04:56:15.686Z

Author: Kinsey Moore 2024-12-17T16:26:37.595Z

Closing since !89 has been merged.

3.14.1.25 46 - Add std::filesystem chdir and mkdir support to libstdc++v3

Id	46
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2024-11-13T10:29:37.913Z
Closed	2024-11-27T15:27:27.605Z
Updated	2024-11-27T15:27:27.619Z
Milestone	6.1
Labels	lang::c++, tool::gcc
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/46
Merges	1

The `libstc++-v3` configure uses links tests to check for the calls `chdir` and `mkdir`. These checks fail because the calls are in `rtems/rtos/rtems.git` and we need a compiler to built RTEMS.

Author: Chris Johns 2024-11-13T10:29:38.018Z

assigned to @chris

Author: Chris Johns 2024-11-13T10:34:29.051Z

This patch sets the defines for RTEMS so `std::filesystem` directory management works.

gcc-13.3.0-libstdc-filesystem.diff

Author: Sebastian Huber 2024-11-13T11:06:42.228Z

The right place is probably:

```
diff --git a/libstdc++-v3/configure.ac b/libstdc++-v3/configure.ac
index e59bcdb2944..79512a398c2 100644
--- a/libstdc++-v3/configure.ac
+++ b/libstdc++-v3/configure.ac
@@ -353,6 +353,31 @@ else

AC_DEFINE(HAVE_ICONV)
```

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```
AC_DEFINE(HAVE_MEMALIGN)
+
+    case "${target}" in
+      *-rtems*)
+        case "${target}" in
+          bfin* | lm32* | mips* | moxie* | or1k* | v850*)
+            ;;
+          *)
+            AC_DEFINE(HAVE_TLS)
+            ;;
+        esac
+        AC_DEFINE(HAVE_ALIGNED_ALLOC)
+        AC_DEFINE(HAVE_AT_QUICK_EXIT)
+        AC_DEFINE(HAVE_LINK)
+        AC_DEFINE(HAVE_POLL)
+        AC_DEFINE(HAVE_QUICK_EXIT)
+        AC_DEFINE(HAVE_READLINK)
+        AC_DEFINE(HAVE_SETENV)
+        AC_DEFINE(HAVE_SLEEP)
+        AC_DEFINE(HAVE_SOCKATMARK)
+        AC_DEFINE(HAVE_STRERROR_L)
+        AC_DEFINE(HAVE_SYMLINK)
+        AC_DEFINE(HAVE_TRUNCATE)
+        AC_DEFINE(HAVE_USLEEP)
+        ;;
+    esac
elif test "x$with_headers" != "xno"; then
GLIBCXX_CROSSCONFIG
fi
```

See

```
commit e0466d32eb3422e6d206a16845e4e594d3a0f2b2
Author: Sebastian Huber <sebastian.huber@embedded-brains.de>
Date:   Wed Jun 8 08:44:36 2022 +0200

Enable some features for RTEMS in libstdc++

Remove RTEMS support from crossconfig.m4 since this code is not used␣
↪due to
"with_newlib" being "yes".

libstdc++-v3/ChangeLog:

* configure: Regnerate.
* configure.ac (newlib, *-rtems*): Enable TLS support for all RTEMS
targets except bfin, lm32, mips, moxie, or1k, and v850.
For all RTEMS targets, define HAVE_ALIGNED_ALLOC, HAVE_AT_QUICK_EXIT,
HAVE_LINK, HAVE_POLL, HAVE_QUICK_EXIT, HAVE_READLINK, HAVE_SETENV,
```

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```
HAVE_SLEEP, HAVE_SOCKATMARK, HAVE_STRERROR_L, HAVE_SYMLINK,
HAVE_TRUNCATE, and HAVE_USLEEP.
* crossconfig.m4 (*-rtems*): Remove.
```

Author: Chris Johns 2024-11-13T20:47:26.243Z

That would also work. The header file was easier to sort out because I did not need to regenerate configure

Would the change be as simple as bringing across the defines I have in the header file?

Author: Kinsey Moore 2024-11-14T23:24:55.412Z

changed title from **Add std::filesystem c{-d-}dir and mkdir support to libstdc++v3** to **Add std::filesystem c{+h+}dir and mkdir support to libstdc++v3**

Author: Sebastian Huber 2024-11-16T23:38:37.048Z

There is already this change in GCC:

```
commit 5955c18dfb970740d55d432aeee5cb5a6f51cf65
Author: Alexandre Oliva <oliva@adacore.com>
Date:   Thu May 30 04:01:15 2024 -0300

[libstdc++-v3] [rtems] enable filesystem support

mkdir, chdir and chmod functions are defined in librtemscpu, that
doesn't get linked in during libstdc++-v3 configure, but applications
use -qrtems for linking, which brings those symbols in, so it makes
sense to mark them as available so that the C++ filesystem APIs are
enabled.


for  libstdc++-v3/ChangeLog

* configure.ac [*-*-rtems*]: Set chdir, chmod and mkdir as
available.
* configure: Rebuilt.
```

Author: Chris Johns 2024-11-16T23:38:37.048Z

I searched https://gcc.gnu.org/git/?p=gcc and could not find that commit?

Author: Chris Johns 2024-11-16T23:38:37.048Z

Found the patch on `master`. I have commented below.

Author: Sebastian Huber 2024-11-16T23:42:57.171Z

Proposal for GCC trunk:

0001-libstdc-v3-Enable-features-for-RTEMS.patch

Author: Chris Johns 2024-11-16T23:42:57.171Z

This looks great. I will test it and then make a MR for the RSB to use it.

Author: Chris Johns 2024-11-16T23:42:57.171Z

The patch does not work.

Author: Chris Johns 2024-11-16T23:00:01.176Z

It does not fix the directory management because the tests fail. The configure test results I can see are:

```
checking for chmod... no
checking for mkdir... no
checking for chdir... no
checking for getcwd... yes
checking for realpath... no
checking for utimensat... no
checking for utime... no
checking for lstat... yes
checking for struct stat.st_mtim.tv_nsec... yes
checking for fchmod... yes
checking for fchmodat... no
checking for sendfile that can copy files... no
checking for link... no
checking for readlink... no
checking for symlink... no
checking for truncate... no
checking for fdopendir... yes
checking for dirfd... yes
checking for openat... no
checking for unlinkat... no
```

In `acinclude.m4` the `mkdir` change says:

```
AC_DEFINE(_GLIBCXX_USE_MKDIR, 1, [Define if usable mkdir is available␣
↪in <sys/stat.h>.])
```

I will test defining this by manually hacking the patch to add the `_GLIBCXX_USE_*` defines.

Author: Chris Johns 2024-11-16T23:39:55.930Z

This patch works vCJ-0001-libstdc-v3-Enable-features-for-RTEMS.patch. Manually hacked!

I found the patch from Alexandre on GCC's `master` branch and I could not find it on `release/gcc-13` branch.

I prefer the approach I have taken because it is the method detailed in the check's help. I am concerned directly tweaking the configure vars depends on the implementation which would need to be kept in sync.

Author: Chris Johns 2024-11-23T06:10:10.686Z

@sebhub any update on this change?

Author: Sebastian Huber 2024-11-23T06:10:10.686Z

Sorry, I am busy with other things right now.

Author: Chris Johns 2024-11-23T06:10:10.686Z

Thanks and I am only asking because of branching this week.

Author: Chris Johns 2024-11-23T06:11:05.126Z

I have created a v2 patch and regenerated `configure`.

v2-0001-libstdc-v3-Enable-features-for-RTEMS.patch

Author: Chris Johns 2024-11-23T21:54:58.170Z

mentioned in merge request !78

Author: Joel Sherrill 2024-11-25T22:45:06.929Z

Please change from closes Issue 46 to updates 46.

Author: Chris Johns 2024-11-25T22:59:01.992Z

The issue was closed when we only had `Updates` in the MR and commit.

Author: Chris Johns 2024-11-26T01:12:54.196Z

mentioned in commit d53112736f76dc50995cda023ba4b20c2055c89f

Author: Chris Johns 2024-11-26T01:13:40.082Z

mentioned in merge request !80

Author: Chris Johns 2024-11-27T15:07:31.044Z

mentioned in commit 6a0772b8a2cc58389b298873bf94324316579076

Author: Kinsey Moore 2024-11-27T15:27:27.254Z

Closing since !80 is merged now.

Author: Joel Sherrill 2026-05-21T19:29:18.896Z

mentioned in merge request !260

3.14.1.26 35 - x86_64 breaks on MacOS M machines

Id	35
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Amar Takhar
Created	2024-10-02T03:37:57.339Z
Closed	2024-11-15T10:31:55.206Z
Updated	2024-11-15T10:31:55.281Z
Milestone	6.1
Labels	arch:x86_64, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/35
Merges	1

Building the `x86_64` tools on MacOS M silicon fails with:

```
config: tools/rtems-grub-2.06.cfg
grub2.cfg:11: "Darwin does not support Grub2 compilation by default."
grub2.cfg:12: "If you need Grub2 on Darwin, please install objconv"
grub2.cfg:13: "and enable it by removing '%undefine grub2_platform_supported' above"
config: tools/rtems-makefs-r12.cfg
package: makefs-v12-arm64-apple-darwin23.6.0-1
download: https://codeload.github.com/kusumi/makefs/tar.gz/r12 -> sources/makefs-r12.tar.gz
downloading: sources/makefs-r12.tar.gz - 646.2kB
building: makefs-v12-arm64-apple-darwin23.6.0-1
```

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```
error: building makefs-v12-arm64-apple-darwin23.6.0-1
Build FAILED
See error report: rsb-report-makefs-v12-arm64-apple-darwin23.6.0-1.txt
Note: In some cases the error appears only in
the complete build log (see --log option)
error: building makefs-v12-arm64-apple-darwin23.6.0-1
```

Why is grub being built?

Author: Chris Johns 2024-10-02T03:37:57.560Z

assigned to @joel

Author: Amar Takhar 2024-10-02T04:45:12.766Z

Grub has been built for x86_64 since 2021. Something else has changed somewhere.

Author: Chris Johns 2024-10-17T23:44:40.564Z

I do not know. Why is it needed? The build could become dependent on MacOS?

Author: Chris Johns 2024-10-17T23:44:58.959Z

assigned to @amar

Author: Chris Johns 2024-10-17T23:45:36.908Z

unassigned @joel

Author: Amar Takhar 2024-10-25T19:59:18.826Z

I don't have access to a macos M machine not sure what I can do here.

Author: Amar Takhar 2024-10-25T20:00:03.175Z

unassigned @amar

Author: Chris Johns 2024-10-31T22:51:32.956Z

assigned to @chris

Author: Sam Price 2024-11-15T11:13:50.394Z

I am building this inside of a ubuntu 20 container on a m1 mac

Author: Amar Takhar 2024-11-15T11:13:50.394Z

So you're saying that it works or you are testing it? :)

Author: Sam Price 2024-11-15T11:13:50.394Z

Im just saying i can build the tools inside a docker container running ubuntu on a m1 chip. Im not sure i would attempt this on a local install of my mac.

Author: Amar Takhar 2024-11-15T11:13:50.394Z

Ah, thanks this support is for those running on MacOS which we support directly good to know that it works there thanks!

Author: Chris Johns 2024-11-15T08:59:07.969Z

The build fails with `gmp-6.3.0-arm64-apple-darwin24.0.0-1` . Some sort of compiler error.

```
In file included from fib_table.c:4:
../gmp-impl.h:1356:43: error: unexpected type name 'mpz_srcptr': expected identifier
1356 |   void (*randseed_fn) (gmp_randstate_ptr, mpz_srcptr);
|                                           ^
../gmp-impl.h:1356:24: error: a parameter list without types is only allowed in a function definition
1356 |   void (*randseed_fn) (gmp_randstate_ptr, mpz_srcptr);
|                        ^
../gmp-impl.h:1357:42: error: unexpected type name 'mp_ptr': expected identifier
1357 |   void (*randget_fn) (gmp_randstate_ptr, mp_ptr, unsigned long int);
|                                          ^
../gmp-impl.h:1357:50: error: expected identifier
1357 |   void (*randget_fn) (gmp_randstate_ptr, mp_ptr, unsigned long int);
|                                                  ^
../gmp-impl.h:1357:22: warning: a function declaration without a prototype is deprecated in all versions of C [-Wstrict-prototypes]
1357 |   void (*randget_fn) (gmp_randstate_ptr, mp_ptr, unsigned long int);
|                      ^
```

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```
|                                                                      void
../gmp-impl.h:1358:25: error: a parameter list without types is only␣
↪allowed in a function definition
1358 |   void (*randclear_fn) (gmp_randstate_ptr);
|                         ^
../gmp-impl.h:1359:24: error: a parameter list without types is only␣
↪allowed in a function definition
1359 |   void (*randiset_fn) (gmp_randstate_ptr, gmp_randstate_srcptr);
|                        ^
../gmp-impl.h:1377:47: error: a parameter list without types is only␣
↪allowed in a function definition
1377 | __GMP_DECLSPEC void __gmp_randinit_mt_noseed (gmp_randstate_ptr);
|                                               ^
1 warning and 7 errors generated.
```

Author: Chris Johns 2024-11-15T08:59:07.969Z

The error was an old include in a build temp directory. I deleted the directory and GMP builds.

Author: Chris Johns 2024-11-15T10:12:14.705Z

mentioned in merge request !77

3.14.1.27 44 - expat picking up dockbook2man and erroring when XML support is not enabled.

Id	44
State	closed
Type	ISSUE
Author	Amar Takhar
Closed by	Amar Takhar
Created	2024-10-29T22:47:08.778Z
Closed	2024-10-29T22:58:18.313Z
Updated	2024-10-29T22:58:18.364Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/44
Merges	1

Summary

Found by ita on Discord

- https://discord.com/channels/820452222382112799/1257160543580590141/1300950748561018911

By following these steps:

- https://docs.rtems.org/branches/master/user/hosts/posix.html#xubuntu

Steps to reproduce

3.14.1.27.2.1 Pre-set options

Author: Gedare Bloom 2024-10-29T22:57:04.472Z

mentioned in merge request !73

3.14.1.28 36 - dtc build failure on msys2 - all rtems6 target tools fail to build on Windows 10

Id	36
State	closed
Type	ISSUE
Author	Trac Migrate
Assignee(s)	Joel Sherrill
Closed by	Chris Johns
Created	2021-11-11T21:08:30.000Z
Closed	2024-10-18T21:24:10.584Z
Updated	2024-10-18T21:24:10.697Z
Milestone	6.1
Labels	priority::normal, tickettype::defect, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/36
Merges	1

Original author: kgardas

I'm testing RSB git source updated 2021-11-10 and it fails on freshly installed msys2/windows 10 platform with:

```
karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems
$ ../source-builder/sb-check
RTEMS Source Builder - Check, 6 (efa44e47a7d2 modified)
Environment is ok

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems
$ ../source-builder/sb-set-builder --prefix=/c/r/rr 6/rtems-sparc
RTEMS Source Builder - Set Builder, 6 (efa44e47a7d2 modified)
Build Set: 6/rtems-sparc
config: devel/dtc-1.6.0-1.cfg
package: dtc-1.6.0-x86_64-w64-mingw32-1
building: dtc-1.6.0-x86_64-w64-mingw32-1
error: building d1xwm1
Build FAILED
See error report: rsb-report-dtc-1.6.0-x86_64-w64-mingw32-1.txt
error: building d1xwm1
Build Set: Time 0:00:28.232196
```

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```
Build FAILED

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems
$
```

the problem report is attached.

Joel adds: dtc does not build on msys2. It requires fnmatch.h which is not present. Alternative fixes include finding an alternative for fnmatch on msys2, providing an implementation to be used on msys2, or adding gnulib which is a portability package to our RSB packages on msys2.

Also there may be other tickets for the same issue.

Possible Mentors: Karel Gardas Skills: C Difficulty: Medium

- rsb-report-dtc-1.6.0-x86_64-w64-mingw32-1.txt

Author: Amar Takhar 2024-10-03T02:38:52.661Z

assigned to @tracmigrate

Author: Amar Takhar 2024-04-26T01:34:53.550Z

assigned to @tracmigrate

Author: Trac Migrate 2021-11-11T21:09:20.000Z

Original author: kgardas

- **Attachment** rsb-report-dtc-1.6.0-x86_64-w64-mingw32-1.txt added

dtc compilation failure problem report.

Author: Joel Sherrill 2022-02-02T14:23:22.000Z

Original author: kgardas

- **Milestone** set to rtems%"6.1"

Adding SoC as a ticket because I think this is a possible small SoC project. Possible solutions include adding gnulib to the RSB bset for msys2 or modifying dtc to use other APIs for this functionality.

Author: Joel Sherrill 2022-02-04T20:05:29.000Z

Original author: kgardas

- **Description** changed

```
I'm testing RSB git source updated 2021-11-10 and it fails on freshly␣
↪installed msys2/windows 10 platform with:
```

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems $ ../source-builder/sb-check RTEMS Source Builder - Check, 6 (efa44e47a7d2 modified) Environment is ok

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems $ ../source-builder/sb-set-builder –prefix=/c/r/rr 6/rtems-sparc RTEMS Source Builder - Set Builder, 6 (efa44e47a7d2 modified) Build Set: 6/rtems-sparc config: devel/dtc-1.6.0-1.cfg package: dtc-1.6.0-x86_64-w64-mingw32-1 building: dtc-1.6.0-x86_64-w64-mingw32-1 error: building d1xwm1 Build FAILED See error report: rsb-report-dtc-1.6.0-x86_64-w64-mingw32-1.txt error: building d1xwm1 Build Set: Time 0:00:28.232196 Build FAILED

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems $

```
the problem report is attached.
+
+ Joel adds: dtc does not build on msys2. It requires fnmatch.h which␣
↪is not present. Alternative fixes include finding an alternative for␣
↪fnmatch on msys2, providing an implementation to be used on msys2, or␣
↪adding gnulib which is a portability package to our RSB packages on␣
↪msys2.
+
+ Also there may be other tickets for the same issue.
```

- **Summary** changed from *RSB can't build rtems-sparc target tools on Windows 10.* to *dtc build failure on msys2 - all rtems6 target tools fail to build on Windows 10*

Author: Joel Sherrill 2022-02-25T21:15:50.000Z

Original author: kgardas

- **Description** changed

```
I'm testing RSB git source updated 2021-11-10 and it fails on freshly␣
↪installed msys2/windows 10 platform with:
```

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems $ ../source-builder/sb-check RTEMS Source Builder - Check, 6 (efa44e47a7d2 modified) Environment is ok

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems $ ../source-builder/sb-set-builder –prefix=/c/r/rr 6/rtems-sparc RTEMS Source Builder - Set Builder, 6 (efa44e47a7d2 modified) Build Set: 6/rtems-sparc config: devel/dtc-1.6.0-1.cfg package: dtc-1.6.0-x86_64-w64-mingw32-1 building: dtc-1.6.0-x86_64-w64-mingw32-1 error: building d1xwm1 Build FAILED See error report: rsb-report-dtc-1.6.0-x86_64-w64-mingw32-1.txt error: building d1xwm1 Build Set: Time 0:00:28.232196 Build FAILED

karel@DESKTOP-755H9VE MINGW64 /c/r/rtems-source-builder/rtems $

```
the problem report is attached.

Joel adds: dtc does not build on msys2. It requires fnmatch.h which is not present. Alternative fixes include finding an alternative for fnmatch on msys2, providing an implementation to be used on msys2, or adding gnulib which is a portability package to our RSB packages on msys2.

Also there may be other tickets for the same issue.
+
+ Possible Mentors: Karel Gardas
+ Skills: C
+ Difficulty: Medium
```

Author: Chris Johns 2022-11-29T23:48:28.000Z

Original author: kgardas

status update?

Author: Gedare Bloom 2024-02-17T05:15:05.000Z

Original author: kgardas

- **Owner** set to kgardas
- **Status** changed from *new* to *assigned*

Author: Amar Takhar 2024-04-25T20:49:19.387Z

changed the description

Author: Amar Takhar 2024-10-03T02:38:53.196Z

moved from rtems/programs/gsoc#76

Author: Amar Takhar 2024-10-03T02:39:04.891Z

unassigned @tracmigrate

Author: Gedare Bloom 2024-10-06T18:22:18.034Z

assigned to @joel

Author: Gedare Bloom 2024-10-06T21:56:30.608Z

marked this issue as related to #25

Author: Gedare Bloom	2024-10-06T22:11:07.024Z

mentioned in merge request !63

Author: Gedare Bloom	2024-10-10T04:44:21.038Z

mentioned in merge request !66

3.14.1.29 25 - dtc builds fail on MSYS2 for RTEMS 6

Id	25
State	closed
Type	ISSUE
Author	xiaojun zheng
Closed by	Chris Johns
Created	2024-07-19T02:18:03.490Z
Closed	2024-10-18T21:24:10.610Z
Updated	2024-10-18T21:24:10.690Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/25
Merges	1

Summary

MSYS2, target arm,aarch64

build command

```
../source-builder/sb-set-builder --log=l-arm.txt --prefix=/opt/rtems/6.1 6/rtems-
↪arm
```

rsb-report-dtc-1.6.1-x86_64-w64-mingw32-1.txt

Author: xiaojun zheng	2024-07-19T02:19:08.785Z

changed the description

Author: Gedare Bloom	2024-10-06T21:56:30.668Z

marked this issue as related to #36

Author: Gedare Bloom	2024-10-06T22:11:06.516Z

mentioned in merge request !63

Author: Gedare Bloom 2024-10-10T04:44:20.984Z

mentioned in merge request !66

3.14.1.30 40 - Adding a hash in a release build generates an error

Id	40
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Amar Takhar
Created	2024-10-09T18:33:59.533Z
Closed	2024-10-09T22:08:02.520Z
Updated	2024-10-09T22:08:02.611Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/40
Merges	1

Releases provide the release tar file hash in the `VERSION` file. This is read and loaded when the RSB starts a set build. If the package being built has a development hash in its configuration file the addition of that hash to the hash table results in an error because the hash is present and the value is different.

If the RSB is in release mode (`%{release} == 1`) do not raise an error. This lets the error happen during development if there is a duplicate and lets us ship untouched config files with the release versions of the tar files and hashes defined in `VERSION`.

Author: Chris Johns 2024-10-09T18:33:59.663Z

assigned to @chris

Author: Chris Johns 2024-10-09T22:05:19.096Z

mentioned in merge request !65

3.14.1.31 38 - Windows only code in common area in path.py

Id	38
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Gedare Bloom
Closed by	Chris Johns
Created	2024-10-07T07:09:52.783Z
Closed	2024-10-07T12:55:56.197Z
Updated	2024-10-07T12:55:56.244Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/38
Merges	1

The change to detect Windows 11 in !63 is in the common area and should have been guarded with a check of `nt`. It has broken non-Windows builds:

```
windows11 = sys.getwindowsversion().build >= 22000
^^^^^^^^^^^^^^^^^^^^^
AttributeError: module 'sys' has no attribute 'getwindowsversion'
```

Author: Chris Johns 2024-10-07T07:09:52.886Z

assigned to @gedare

Author: Chris Johns 2024-10-07T07:12:03.637Z

changed title from **Windows only code in common area i{-s-} path.py** to **Windows only code in common area i{+n+} path.py**

Author: Amar Takhar 2024-10-07T07:27:45.537Z

mentioned in merge request !64

3.14.1.32 32 - Can't build everything with all locales

Id	32
State	closed
Type	ISSUE
Author	Christian Mauderer
Assignee(s)	Christian Mauderer
Closed by	Christian Mauderer
Created	2024-09-07T14:16:44.108Z
Closed	2024-09-07T16:07:57.350Z
Updated	2024-09-07T16:07:57.364Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/32
Merges	0

Summary

I wanted to build the `qemu-xilinx` on an Archlinux System with a German language setting. With that, downloading the sources for qemu-xilinx-v2023.2-1 failed. It seems that the `source-builder/sb/git.py` module tries to parse some language specific strings. My problem is at that line:

https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/blob/8488d28da6bfa233a90c2e80898696fd8de15534/source-builder/sb/git.py#L241

With a LANG='C' or LANG='en_US' setting, the output of `git remote show origin` has a line

HEAD branch: main

that is parsed by that module. With a LANG='de_DE', I instead get a

Hauptbranch: main

With that output, no default branch can be found and the source builder crashes at `source-builder/sb/download.py` in line 511:

repo.checkout(default_branch)

I'm not sure whether that's the only place where a language specific string is parsed.

Steps to reproduce

On a system with a German locale, try

../source-builder/sb-set-builder –source-only-download devel/qemu-xilinx

Possible solutions

I can think of multiple solutions:

- Setting the locale to 'C' for all RSB applications using the python `locale.setlocale(...)`. Problem is: I'm not sure whether that works on Windows. I didn't find any clear cross-platform solution.

- Replacing the current git.py with the python git module. Most likely difficult due to dependencies.
- Handle strings of all languages.

Any better ideas?

Author: Christian Mauderer 2024-09-07T14:16:44.287Z

assigned to @c-mauderer

Author: Christian Mauderer 2024-09-07T16:07:56.823Z

I did not analyze the problem enough. It was a problem with a broken clone of the repo in the sources directory. Sorry for creating the issue without analyzing enough.

3.14.1.33 13 - sb-rtems-pkg does not update rtems-tools checksum

Id	13
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Amar Takhar
Created	2024-06-15T03:22:23.484Z
Closed	2024-06-15T18:26:25.620Z
Updated	2024-09-05T11:27:37.864Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/13
Merges	2

Summary

Running the `sb-rtems-pkg` tool does not update the checksum

Steps to reproduce

```
cd rtems
../source-builder/sb-rtems-pkg
git diff
```

The error is no checksum update when the hash is updated:

```
diff --git a/rtems/config/tools/rtems-tools-6.cfg b/rtems/config/tools/rtems-
↪tools-6.cfg
index 7e4bfb0..8e7edc8 100644
--- a/rtems/config/tools/rtems-tools-6.cfg
+++ b/rtems/config/tools/rtems-tools-6.cfg
```

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```
@@ -10,7 +10,7 @@
%define rtems_tools_source rtems-tools-%{rtems_tools_version}
%define rtems_tools_ext xz
%else
-%define rtems_tools_version ed300ed6061779ca6802b183e09d86e99649407d
+%define rtems_tools_version 9cd5599e468eaf847b690a4608906ca9bece10c7
%define rtems_tools_ext bz2
%endif
```

Author: Chris Johns 2024-06-15T03:22:23.637Z

assigned to @chris

Author: Chris Johns 2024-06-15T05:26:40.062Z

mentioned in merge request !29

Author: Frank Kuehndel 2024-09-05T11:27:37.803Z

mentioned in merge request !55

3.14.1.34 24 - Update newlib hash for RUSAGE_PTHREAD and remove sys/tree.h

Id	24
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Chris Johns
Created	2024-07-15T19:13:17.634Z
Closed	2024-07-15T22:18:49.160Z
Updated	2024-08-28T23:15:01.481Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/24
Merges	1

Summary

Update newlib hash per Title.

Author: Joel Sherrill 2024-07-15T19:13:17.790Z

assigned to @joel

Author: Joel Sherrill 2024-07-15T19:19:59.241Z

mentioned in merge request !37

Author: Sebastian Huber 2024-08-28T23:15:01.447Z

mentioned in merge request !54

3.14.1.35 28 - Update to binutils 2.34 for rtems 6

Id	28
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Chris Johns
Created	2024-08-05T22:51:01.470Z
Closed	2024-08-07T02:53:55.645Z
Updated	2024-08-07T02:53:55.784Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/28
Merges	1

Summary

Update binutils to 2.34 on all architectures possible

Author: Joel Sherrill 2024-08-05T22:51:01.569Z

assigned to @joel

Author: Joel Sherrill 2024-08-05T22:51:27.201Z

changed the description

Author: Joel Sherrill 2024-08-06T13:50:50.795Z

mentioned in merge request !44

Author: YASH BHIWANIA 2026-08-24T18:27:37.664Z

mentioned in merge request !287

3.14.1.36 23 - Microblaze Tools Fails to Build

Id	23
State	closed
Type	ISSUE
Author	Joel Sherrill
Closed by	Chris Johns
Created	2024-07-12T15:02:17.691Z
Closed	2024-07-16T22:30:37.013Z
Updated	2024-07-16T22:30:37.534Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/23
Merges	1

Summary

Tools for microblaze-rtems6 fail to build with the issue being an XXX version conflict that results in a compile error for gcc. This is the error message from the RSB log:

```
libtool: compile:  gcc -O2 -g -pipe -I/home/joel/rtems-work/rtems-source-builder/rtems/build/tmp/sb-1000/6/rtems-microblaze/home/joel/rtems-work/tools/6/include -I/home/joel/rtems-work/rtems-source-builder/rtems/build/tmp/sb-1000-internal/include -DHAVE_CONFIG_H -I. -I../../../gnu-mirror-gcc-d04fe55/mpc/src -I.. -g -O2 -MT mul.lo -MD -MP -MF .deps/mul.Tpo -c ../../../gnu-mirror-gcc-d04fe55/mpc/src/mul.c -o mul.o
../../../gnu-mirror-gcc-d04fe55/mpc/src/mul.c:175:1: error: conflicting types for \ |md_0_8216|\ mpfr_fmma\ |md_0_8217|\ ; have \ |md_0_8216|\ int(__mpfr_struct *, const __mpfr_struct *, const __mpfr_struct *, const __mpfr_struct *, int,  mpfr_rnd_t)\ |md_0_8217|\
175 | mpfr_fmma (mpfr_ptr z, mpfr_srcptr a, mpfr_srcptr b, mpfr_srcptr c,
| ^~~~~~~~~
In file included from ../../../gnu-mirror-gcc-d04fe55/mpc/src/mpc.h:25,
from ../../../gnu-mirror-gcc-d04fe55/mpc/src/mpc-impl.h:30,
from ../../../gnu-mirror-gcc-d04fe55/mpc/src/mul.c:22:
/usr/include/mpfr.h:765:21: note: previous declaration of \ |md_0_8216|\ mpfr_fmma\ |md_0_8217|\  with type \ |md_0_8216|\ int(__mpfr_struct *, const __mpfr_struct *, const __mpfr_struct *, const __mpfr_struct *, const __mpfr_struct *, mpfr_rnd_t)\ |md_0_8217|\
765 | __MPFR_DECLSPEC int mpfr_fmma (mpfr_ptr, mpfr_srcptr, mpfr_srcptr, mpfr_srcptr,
|                     ^~~~~~~~~
```

I ran git bisect and it identified this as the breaking commit:

```
423d98d2058a7dac0921f9a13113b024696236b9 is the first bad commit
commit 423d98d2058a7dac0921f9a13113b024696236b9
Author: Chris Johns <chrisj@rtems.org>
Date:   Sat Jun 8 09:04:11 2024 +1000
```

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```
5
6  gdb: Build MPFR before GDB as it now depeneds on it
7
8  Closes #7
9
10 bare/config/devel/expat-internal.bset       | 14 +++++++++
11 bare/config/devel/gmp-internal.bset         | 14 +++++++++
12 bare/config/devel/mpfr-4.2.1.cfg            | 18 ++++++++++
13 bare/config/devel/mpfr-internal.bset        | 14 +++++++++
14 rtems/config/6/rtems-default.bset           |  1 +
15 rtems/config/tools/rtems-default-tools.bset | 16 +++++++++--
16 source-builder/config/expat-2-1.cfg         | 47 +++++++++++++++++++++++++++---
17 source-builder/config/gcc-13.cfg            |  8 ++++--
18 source-builder/config/gcc-common-1.cfg      | 16 ++++++++++
19 source-builder/config/gdb-common-1.cfg      |  2 +-
20 source-builder/config/gmp.cfg               | 48 +++++++++++++++++++++++++++++++---
21 source-builder/config/mpfr.cfg              | 49 +++++++++++++++++++++++++++++++---
22 source-builder/defaults.mc                  | 19 +++++++++++---
23 13 files changed, 223 insertions(+), 43 deletions(-)
24 create mode 100644 bare/config/devel/expat-internal.bset
25 create mode 100644 bare/config/devel/gmp-internal.bset
26 create mode 100644 bare/config/devel/mpfr-4.2.1.cfg
27 create mode 100644 bare/config/devel/mpfr-internal.bset
```

This is the git bisect log:

```
1  $ git bisect log
2  git bisect start
3  # status: waiting for both good and bad commits
4  # bad: [c085b3bafb66e7cf2f9afd8b2622b5c1799e1616] rtems-tools: Fetch rtems-syms␣
   ↪improvements
5  git bisect bad c085b3bafb66e7cf2f9afd8b2622b5c1799e1616
6  # status: waiting for good commit(s), bad commit known
7  # good: [93321bacf219039a02b3150c83ed1114d5bd1657] Change README to markdown
8  git bisect good 93321bacf219039a02b3150c83ed1114d5bd1657
9  # good: [b7be268a79710ad267e967a112644b105b2c4133] config/rtems-kernel: Update␣
   ↪for gitlab
10 git bisect good b7be268a79710ad267e967a112644b105b2c4133
11 # bad: [80f8bdb11dd373dfa26376c1beb378f0c16d7943] bare/expat-internal: Fix the␣
   ↪default version
12 git bisect bad 80f8bdb11dd373dfa26376c1beb378f0c16d7943
13 # bad: [423d98d2058a7dac0921f9a13113b024696236b9] gdb: Build MPFR before GDB as␣
   ↪it now depeneds on it
14 git bisect bad 423d98d2058a7dac0921f9a13113b024696236b9
15 # good: [d68c65b2e03ac7512922dc167f3573badc7d1cfe] config/rtems-net-services:␣
   ↪Update for gitlab
16 git bisect good d68c65b2e03ac7512922dc167f3573badc7d1cfe
17 # good: [f39e9584775a0bccdbd6959a9c55d473330d08e2] Migrate devel links to gitlab
18 git bisect good f39e9584775a0bccdbd6959a9c55d473330d08e2
```

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```
19 # first bad commit: [423d98d2058a7dac0921f9a13113b024696236b9] gdb: Build MPFR␣
   ↪before GDB as it now depeneds on it
```

The microblaze target is using a specific version of binutils and gcc with patches extracted from the Xilinx repo. Updating to FSF versions is not possible. There is an effort underway to submit work but the person who reached out to the binutils and gcc communities says it may take a year. So we are stuck needing to get the Microblaze target back to its state before this patch.

The contrib/download_prerequisites script with the Xilinx gcc version cites these:

```
1 gmp-6.1.0.tar.bz2
2 mpfr-3.1.6.tar.bz2
3 mpc-1.0.3.tar.gz
4 isl-0.18.tar.bz2
```

Steps to reproduce

```
1 cd
2 rtems
3 ../source-builder/sb-set-builder --prefix=${HOME}/rtems-work/tools/6 --log=l-
   ↪microblaze.txt  6/rtems-microblaze
```

/milestone %6.1

Author: Joel Sherrill 2024-07-12T15:35:07.099Z

changed the description

Author: Alex White 2024-07-16T14:32:33.824Z

mentioned in merge request !39

3.14.1.37 22 - All Builds Fail on Cygwin From chmod Returning an Error

Id	22
State	closed
Type	ISSUE
Author	Joel Sherrill
Closed by	Chris Johns
Created	2024-07-08T16:58:19.497Z
Closed	2024-07-09T20:49:28.912Z
Updated	2024-07-09T20:49:28.992Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/22
Merges	1

Summary

For some unknown reason, the _chmod_ has begun to fail on Cygwin. This is done after untaring the source files and results in all Cygwin RSB builds failing.

Steps to reproduce

Build any target on Cygwin. The generated do-build script is run with “sh -ex” which will exit on any command returning non-zero. The following shows the results of manually “sh -ex do-build ; echo $?”

```
+ tar_exit=0
+ cd sourceware-mirror-newlib-cygwin-7947581
+ chmod -R a+rX,g-w,o-w .
1
```

Author: Amar Takhar 2024-07-08T17:00:20.169Z

What version of Windows?

Author: Amar Takhar 2024-07-08T17:00:33.055Z

marked this issue as related to #21

Author: Amar Takhar 2024-07-08T17:08:22.824Z

If it’s Windows 10+ chmod isn’t going to be needed and those flags will cause issues for sure especially the group perms. If we want to just say “You need at least Windows 10” then deleting all of them would be fine.

Author: Joel Sherrill 2024-07-08T17:11:58.600Z

mentioned in merge request !33

3.14.1.38 12 - GIT links to gitlab.rtems.org need to use protocol=https

Id	12
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Amar Takhar
Created	2024-06-13T06:15:14.004Z
Closed	2024-06-13T07:18:12.069Z
Updated	2024-06-13T07:18:12.130Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/12
Merges	1

Summary

Moving to Gitlab has changed the git repo path from `git://git.rtems.org` to `https://gitlab.rtems.org` for read-only access. The RSB code `download.py` assumes anything with `http/` `https` is a file download. The URLs should use `protocol=https`.

Steps to reproduce

```
../source-builder/sb-rtems-pkg
```

Solution

Change the URLs back to `git://gitlab.rtems.org`

> **Author:** Chris Johns 2024-06-13T06:15:14.100Z
>
> assigned to @chris
>
> **Author:** Amar Takhar 2024-06-13T07:00:44.135Z
>
> Can't you fix this by treating anything that ends in `.git` as a repo? I've never seen a clone URL without `.git` at the end.
>
> **Author:** Chris Johns 2024-06-13T07:00:44.135Z
>
> Maybe but it seems fragile. For `download.py`'s `git` support a URL is normally:
>
> ```
> https://gitlab.rtems.org/rtems/rtos/rtems.git?fetch?checkout=main
> ```
>
> So I will make sure only the supported list of `git` commands are supported. Anything else is a file download

Author: Chris Johns 2024-06-13T07:00:44.135Z

Oh hang on, it is already covered in the code here https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/blob/main/source-builder/sb/download.py?ref_type=heads#L490 :

```
if _as[0] == 'protocol':
if len(_as) != 2:
raise error.general('invalid git protocol option: %s' % (_as))
if _as[1] == 'none':
# remove the rest of the protocol header leaving nothing.
us[0] = url_base[len('://'):]
else:
if _as[1] not in [
'ssh', 'git', 'http', 'https', 'ftp', 'ftps', 'rsync'
]:
raise error.general('unknown git protocol: %s' % (_as[1]))
us[0] = _as[1] + url_base
```

This issue is now about updating the `git` URLs

Author: Amar Takhar 2024-06-13T07:00:44.135Z

Well, since we're the ones controlling it can't we state that anything ending in `.git` is a repository? Also Python has urlparse which can easily get the base URL.

Author: Amar Takhar 2024-06-13T07:00:44.135Z

hmm okay should be using urlparse though instead of hacking the URL directly

Author: Chris Johns 2024-06-13T07:00:44.135Z

Yeah, old code and not related to this issue.

I will find the URLs that got changed and change them back.

Author: Amar Takhar 2024-06-13T07:00:44.135Z

What do you mean? `git://` is not a supported protocol on GitLab.

Author: Chris Johns 2024-06-13T07:00:44.135Z

Yes I know `git://` is not supported. The URL is internal to the RSB and how it works and not related to gitlab. A URL of:

```
git://gitlab.rtems.org/rtems/tools/rtems-tools.git?protocol=https
```

Will be turned into something like:

```
url: get: git://gitlab.rtems.org/rtems/tools/rtems-tools.git?protocol=https?fetch?checkout=main -> /Users/chris/development/rtems/rsb/rtems-source-builder.git/rtems/sources/rtems-tools.git
git: clone: https://gitlab.rtems.org/rtems/tools/rtems-tools.git -> sources/rtems-tools.git
cmd: (None) /usr/bin/git clone https://gitlab.rtems.org/rtems/tools/rtems-tools.git /Users/chris/development/rtems/rsb/rtems-source-builder.git/rtems/sources/rtems-tools.git
exe: spawn: /usr/bin/git clone https://gitlab.rtems.org/rtems/tools/rtems-tools.git /Users/chris/development/rtems/rsb/rtems-source-builder.git/rtems/sources/rtems-tools.git
exe: ['/usr/bin/git', 'clone', 'https://gitlab.rtems.org/rtems/tools/rtems-tools.git', '/Users/chris/development/rtems/rsb/rtems-source-builder.git/rtems/sources/rtems-tools.git']
Cloning into '/Users/chris/development/rtems/rsb/rtems-source-builder.git/rtems/sources/rtems-tools.git'...
git: fetch: https://gitlab.rtems.org/rtems/tools/rtems-tools.git -> sources/rtems-tools.git
cmd: (/Users/chris/development/rtems/rsb/rtems-source-builder.git/rtems/sources/rtems-tools.git) /usr/bin/git fetch
exe: spawn: /usr/bin/git fetch
exe: ['/usr/bin/git', 'fetch']
git: checkout: https://gitlab.rtems.org/rtems/tools/rtems-tools.git => main
cmd: (/Users/chris/development/rtems/rsb/rtems-source-builder.git/rtems/sources/rtems-tools.git) /usr/bin/git checkout main
exe: spawn: /usr/bin/git checkout main
exe: ['/usr/bin/git', 'checkout', 'main']
Already on 'main'
Your branch is up to date with 'origin/main'.
cmd: (/Users/chris/development/rtems/rsb/rtems-source-builder.git/rtems/sources/rtems-tools.git) git log -n 1
exe: spawn: git log -n 1
exe: ['git', 'log', '-n', '1']
commit ed300ed6061779ca6802b183e09d86e99649407d
Author: Amar Takhar <amar@rtems.org>
Date:   Sat Jun 8 00:04:03 2024 -0400

Fix Python 3.12 PEP-701

Escapes are no longer allowed in strings.

Fixes #3
```

Author: Amar Takhar 2024-06-13T07:00:44.135Z

Oh, yeah I see how it works now that is a strange way to do it but I guess if it works. The nice thing of just checking for .git at the ending is you can just cut and paste any urls in there without worrying about switching protocols in the url arguments. Also url.parse will get the argument of a URL even if it's encoded.

Author: Chris Johns 2024-06-13T07:07:33.181Z

The change was made a while ago to support other sites. It is a way of fitting in a solution into something existing.

Author: Amar Takhar 2024-06-13T07:00:44.135Z

Fair enough.

Author: Chris Johns 2024-06-13T07:09:24.635Z

changed title from **GIT {-download using http/https has broken download.py-}** to **GIT {+links to gitlab.rtems.org need to use protocol=https+}**

Author: Chris Johns 2024-06-13T07:09:24.660Z

changed the description

Author: Chris Johns 2024-06-13T07:09:53.056Z

changed the description

Author: Chris Johns 2024-06-13T07:13:10.496Z

mentioned in merge request !25

3.14.1.39 11 - Source downloads fail

Id	11
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Amar Takhar
Created	2024-06-11T23:29:31.177Z
Closed	2024-06-12T01:41:26.609Z
Updated	2024-06-12T01:41:26.668Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/11
Merges	1

Summary

Running `sb-get-sources` fails because of incorrect logic in:

1. `config/tools/rtems-kernel-common.cfg`
2. `source-builder/config/glib-2-meson.cfg`

The changes are:

```
-%if %{_dry_run} && %{defined with_download}
+%if %{_dry_run} || %{defined with_download}
```

GNU GCC git upgrades has broken building `gcc-4.9` compilers as the common support contains patches from git. Remove the GCC 4.9 builds from `bare`.

Changes to fix #9 in !21 breaks building RTEMS 7. The MPFR define is not present.

Steps to reproduce

```
cd rtems
../source-builder/sb-get-sources --stop-on-error
```

Author: Chris Johns 2024-06-11T23:29:31.261Z

assigned to @chris

Author: Chris Johns 2024-06-11T23:34:32.748Z

changed the description

Author: Chris Johns 2024-06-12T00:29:28.446Z

Reviewing the comments in `config/tools/rtems-kernel-common.cfg` it says:

```
# If a dry-run and with download ignore errors and correct setting for␣
↪tools
# and BSPs. Only after the source to download.
```

and this means `--dry-run` and `--with-download` should be set. Reviewing the `sb-get-sources` command it is only providing `--with-download` as a default option:

```
opts = simhost.load_options(args, argopts, extras=['--with-download'])
```

Add `--dry-run` is a better solution.

Further review of `source-builder/sb/getsources.py` dry run returns `True` and the `%{_dry_run}` macro is `0`. I will add a set of extra defaults to `simhost.py` to match the option defaults.

Author: Chris Johns 2024-06-12T01:01:30.305Z

changed title from **Source downloads fail{- with incorrect logic-}** to **Source downloads fail**

Author: Chris Johns 2024-06-12T01:01:30.329Z

changed the description

Author: Chris Johns 2024-06-12T01:36:16.362Z

mentioned in merge request !22

3.14.1.40 9 - GDB 14.2 fails to build on MacOS

Id	9
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Amar Takhar
Created	2024-06-11T04:28:05.144Z
Closed	2024-06-11T04:48:36.646Z
Updated	2024-06-12T01:01:30.418Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/9
Merges	1

From https://lists.rtems.org/pipermail/users/2024-June/068991.html

when trying to build the arm-tools with the Rtems Source Builder on osX and I get this error:

It starts with Python 3.12.3

```
RTEMS Tools Project - Source Builder Error Report
Build: error: building arm-rtems6-gdb-14.2-arm64-apple-darwin23.5.0-1
Command Line: ../source-builder/sb-set-builder --jobs=20 --prefix=/Volumes/Epics/
↪LONG_ISLAND/RTEMS_ARM_libBsd_stack/rtems/6 6/rtems-arm
Python: 3.12.3 (main, Apr  9 2024, 08:09:14) [Clang 15.0.0 (clang-1500.3.9.4)]
https://gitlab.rtems.org/rtems/tools/rtems-source-builder.git/origin/
↪ac974f70ecdb9c9ee64ff0611b78960437efc8da
Darwin Zarquon.local 23.5.0 Darwin Kernel Version 23.5.0: Wed May  1 20:14:38 PDT␣
↪2024; root:xnu-10063.121.3~5/RELEASE_ARM64_T6020 arm64
Tail of the build log:
```

but at the end `/usr/local/bin/python3` gets called ... which exists, but older Version???

```
checking how to link with libexpat... /Volumes/Epics/LONG_ISLAND/RTEMS_ARM_libBsd_stack/rsb/rtems/build/tmp/sb-501-internal/lib/libexpat.a
checking for XML_StopParser... yes
checking whether to use python... /usr/local/bin/python3
checking for python... no
configure: error: no usable python found at /usr/local/bin/python3
make[1]: *** [configure-gdb] Error 1
make: *** [all] Error 2
shell cmd failed: /bin/sh -ex  /Volumes/Epics/LONG_ISLAND/RTEMS_ARM_libBsd_stack/rsb/rtems/build/arm-rtems6-gdb-14.2-arm64-apple-darwin23.5.0-1/do-build
error: building arm-rtems6-gdb-14.2-arm64-apple-darwin23.5.0-1%
junkes at Zarquon RTEMS_ARM_libBsd_stack % /usr/local/bin/python3
Python 3.12.2 (v3.12.2:6abddd9f6a, Feb  6 2024, 17:02:06) [Clang 13.0.0 (clang-1300.0.29.30)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
```

```
  Even if I had previously actived a python environment ``./py3.12/bin/activate``

  On Linux everything works \ |md_0_8230|\  as usual ...
```

Author: Chris Johns 2024-06-11T04:28:05.300Z

assigned to @chris

Author: Chris Johns 2024-06-11T04:28:49.029Z

I have investigated the problem and the MacOS specific patch to work round this issue did not make it across to the GDB 14.2 configuration.

Author: Chris Johns 2024-06-11T04:34:42.191Z

mentioned in merge request !21

Author: Chris Johns 2024-06-12T01:01:30.397Z

mentioned in issue #11

3.14.1.41 7 - GDB requires GMP 4.2+, and MPFR 3.1.0+

Id	7
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Amar Takhar, Chris Johns
Closed by	Amar Takhar
Created	2024-06-06T20:49:21.554Z
Closed	2024-06-08T19:42:26.969Z
Updated	2024-06-08T19:42:27.056Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/7
Merges	1

The change to `gdb-14` has changed the dependencies it has when building when a host does not have packages installed. The change is:

1. GMP 4.2+
2. MPDR 3.1.0+

We should check the change worked on MacOS with M2 processors

Author: Chris Johns 2024-06-06T20:49:21.618Z

changed due date to June 09, 2024

Author: Chris Johns 2024-06-06T20:49:21.668Z

assigned to @joel

Author: Chris Johns 2024-06-07T05:18:39.764Z

The RTEMS defaults tools for 6 builds GMP 6.3.0 so that is ok. The error must be MPFR.

The RSB `bare` has support for MPFR 4.2.0. This will be added to the defaults tools build.

Author: Chris Johns 2024-06-07T05:21:49.779Z

GCC 13 is building MPFR 4.2.1. The `bare` package should be moved to 4.2.1 and support in GCC 13 removed.

Author: Chris Johns 2024-06-07T22:30:20.731Z

assigned to @chris and unassigned @joel

Author: Chris Johns 2024-06-07T22:32:29.250Z

assigned to @joel

Author: Chris Johns 2024-06-08T04:44:19.340Z

@joel it seems MPFR and GDB use `libtool` and this is the error:

```
libtool: link: warning: library `/opt/work/chris/rtems/deploy/rtems-
↪deployment.git/build/tmp/sb-500/tools/rtems-default-tools/opt/rtems/
↪deploy/lib/libmpfr.la' was moved.
libtool: link: cannot find the library `/opt/rtems/deploy/lib/libgmp.la
↪' or unhandled argument `/opt/rtems/deploy/lib/libgmp.la'
make[2]: *** [Makefile:2173: gdb] Error 1
```

It seems `libtool` does not like using staged libraries in a build and wants the library in the final location.

Author: Chris Johns 2024-06-08T04:44:19.340Z

If you have an existing install under the build prefix the build may work as `libgmp.a` etc are found. If you use:

```
--prefix=/never-exist --no-install
```

you will see the problem. This is a simple RSB set of options for the command line tests the RSB build works for a clean install.

The issue is the `.la` files `libtool` uses being installed into the `_tmproot` path used to stage internally used libraries. If they are deleted before the GDB build runs with:

```
rm -f $(find %{_tmproot} -name \\*.la)
```

before `make` runs in the `gdb-common-1.cfg` the build and GDB and GCC build.

I think the solution is to make GPM and MPFR internal packages so the prefix they have is internal and `libtool` should not see a problem.

Author: Chris Johns 2024-06-08T04:44:19.340Z

I have made the changes to build Expat, GMP and MPFR as internal packages. The build installs static libraries into a temporary internal path in the RSB's build area and GDB and GCC link against these. The packages are not installed which I think is a good thing.

The MR !16 has the changes.

Author: Chris Johns 2024-06-07T23:06:16.806Z

assigned to @amar and unassigned @chris and @joel

Author: Chris Johns 2024-06-07T23:07:27.322Z

I have a patch on https://gitlab.rtems.org/chris/rtems-source-builder/-/tree/7-gdb-requires-gmp-4-2-and-mpfr-3-1-0?ref_type=heads which shows the error

Author: Chris Johns 2024-06-07T23:30:44.676Z

mentioned in issue #8

Author: Chris Johns 2024-06-08T00:47:06.901Z

mentioned in merge request !16

Author: Chris Johns 2024-06-08T04:44:42.974Z

assigned to @chris

3.14.1.42 8 - Change GDB back to 13

Id	8
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-06-07T23:30:44.306Z
Closed	2024-06-08T01:12:24.941Z
Updated	2024-06-08T01:12:24.952Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/8
Merges	0

Change the 6 version of GDB back to 13 until #7 is resolved.

Author: Chris Johns 2024-06-07T23:30:44.394Z

assigned to @chris

Author: Chris Johns 2024-06-07T23:53:49.093Z

Changing GDB to 13.2 lets it build however GCC fails with:

```
libtool: warning: library '/opt/work/chris/rtems/deploy/rtems-deployment.git/build/tmp/sb-500/tools/rtems-default-tools/opt/rtems/deploy/lib/libmpfr.la' was moved.
/usr/bin/grep: /opt/rtems/deploy/lib/libgmp.la: No such file or directory
/usr/bin/sed: can't read /opt/rtems/deploy/lib/libgmp.la: No such file or directory
libtool:   error: '/opt/rtems/deploy/lib/libgmp.la' is not a valid libtool archive
```

Another but similar error to the GDB MPFR one reported in #7

This is on Rocky 9

Author: Chris Johns 2024-06-08T01:12:11.875Z

I am closing this. It looks like the problem in #7 is related to deployment builds in `rpmbuild` to make an RPM. The updates from @joel build cleanly on FreeBSD 14 and Rocky 9 from the RSB command line.

3.14.1.43 4 - Move devel.rtems.org patches to gitlab.rtems.org

Id	4
State	closed
Type	ISSUE
Author	Gedare Bloom
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2024-05-16T18:06:24.945Z
Closed	2024-06-06T23:26:44.614Z
Updated	2024-06-06T23:26:44.626Z
Milestone	6.1
Labels	infra::migration, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/4
Merges	0

Summary

There are approx. 73 references to devel.rtems.org in RSB and most of them appear to be linking to patches. The patch attachment links appear to be mechanically fixable by replacing:

`https://devel.rtems.org/raw-attachment/ticket/####/FILENAME` with `https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/assets/tracmigration/ticket_attachments/FILENAME.patch`

Steps to reproduce

Author: Gedare Bloom 2024-05-16T18:06:25.054Z

assigned to @chris

Author: Amar Takhar 2024-05-16T18:23:13.241Z

This won't work. The directory structure was flattened so there are no more subdirectories I did this to future-proof in the hopes that they can actually be imported into GitLab in the future. So if there were previously 5 patch.diff files they will now be patch.diff, patch-1.diff, patch-2.diff etc.

I'll see if I can generate a log so we can easily replace these not sure though due to how tracboat is written.

Author: Kinsey Moore 2024-06-05T21:04:36.562Z

mentioned in merge request !15

Author: Kinsey Moore 2024-06-06T23:26:44.321Z

This is fixed now that !15 is merged.

3.14.1.44 3 - Move git.rtems.org configurations to gitlab.rtems.org

Id	3
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2024-05-16T05:54:50.654Z
Closed	2024-06-06T23:26:30.996Z
Updated	2024-06-06T23:26:31.011Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/3
Merges	0

Summary

A number of configuration files reference `git.rtems.org` and they need to be changed to reference `gitlab.rtems.org`.

Author: Chris Johns 2024-05-16T05:54:50.758Z

assigned to @chris

Author: Kinsey Moore 2024-06-05T16:58:06.143Z

I'm working on this patch set, just FYI.

Author: Amar Takhar 2024-06-05T17:03:31.699Z

If there are any comments required outside of the changes we should keep them here and point users to this ticket if they have issues the MR should give them an indication of what URLs they need to switch ot.

Author: Kinsey Moore 2024-06-05T18:20:17.005Z

mentioned in merge request !15

Author: Kinsey Moore 2024-06-05T18:20:44.964Z

created branch 3-move-git-rtems-org-configurations-to-gitlab-rtems-org to address this issue

Author: Kinsey Moore 2024-06-05T18:22:05.220Z

Ignore that created branch. . . the MR is !15 to fix main/6/7.

Author: Kinsey Moore 2024-06-06T23:26:30.695Z

This is fixed now that !15 is merged.

3.14.1.45 2 - QEMU failed to build on FreeBSD 14

Id	2
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Amar Takhar
Created	2024-05-13T07:21:47.963Z
Closed	2024-05-16T05:07:07.237Z
Updated	2024-05-16T05:07:07.302Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/work_items/2
Merges	1

Pixman and GLib fail to build on FreeBSD 14

Pixman update to 0.42.2 build however GLib 2.69.3 requires `meson` and `ninja` to build. This is a major changed.

Steps to reproduce

```
cd bare
../source-builder/sb-set-builder --prefix=/opt/rtems/qemu --log=qemu.txt devel/
↪qemu
```

Author: Chris Johns 2024-05-13T07:21:48.106Z

assigned to @chris

Author: Chris Johns 2024-05-14T04:16:16.059Z

Glib uses `pkg-config` via `meson` and `meson` checks for `--version` to determine if `pkg-config` is usable. I have added `--version` to the RSB `pkg-config` and `meson` seems happier:

```
Found pkg-config: YES (/opt/work/chris/rtems/rsb/rtems-source-builder.
↪git/source-builder/pkg-config) version: 1.2.3
```

The Glib build now fails due to:

```
Run-time dependency libpcre found: NO (tried pkgconfig and cmake)
Run-time dependency libpcre found: NO (tried pkgconfig and cmake)
Looking for a fallback subproject for the dependency libpcre
Downloading libpcre source from https://ftp.pcre.org/pub/pcre/pcre-8.37.
↪tar.bz2
```

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```
<urlopen error [Errno 8] Name does not resolve>
WARNING: failed to download with error: could not get https://ftp.pcre.
↪org/pub/pcre/pcre-8.37.tar.bz2 is the internet available?. Trying␣
↪after a delay...
<urlopen error [Errno 8] Name does not resolve>
WARNING: failed to download with error: could not get https://ftp.pcre.
↪org/pub/pcre/pcre-8.37.tar.bz2 is the internet available?. Trying␣
↪after a delay...
<urlopen error [Errno 8] Name does not resolve>
WARNING: failed to download with error: could not get https://ftp.pcre.
↪org/pub/pcre/pcre-8.37.tar.bz2 is the internet available?. Trying␣
↪after a delay...
<urlopen error [Errno 8] Name does not resolve>
WARNING: failed to download with error: could not get https://ftp.pcre.
↪org/pub/pcre/pcre-8.37.tar.bz2 is the internet available?. Trying␣
↪after a delay...
<urlopen error [Errno 8] Name does not resolve>
WARNING: failed to download with error: could not get https://ftp.pcre.
↪org/pub/pcre/pcre-8.37.tar.bz2 is the internet available?. Trying␣
↪after a delay...
<urlopen error [Errno 8] Name does not resolve>
A fallback URL could be specified using source_fallback_url key in the␣
↪wrap file

meson.build:2002:9: ERROR: could not get https://ftp.pcre.org/pub/pcre/
↪pcre-8.37.tar.bz2 is the internet available?
```

Oh hmm

Author: Chris Johns 2024-05-14T04:16:16.059Z

FreeBSD has `pcre2-10.43` installed and the following is present:

```
$ pkg which /usr/local/lib/libpcre2-16.a
/usr/local/lib/libpcre2-16.a was installed by package pcre2-10.43
```

and:

```
$ find /usr/local/libdata/ -name \\*.pc | grep pcre
/usr/local/libdata/pkgconfig/libpcre2-32.pc
/usr/local/libdata/pkgconfig/libpcre2-posix.pc
/usr/local/libdata/pkgconfig/libpcre2-16.pc
/usr/local/libdata/pkgconfig/libpcre2-8.pc
```

The RSB's `pkg-config` has `meson` reporting:

```
Pkg-config binary missing from cross or native file, or env var␣
↪undefined.
Trying a default Pkg-config fallback at pkg-config
```

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```
Found pkg-config: YES (/opt/work/chris/rtems/rsb/rtems-source-builder.
↪git/source-builder/pkg-config) version: 1.2.3
Determining dependency 'libpcre' with pkg-config executable '/opt/work/
↪chris/rtems/rsb/rtems-source-builder.git/source-builder/pkg-config'
env[PKG_CONFIG_BUILD_TOP_DIR]: /opt/work/chris/rtems/rsb/rtems-source-
↪builder.git/bare/build/tmp/sb-1001/devel/qemu
env[PKG_CONFIG_PATH]: /opt/work/chris/rtems/rsb/rtems-source-builder.
↪git/bare/build/tmp/sb-1001/devel/qemu/opt/work/rtems/qemu/lib/
↪pkgconfig
env[PKG_CONFIG]: /opt/work/chris/rtems/rsb/rtems-source-builder.git/
↪source-builder/pkg-config
-----------
Called: `/opt/work/chris/rtems/rsb/rtems-source-builder.git/source-
↪builder/pkg-config --modversion libpcre` -> 1
```

Using the FreeBSD `pkg` installed `pkg-config` gives:

```
Pkg-config binary missing from cross or native file, or env var␣
↪undefined.
Trying a default Pkg-config fallback at pkg-config
Found pkg-config: YES (/usr/local/bin/pkg-config) 2.0.3
Determining dependency 'libpcre' with pkg-config executable '/usr/local/
↪bin/pkg-config'
env[PKG_CONFIG_BUILD_TOP_DIR]: /opt/work/chris/rtems/rsb/rtems-source-
↪builder.git/bare/build/tmp/sb-1001/devel/qemu
env[PKG_CONFIG_PATH]: /opt/work/chris/rtems/rsb/rtems-source-builder.
↪git/bare/build/tmp/sb-1001/devel/qemu/opt/work/rtems/qemu/lib/
↪pkgconfig
env[PKG_CONFIG]: /usr/local/bin/pkg-config
-----------
Called: `/usr/local/bin/pkg-config --modversion libpcre` -> 1
```

Both report no `pcre` present. The RSB `pkg-config` is not the issue. The question is why `glib` and/or `meson` does not find `pcre`?

The `glib` support in `meson.build` is:

```
pcre = dependency('libpcre', version: '>= 8.31', required : false) #␣
↪Should check for Unicode support, too. FIXME
if not pcre.found()
if cc.get_id() == 'msvc' or cc.get_id() == 'clang-cl'
# MSVC: Search for the PCRE library by the configuration, which␣
↪corresponds
# to the output of CMake builds of PCRE.  Note that debugoptimized
# is really a Release build with .PDB files.
if vs_crt == 'debug'
pcre = cc.find_library('pcred', required : false)
else
pcre = cc.find_library('pcre', required : false)
endif
```

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```
endif
endif

# Try again with the fallback
if not pcre.found()
pcre = dependency('libpcre', required : true, fallback : ['libpcre',
↪'pcre_dep'])
use_pcre_static_flag = true
elif host_system == 'windows'
pcre_static = cc.links('''#define PCRE_STATIC
#include <pcre.h>
int main() {
void *p = NULL;
pcre_free(p);
return 0;
}''',
dependencies: pcre,
name : 'Windows system PCRE is a static build')
use_pcre_static_flag = pcre_static
else
use_pcre_static_flag = false
endif
```

Author: Chris Johns 2024-05-14T04:16:16.059Z

Updating to 2.80.2 as @amar kindly pointed out has resolved the PCRE issue

Author: Amar Takhar 2024-05-14T02:18:37.043Z

http://pcre.org/:

- Note that the former ftp.pcre.org FTP site is no longer available. You will need to update any scripts that download PCRE source code to download via HTTPS, Git, or Subversion from the new home on GitHub instead.

Author: Amar Takhar 2024-05-14T04:17:22.081Z

https://github.com/PCRE2Project/pcre2/releases

Author: Chris Johns 2024-05-14T04:17:22.081Z

It is not yet clear what the issue is to trigger `meson` to take the path it has. And I would discourage letting `glib` build a package like this. Too easy to be manipulated.

Author: Amar Takhar 2024-05-14T04:17:22.081Z

You mean why glib can't find libpcre or why it's trying to download it?

Author: Amar Takhar 2024-05-14T04:17:22.081Z

What version of glib is this?

Author: Chris Johns 2024-05-14T04:17:22.081Z

Attempting to build glib-2.69.3

Author: Chris Johns 2024-05-14T04:17:22.081Z

I wonder if `glib` wants PCRE, ie 8.45 (or something), and not PCRE2?

Author: Amar Takhar 2024-05-14T04:17:22.081Z

glib stable is at 2.80 any reason to build an old version like that? Might be why it's failing certainly why it's looking for an old ftp.

Author: Chris Johns 2024-05-14T04:17:22.081Z

Ah thanks and no reason other than scanning the list of files and getting the wrong one. I will take a look.

Author: Chris Johns 2024-05-14T04:17:22.081Z

@amar The `glib` site says 2.81.0 (https://docs.gtk.org/glib/) but I cannot find it in the Releases on their gitlab site. I have paged through a lot of dot releases and got bored?

Author: Amar Takhar 2024-05-14T04:17:22.081Z

I think that is the version of the documentation which is probably HEAD. 2.81 isn't released yet:

- https://gitlab.gnome.org/GNOME/glib/-/releases

Author: Chris Johns 2024-05-14T04:17:22.081Z

Using 2.80.2 has sorted this issue. Thanks.

Author: Chris Johns 2024-05-14T04:42:02.723Z

Fixed the RSB `pkg-config` to support `--modversion` so `meson` is happy however there is a new issue with `glib`:

```
Found pkg-config: YES (/opt/work/chris/rtems/rsb/rtems-source-builder.
↪git/source-builder/pkg-config) version: 1.2.3
Run-time dependency libpcre2-8 found: YES 10.43

meson.build:2214:0: ERROR: Subproject exists but has no meson.build␣
↪file.
```

Author: Amar Takhar 2024-05-14T04:42:02.723Z

Do you have any build artifacts around? That error can happen from previous builds/downloads that have failed.

Author: Amar Takhar 2024-05-14T04:42:02.723Z

Are you using the 'source code' or 'release tarball'?? Make sure you're using the release tarball it has all the submodules already.

- This: https://download.gnome.org/sources/glib/2.80/glib-2.80.2.tar.xz

Author: Chris Johns 2024-05-14T04:42:02.723Z

Ah OK. I took the source tarball.

Author: Amar Takhar 2024-05-14T04:42:02.723Z

Okay probably source of the error then they don't do a good job of making it clear you want the release tarball and not source.

Author: Chris Johns 2024-05-14T04:42:02.723Z

The released sources has resolved that issue

Author: Chris Johns 2024-05-14T04:52:24.733Z

The `glib` build has now moved onto fail with:

```
Dependency gvdb found: YES 0.0 (overridden)
Library m found: YES
Run-time dependency libffi found: YES 3.0.13
Run-time dependency zlib found: YES 1.3
Run-time dependency intl found: YES
Checking for function "ngettext" with dependency intl: YES
Checking for function "bind_textdomain_codeset" with dependency intl:␣
```

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```
↪YES
Checking for function "getxattr" : NO
Header "attr/xattr.h" has symbol "getxattr" : NO

meson.build:2318:4: ERROR: Problem encountered: No getxattr␣
↪implementation found in C library or libxattr
```

Author: Chris Johns 2024-05-14T04:52:24.733Z

I do not have:

```
pxattr-2.1.0                    Portable utility to work with file␣
↪extended attributes
```

installed. I do not like adding further dependencies into what we need.

Author: Amar Takhar 2024-05-14T04:52:24.733Z

You can pass `-Dxattr=false` To meson.

Author: Amar Takhar 2024-05-14T04:52:24.733Z

Actually the FreeBSD port may give you some ideas:

- https://github.com/freebsd/freebsd-ports/blob/main/devel/glib20/Makefile#L27

Author: Chris Johns 2024-05-14T04:52:24.733Z

Thanks, happy to borrow those options.

Author: Chris Johns 2024-05-15T02:47:29.135Z

Glib's `meson` support does not like the staging used by the RSB. The RSB builds and installs packages into an internal temporary work space (using `DESTDIR`) and those packages are referenced using `LDFLAGS` etc when building on top of earlier packages. This is mostly working expect when running `gio/glib-compile-resources`. This tool does a compile and link as it does not include the `LDFLAGS` or `LD`. The `LDFLAGS` are used else where by `meson` without an issue so it seems this is specific to this type of build target. In this case `iconv` is built however there is:

```
[986/1597] /opt/work/chris/rtems/rsb/rtems-source-builder.git/bare/
↪build/glib-2.80.2-x86_64-freebsd14.0-1/glib-2.80.2/_build/gio/glib-
↪compile-resources --compiler=clang --target=gio/tests/plugin-
↪resources.c --sourcedir=/opt/work/chris/rtems/rsb/rtems-source-
```

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```
↪builder.git/bare/build/glib-2.80.2-x86_64-freebsd14.0-1/glib-2.80.2/
↪gio/tests --internal --generate-source --c-name _g_plugin ../gio/
↪tests/test4.gresource.xml
FAILED: gio/tests/plugin-resources.c
/opt/work/chris/rtems/rsb/rtems-source-builder.git/bare/build/glib-2.80.
↪2-x86_64-freebsd14.0-1/glib-2.80.2/_build/gio/glib-compile-resources -
↪-compiler=clang --target=gio/tests/plugin-resources.c --sourcedir=/
↪opt/work/chris/rtems/rsb/rtems-source-builder.git/bare/build/glib-2.
↪80.2-x86_64-freebsd14.0-1/glib-2.80.2/gio/tests --internal --generate-
↪source --c-name _g_plugin ../gio/tests/test4.gresource.xml
ld-elf.so.1: /opt/work/chris/rtems/rsb/rtems-source-builder.git/bare/
↪build/glib-2.80.2-x86_64-freebsd14.0-1/glib-2.80.2/_build/gio/../glib/
↪libglib-2.0.so.0: Undefined symbol "libiconv_open"
```

Author: Amar Takhar 2024-05-15T02:47:29.135Z

There's probably a different environment variable that's used to avoid pulling in the system libraries and use the internal ones. Not sure why it isn't adding the directories it may not be detecting them. Did you look at the FreeBSD Makefile to see what it does?

Author: Chris Johns 2024-05-15T02:47:29.135Z

It is a custom command so env handling would have to be in compiler as a child process.

While looking into the issue I notice the name `gio/tests/test4.gresource.xml` is a test so I checked `meson_options.txt` and found I could disable the tests. The build completes and `qemu` is now building.

Author: Chris Johns 2024-05-16T04:51:20.683Z

QEMU has built and install however the `iconv` shared library is not being installed:

```
$ /opt/work/rtems/qemu/bin/qemu-system-aarch64 --version
ld-elf.so.1: Shared object "libintl.so.9" not found, required by
↪"libgio-2.0.so.0"
```

The installed shared libraries are:

```
$ find /opt/work/rtems/qemu -name \\*.so
/opt/work/rtems/qemu/lib/libgirepository-2.0.so
/opt/work/rtems/qemu/lib/libgettextsrc.so
/opt/work/rtems/qemu/lib/libpixman-1.so
/opt/work/rtems/qemu/lib/libgthread-2.0.so
/opt/work/rtems/qemu/lib/libffi.so
/opt/work/rtems/qemu/lib/libasprintf.so
```

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```
/opt/work/rtems/qemu/lib/libintl.so
/opt/work/rtems/qemu/lib/libgettextsrc-0.18.3.so
/opt/work/rtems/qemu/lib/libgio-2.0.so
/opt/work/rtems/qemu/lib/libgettextlib-0.18.3.so
/opt/work/rtems/qemu/lib/libgettextlib.so
/opt/work/rtems/qemu/lib/libglib-2.0.so
/opt/work/rtems/qemu/lib/libgmodule-2.0.so
/opt/work/rtems/qemu/lib/libgobject-2.0.so
/opt/work/rtems/qemu/lib/libgettextpo.so
```

Author: Amar Takhar 2024-05-16T04:51:20.683Z

Is `libintl.so.9` actually there? What is the link pointing to?

Author: Chris Johns 2024-05-16T04:51:20.683Z

It is built as part of the vertical stack if not present. I am looking into where the problem could be. I think this is an RSB issue.

Author: Chris Johns 2024-05-16T04:51:20.683Z

Hmm is is not being built:

```
config: devel/libiconv-1.14-1.cfg
config: devel/gettext-0.18.3.1-1.cfg
package: gettext-0.18.3.1-x86_64-freebsd14.0-1
building: gettext-0.18.3.1-x86_64-freebsd14.0-1
```

The package is in the stack but not built. It is only built on Windows.

Author: Amar Takhar 2024-05-16T04:51:20.683Z

If it's not built how is there a `libintl.so`?? Is that being created somewhere else?

Author: Chris Johns 2024-05-16T04:51:20.683Z

I cleaned the build and install `${prefix}` path and it is now failing with:

```
ld-elf.so.1: Shared object "libpixman-1.so.0" not found, required by
↪"qemu-system-aarch64"
```

I cannot build pixman as static and adding `--static` to the qemu build gave me an error looking for `libxml2` which I have not looked into. The shared library `libpixman-1.so.0` is installed into `${prefix}/lib` however qemu does not know to search there.

Author: Chris Johns 2024-05-16T04:51:20.683Z

The RSB configures qemu with:

```
--extra-ldflags="-Wl,-rpath -Wl,/$SB_PREFIX_CLEAN/lib -L$SYSROOT/lib $
↪{VDE_LDFLAGS}"
```

to set the search path in the executable. I am not sure why this has broken?

Author: Amar Takhar 2024-05-16T04:51:20.683Z

How come `-rpath` is empty? That might be your problem.

Author: Chris Johns 2024-05-16T04:51:20.683Z

It should not be empty as `$SB_PREFIX_CLEAN` is a clean version of the `$prefix` which is `/opt/work/rtems/qemu`? These options are (should be?) passed to `cc` which calls the `ld` with `-rpath /opt/work/rtems/qemu/lib`. The build system is `meson` and a `make` wraper which is calling ninja. I am not yet sure how to get a verbose option into that path.

Building with the path hard coded to the prefix:

```
--extra-ldflags="-Wl,-rpath -Wl,/opt/work/rtems/qemu/lib"
```

results in:

```
$ readelf -d /opt/work/rtems/qemu/bin/qemu-system-aarch64 | grep RUNPATH
$
```

If I change the path to something else:

```
--extra-ldflags="-Wl,-rpath -Wl,/chris/lib"
```

I get:

```
$ readelf -d /opt/work/rtems/qemu/bin/qemu-system-aarch64 | grep RUNPATH
0x000000000000001d RUNPATH              Library runpath: [/chris/lib]
$
```

Something must be touching these options if the path is based on the `$prefix` is not being set. The linker does not know about prefixing.

Author: Chris Johns 2024-05-16T04:51:20.683Z

And to prove there must be a simple pattern match I have made the path `/$SB_PREFIX_CLEAN/lib/../lib` and it works:

```
$ readelf -d /opt/work/rtems/qemu/bin/qemu-system-aarch64 | grep RUNPATH
0x000000000000001d RUNPATH              Library runpath: [/opt/work/
↪rtems/qemu/lib/../lib]
```

Weird

Author: Chris Johns 2024-05-16T04:51:20.683Z

I think reason `libintl.so.9` was not found by `libgio-2.0.so.0` is `gio` is not built with a suitable `-rpath` option. I guess the `rpath` needs to be set for all packages in the vertical stack?

Author: Amar Takhar 2024-05-16T04:51:20.683Z

Oh sorry I was confused by the separate use of -Wl I usually use -Wl,-rpath=<path>

Yes it might need to be set for all of them but your find only showed the *.so files was libintl.so.9 actually there or another version?

Author: Chris Johns 2024-05-16T04:51:20.683Z

I am reluctant to change `-rpath /a/b` to `-rpath=/a/b` given it has been working for years.

Yes that library is installed but it is not found by `gpio`.

Also using `/$SB_PREFIX_CLEAN/lib/` works as an `-rpath`.

Author: Chris Johns 2024-05-16T04:51:20.683Z

I have added `-rpath` to the packages in the stack and it works:

```
$ /opt/work/rtems/qemu/bin/qemu-system-aarch64  --version
QEMU emulator version 5.1.91
Copyright (c) 2003-2020 Fabrice Bellard and the QEMU Project developers
```

@amar thanks for your help and feedback, it has saved my sanity.

Author: Amar Takhar 2024-05-16T04:51:20.683Z

hah no problem I deal with this sort of thing a _lot_.

Also the only reason I use rpath=<path> is to make sure the path always sticks with the argument. I've had that not be the case but that was a long time ago.

Author: Chris Johns 2024-05-16T04:51:20.683Z

I agree on using = but I think the GNU doco was separate at the time but I cannot remember.

Author: Amar Takhar 2024-05-16T04:51:20.683Z

I think it was a bug in automake this was a really long time ago I'm sure it's not an issue anymore but who knows..

Author: Chris Johns 2024-05-16T04:51:50.363Z

mentioned in merge request !10

3.14.2 Merge Requests

3.14.2.1 48 - rtems/config/tools: Add checks to stdcxx.py install script

Id	48
State	merged
Merged by	Amar Takhar
Merged at	2024-08-23T21:48:44.990Z
Created	2024-08-19T21:12:26.101Z
Updated	2025-09-19T02:36:46.920Z
Milestone	6.1
Labels	python::gdb
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/48
Commit	f279f357e61e2e4ab56eef4c718d45c0f7cdd652

Summary

As noted in issue rtems/tools/rtems-source-builder#29, the build fails when run on a fresh toolchain. This occurs for 2 reasons:

1. The directory to which the script is to be installed does not exist (this only happens if this is the _first_ toolchain being built to that prefix).
2. `arch-rtems6-gcc` has not yet been installed, due to which one of the macros is left defined wrong. This is a result of not testing on a completely fresh toolchain after altering the order of some files in !35

To circumvent these errors, two checks have been added:

1. A check to see if the install path exists first, which if not, will be created and the script (`stdcxx.py`) will be placed there.
2. The `gcc_version` macro is used as backup if the toolchain's GCC is not yet built (in the case of fresh builds)

Author: Suraj Kumar 2024-08-20T05:26:31.118Z

@amar @chris

Author: Chris Johns 2024-08-20T05:26:31.118Z

This change looks good to me. When you are ready please make ready for approval and merging.

Thanks

Author: Suraj Kumar 2024-08-19T21:14:21.378Z

changed the description

Author: Suraj Kumar 2024-08-19T21:19:14.454Z

mentioned in issue #29

Author: Amar Takhar 2024-08-20T17:18:04.172Z

Can you add "Closes #29" to your commit message body without the quotes this way it will close and reference the ticket when merged thanks.

Chris is the best person to review this MR.

Author: Suraj Kumar 2024-08-20T17:18:04.172Z

Done, and agreed

Author: Amar Takhar 2024-08-20T17:18:04.172Z

This needs to be done in the commit message via git not the MR. Also please remove the [PATCH] as it is not needed thank you.

Author: Suraj Kumar 2024-08-20T17:18:04.172Z

@amar Do you mean something like that? I always added it to the MR body since it would mention "Closes #29 " in the `Merge details` section as well

Author: Amar Takhar 2024-08-20T17:18:04.172Z

Yes that's correct thanks. The Merge details only takes the commit message when first created but it doesn't run any of the commit triggers those only get activated via the commit message since there are other ways to put code into the repository.

Author: Suraj Kumar 2024-08-20T17:18:04.172Z

Ohh wow, I will keep this in mind, thank you. Git is beautiful

Author: Suraj Kumar 2024-08-19T21:45:17.865Z

changed the description

Author: Suraj Kumar 2024-08-19T21:48:16.382Z

changed title from **Draft: {-[PATCH] -}rtems/config/tools: Add checks to stdcxx.py install script** to **Draft: rtems/config/tools: Add checks to stdcxx.py install script**

Author: Suraj Kumar 2024-08-19T21:48:16.408Z

changed the description

Author: Suraj Kumar 2024-08-19T21:52:22.240Z

added 1 commit

- d8c324f7 - rtems/config/tools: Add checks to stdcxx.py install script

Compare with previous version

Author: Amar Takhar 2024-08-19T21:58:23.179Z

resolved all threads

Author: Suraj Kumar 2024-08-20T03:09:53.479Z

Another (messier) but working alternative might be to still place everything inside `gcc-common-1.cfg` but with the added check from `rtems-gcc-13.3-newlib-head.cfg`, without any includes to other files (which seems to be causing some kind of ordering issue?)

Author: Suraj Kumar 2024-08-20T04:12:39.482Z

I think `rtems-install-stdcxx.cfg` is being run by the RSB before it has a chance to get included at the right time (via `gcc-common-1.cfg`). I tried to circumvent this by defining a variable like

```
%define gcc_installed %(if [ -x %{_bindir}/%{_target}-gcc ]; then echo 1; else echo 0; fi)
```

and then placing the rest of the script under this condition, i.e, the first time being run by the RSB it would not run, and we can define it inside the check within

`gcc-common-1.cfg` (`gcc_pre_install`) before including `rtems-install-stdcxx.cfg` and it should have worked but didn't. Please let me know if this can be an approach as well

Author: Suraj Kumar 2024-08-20T04:26:26.125Z

Another method could be to place something like this instead:

```
- %define rsb_rtems_gcc_version %( %{_bindir}/%{_target}-gcc --version␣
↪| head -1 | awk '{print $3}' )
+ %define rsb_rtems_gcc_version %( \\
+  if [ -x %{_bindir}/%{_target}-gcc ]; then \\
+    %{_bindir}/%{_target}-gcc --version | head -1 | awk '{print $3}'; \
↪\
+  else \\
+    echo "'@RSB_GCC_VERSION@'"; \\
+  fi \\
+)
```

This way, even if things go wrong (which they should not, since by the 2nd time this script is included from `gcc-common-1.cfg`, GCC will have been built), we can add a check within `stdcxx-template.py` like such:

```
if gcc_version == "@RSB_GCC_VERSION@":
# something went wrong when building with GCC
gdb.execute("return")
```

This way, we need not refer to the `gcc_version` macro and can safely proceed with our own defined one.

I think this might be a clean approach. Please let me know your thoughts

Author: Frank Kuehndel 2024-08-23T21:43:10.519Z

I am a bit unsure about the approach with checking the GCC version by calling `sparc-rtems6-gcc`. What do you really know about the `sparc-rtems6-gcc` you are calling? Is it an old gcc from a different run of a different RSB? Is it installed by the current RSB? Is the current RSB run going to overwrite the gcc you called (by a one being of a different version)?

Moreover, in bug report #29 it called an installed gcc:

```
/opt/rtems/6/bin/sparc-rtems6-gcc
```

but RSB has options to for example build only packages and to install nothing at all.

Author: Chris Johns 2024-08-23T21:43:10.519Z

We need the internal gcc version and not the RSB version. To do this we need to ask the newly built gcc (`xgcc`). The file should be placed into the staging area. The staging area is tar'ed or copied to the prefix. I hope this helps explain the task.

Author: Suraj Kumar 2024-08-23T21:43:10.519Z

It calls the GCC specific to the architecture currently being built. I have also added a check now such that if GCC is not built as part of the toolchain, it will add a specific string which will be checked for in `stdcxx.py`, which lets it know GCC was not available during building hence GCC features (such as pretty-printing) would not be available.

And to answer your question on which GCC it will use, the script is now such that it will build the current GCC first (if build is enabled), then run it to find out the version

Author: Chris Johns 2024-08-23T21:43:10.519Z

Please install into the `DESTDIR`. That should clean up the writing on no install builds

Author: Frank Kuehndel 2024-08-23T14:58:08.056Z

1. You do not need to check whether the directory exist. `mkdir -p` will not fail if it exist.
2. RSB has options not to install anything (e.g. to only build packages). Does `mkdir -p %{stdcxx_script_path}` create something on the users machine even if RSB is told to install nothing?

Author: Suraj Kumar 2024-08-23T14:58:08.056Z

Hmm, I don't suppose that option is enabled. I am not sure about that but I suppose it might need to be added as another check? @chris What do you think?

Author: Chris Johns 2024-08-23T14:58:08.056Z

If ``-p``is portable it is a nice solution.

Author: Chris Johns 2024-08-23T14:58:08.056Z

The path should be prefixed with `$DESTDIR`

Author: Frank Kuehndel 2024-08-23T14:58:08.056Z

Oh, it did not consider whether `-p` is portable. Good point. Its part of POSIX.1-2008 at least.

Author: Chris Johns 2024-08-23T14:58:08.056Z

@frank_k thanks for checking

Author: Suraj Kumar 2024-08-21T12:49:55.150Z

changed this line in version 3 of the diff

Author: Chris Johns 2024-08-23T21:43:27.651Z

I have taken a closer look and the RSB config parse needs a change to support what we want. The issue is the `%install` directive is not passed into the include file processing so the context of the included file is lost which causes the command we want to not be in the right spot in the include processing.

Author: Chris Johns 2024-08-23T21:43:27.651Z

With !49 and the following patch I can build a tool chain for `aarch64` with `--no-install` and `--bet-tar-file`. The patch is:

```
diff --git a/rtems/config/tools/rtems-install-stdcxx.cfg b/rtems/config/
↪tools/rtems-install-stdcxx.cfg
index e32f1d2..3ec7f2f 100644
--- a/rtems/config/tools/rtems-install-stdcxx.cfg
+++ b/rtems/config/tools/rtems-install-stdcxx.cfg
@@ -5,12 +5,14 @@
# Path to the location of the template script.
%define stdcxx_template %{rtems_configdir}/stdcxx-template.py

-# Get the current GCC version of the target being built.
-%define rsb_rtems_gcc_version %(%{_bindir}/%{_target}-gcc --version |␣
↪head -1 | awk '{print $3}')
-
# Path to the target location of the script: gdb/python
-%define stdcxx_script %{_prefix}/share/gdb/python/rtems/stdcxx.py
+%define stdcxx_script_path $SB_BUILD_ROOT/%{_prefix}/share/gdb/python/
↪rtems
+%define stdcxx_script      %{stdcxx_script_path}/stdcxx.py

# Modify the template script and update the current GCC version
# and place it in the target location.
-%(cat "%{stdcxx_template}" | sed "s/@RSB_GCC_VERSION@/%{rsb_rtems_gcc_
↪version}/g" > "%{stdcxx_script}")
+%install
+  echo "Installing RTEMS stdc++ Pretty Printer support"
+  RSB_RTEMS_GCC_VERSION=$($SB_BUILD_ROOT_BINDIR/%{_target}-gcc --
↪version | head -1 | awk '{print $3}')
+  mkdir -p %{stdcxx_script_path}
+  cat "%{stdcxx_template}" | sed "s/@RSB_GCC_VERSION@/${RSB_RTEMS_GCC_
↪VERSION}/g" > "%{stdcxx_script}"
diff --git a/source-builder/config/gcc-common-1.cfg b/source-builder/
↪config/gcc-common-1.cfg
```

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```
index 250930a..b317eb1 100644
--- a/source-builder/config/gcc-common-1.cfg
+++ b/source-builder/config/gcc-common-1.cfg
@@ -225,10 +225,6 @@ URL:          http://gcc.gnu.org/
%{__make} DESTDIR=$SB_BUILD_ROOT install
cd ${build_top}

-  %if %{defined gcc_pre_install}
-    %{gcc_pre_install}
-  %endif
-
# libiberty doesn't honor --libdir, but always installs to a
# magically guessed _libdir
%{__rmfile} ${SB_BUILD_ROOT}%{_libdir}/libiberty.a
@@ -242,6 +238,10 @@ URL:          http://gcc.gnu.org/
# Don't want libffi's man-pages
%{__rmfile} $SB_BUILD_ROOT%{_mandir}/man3/*ffi*

+  %if %{defined gcc_pre_install}
+    %{gcc_pre_install}
+  %endif
+
# Clean the symlinks away incase the source is a repo
# Note, delete as a directory because of MSYS2 support on Windows.
%{__rmdir} ${source_dir_gcc}/newlib
```

The command is:

```
../source-builder/sb-set-builder --prefix=/bad/bad --no-install --bset-
↪tar-file --log=ni-aa.txt --trace --no-clean 6/rtems-aarch64
```

Checking the tar file shows the install Python file:

```
$ tar ztvf tar/rtems-aarch64.tar.bz2 | grep stdcxx.py
-rw-r--r--  0 chris  chris      1420 Aug 21 16:08 bad/bad/share/gdb/
↪python/rtems/stdcxx.py
```

Author: Suraj Kumar 2024-08-23T21:43:27.651Z

@chris I have made these changes in the latest commit

Author: Frank Kuehndel 2024-08-23T21:43:27.651Z

Thank you @chris this looks better.

I tested the above patch on top of !49 in a container and the RSB build was successful. This patch should fix #29 .

Author: Chris Johns 2024-08-21T06:33:16.071Z

mentioned in merge request !49

Author: Suraj Kumar 2024-08-21T12:49:55.374Z

added 1 commit

- bf9ef731 - rtems/config/tools: Add install directive to script installing stdcxx.py

Compare with previous version

Author: Suraj Kumar 2024-08-21T13:09:32.804Z

added 3 commits

- d8c324f7 - rtems/config/tools: Add checks to stdcxx.py install script
- e727bb01 - Added check to only install stdcxx.py for RTEMS builds
- 80ea5fa5 - Added install directive

Compare with previous version

Author: Suraj Kumar 2024-08-23T06:30:49.648Z

Author: Joel Sherrill 2024-08-23T21:43:39.272Z

FWIW be sure to test with "–source-only-download". The RSB is currently broken for that also.

```
config: tools/rtems-gcc-13.3-newlib-head.cfg

error: shell macro failed: cat "/home/joel/rtems-work/rtems-source-
↪builder/rtems/config/stdcxx-template.py" | sed "s/@RSB_GCC_VERSION@//
↪bin/sh: line 1: /opt/rtems/6/bin/aarch64-rtems6-gcc: No such file or␣
↪directory/g" > "/opt/rtems/6/share/gdb/python/rtems/stdcxx.py": 1: /
↪bin/sh: line 1: /opt/rtems/6/share/gdb/python/rtems/stdcxx.py: No␣
↪such file or directory

Build FAILED
```

Author: Suraj Kumar 2024-08-23T21:43:39.272Z

@joel I just tested this, works good for me

Author: Chris Johns 2024-08-23T21:43:39.293Z

resolved all threads

Author: Chris Johns 2024-08-23T21:43:50.281Z

approved this merge request

Author: Chris Johns 2024-08-23T21:43:54.936Z

marked this merge request as **ready**

Author: Amar Takhar 2024-08-23T21:48:25.430Z

added 6 commits

- 80ea5fa5...7aec6d55 - 3 commits from branch `rtems/tools:main`
- 4699214a - rtems/config/tools: Add checks to stdcxx.py install script
- ebef2795 - Added check to only install stdcxx.py for RTEMS builds
- f279f357 - Added install directive

Compare with previous version

3.14.2.2 53 - config: Update GCC 10 dependencies

Id	53
State	merged
Merged by	Amar Takhar
Merged at	2024-08-30T17:00:24.735Z
Assignee(s)	Sebastian Huber
Created	2024-08-28T23:06:47.331Z
Updated	2025-09-19T02:36:45.661Z
Milestone	6.1
Labels	tool::gcc
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/53
Commit	8e1b1caaba6cbda126abc7186a2fa67c4df47601

Summary

config: Update GCC 10 dependencies

Older versions of MPC fail to build on current Linux distributions.

Author: Sebastian Huber 2024-08-28T23:06:47.447Z

assigned to @sebhub

Author: Sebastian Huber 2024-08-30T08:28:50.068Z

added 3 commits

- 20b331d0...9e6fd88f - 2 commits from branch `rtems/tools:main`
- 8e1b1caa - config: Update GCC 10 dependencies

Compare with previous version

Author: Joel Sherrill 2024-08-30T13:46:45.270Z

approved this merge request

3.14.2.3 54 - 6/7: Fix Newlib update

Id	54
State	merged
Merged by	Chris Johns
Merged at	2024-08-29T03:50:35.879Z
Assignee(s)	Sebastian Huber
Created	2024-08-28T23:14:58.458Z
Updated	2025-09-19T02:36:45.328Z
Milestone	6.1
Labels	tool::newlib
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/54
Commit	b44a884ccd1f13c3582733b0991773493037263b

Summary

6/7: Fix Newlib update

Update Newlib for all active tool configurations.

Update #24.

Author: Sebastian Huber 2024-08-28T23:14:58.611Z

assigned to @sebhub

Author: Amar Takhar 2024-08-29T03:47:03.305Z

hmm label decisions i guess this is newlib more than anything else.

Author: Chris Johns 2024-08-29T03:50:31.710Z

approved this merge request

3.14.2.4 52 - replaced hardwired sis version in the migrated gitlab path

Id	52
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-29T14:40:23.799Z
Assignee(s)	Chris Johns
Created	2024-08-28T16:54:50.383Z
Updated	2025-09-19T02:36:44.918Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/52
Commit	9e6fd88f0ac7616fe909d46f89a9e2cf016e6833

Summary

replaced hardwired sis version in the migrated gitlab path

Author: Amar Takhar 2024-08-28T17:49:58.742Z

assigned to @chris

Author: Amar Takhar 2024-08-28T17:50:46.668Z

Good catch, thank you!

Author: Leonidas Kosmidis 2024-08-29T03:55:56.196Z

Thank you! I was updating the paths in our internal mirror used in the METASAT project (https://metasat-project.eu) in which we had to freeze the RTEMS version we use. I couldn't simply fetch the changes, so I noticed the change in the diff with upstream.

Author: Amar Takhar 2024-08-29T03:55:56.196Z

No worries that's great for users to be testing these configurations. Eventually when we have CI running we'll catch these cases.

Author: Amar Takhar 2024-08-29T03:55:56.214Z

resolved all threads

Author: Joel Sherrill 2024-08-29T14:39:52.835Z

approved this merge request

Author: Joel Sherrill 2024-08-29T14:40:07.462Z

added 2 commits

- b44a884c - 1 commit from branch `rtems/tools:main`
- 9e6fd88f - replaced hardwired sis version in the migrated gitlab path

Compare with previous version

3.14.2.5 55 - rtems: Update tools to fix #13 (closed) console.open()

Id	55
State	merged
Merged by	Joel Sherrill
Merged at	2024-09-05T21:39:39.675Z
Created	2024-09-05T11:27:34.748Z
Updated	2025-09-19T02:36:29.292Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/55
Commit	8488d28da6bfa233a90c2e80898696fd8de15534

rtems: Update tools to fix issue #13

- RTEMS Tools
- Fix issue #13: console.open() arguments

Author: Frank Kuehndel 2024-09-05T13:21:42.436Z

Test with a CI pipeline was successful.

Author: Frank Kuehndel 2024-09-05T13:21:42.618Z

marked this merge request as **ready**

Author: Joel Sherrill 2024-09-05T21:39:34.744Z

I am ok with this but the short title for the message should mention open.

Author: Frank Kuehndel 2024-09-05T21:39:34.744Z

@Joel I changed the commit message. I hope I did understand you request correctly.

Author: Joel Sherrill 2024-09-05T21:39:34.744Z

Yep. Best to avoid a bunch of messages like “Fixed bug”, “Updated hash”, etc. when you use some view that only shows the one-line view.

Author: Frank Kuehndel 2024-09-05T14:16:20.129Z

added 1 commit

- 8488d28d - rtems: Update tools to fix #13 console.open()

Compare with previous version

Author: Frank Kuehndel 2024-09-05T14:19:43.795Z

changed title from **rtems: Update tools to fix {-issue `#13 <https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/issues/13>`_-}** to **rtems: Update tools to fix {+#13 (closed) console.open()+}**

Author: Frank Kuehndel 2024-09-05T14:33:28.760Z

resolved all threads

Author: Joel Sherrill 2024-09-05T21:39:27.227Z

approved this merge request

Author: Joel Sherrill 2024-09-05T21:39:34.767Z

resolved all threads

3.14.2.6 105 - rtems/config/rtems-kernel-common: Parse –with-rtems-tests correctly

Id	105
State	merged
Merged by	Chris Johns
Merged at	2025-01-06T21:30:54.362Z
Assignee(s)	Kinsey Moore
Created	2025-01-03T20:59:44.026Z
Updated	2025-01-28T03:39:05.638Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/105
Commit	fc16044911f20c4ed1c2c01dcabf40cc7bf254b6

Summary

rtems/config/rtems-kernel-common: Parse –with-rtems-tests correctly

A bug in the RTEMS kernel recipe caused tests to be built and then discarded instead of being installed to the desired prefix directory.

Closes #70

Author: Kinsey Moore 2025-01-03T20:59:44.267Z

assigned to @opticron

Author: Kinsey Moore 2025-01-03T21:00:02.348Z

changed the description

Author: W S 2025-01-05T00:14:27.891Z

Not sure if the PR fixes the described issue.

I ran the following command from 2.5.1 in the docs:

```
cd $HOME/quick-start/src/rsb/rtems
../source-builder/sb-set-builder --prefix=$HOME/quick-start/rtems/6 \\
--target=sparc-rtems6 --with-rtems-bsp=sparc/erc32 --with-rtems-
↪tests=yes 6/rtems-kernel
```

There are no build artifacts for sparc to be found.

Author: Chris Johns 2025-01-06T21:29:47.591Z

added 4 commits

- 2c39c62b...e4f17f38 - 3 commits from branch `rtems/tools:6`
- fc160449 - rtems/config/rtems-kernel-common: Parse –with-rtems-tests correctly

Compare with previous version

Author: Chris Johns 2025-01-06T21:30:49.803Z

approved this merge request

Author: Kinsey Moore 2025-01-28T03:39:05.571Z

mentioned in merge request !104

3.14.2.7 116 - rtems/net-legacy: Do not reference rtems_waf when released

Id	116
State	merged
Merged by	Kinsey Moore
Merged at	2025-01-07T03:43:42.187Z
Assignee(s)	Chris Johns
Created	2025-01-07T03:42:36.565Z
Updated	2025-01-07T03:43:43.583Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/116
Commit	b1aec32059aa0e86385ff75ec01daf93713fa382

Summary

rtems/net-legacy: Do not reference rtems_waf when released

Closes #76

Author: Chris Johns 2025-01-07T03:42:36.984Z

assigned to @chris

Author: Kinsey Moore 2025-01-07T03:43:24.205Z

approved this merge request

3.14.2.8 113 - sb: Fix version finding the top when invoked with VERSION externally

Id	113
State	merged
Merged by	Kinsey Moore
Merged at	2025-01-07T03:12:14.002Z
Assignee(s)	Chris Johns
Created	2025-01-07T02:50:26.970Z
Updated	2025-01-07T03:12:15.148Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/113
Commit	1bd2a19e8c3a307204d62e5b7dd3d22820d8ba32

Fix version finding the top when invoked with VERSION externally

Closes #68

Author: Chris Johns 2025-01-07T02:50:31.441Z

assigned to @chris

Author: Kinsey Moore 2025-01-07T03:12:08.947Z

approved this merge request

3.14.2.9 102 - config/gcc-13: Add support in ISL for FreeBSD on arm64 systems

Id	102
State	merged
Merged by	Chris Johns
Merged at	2025-01-06T21:29:26.996Z
Assignee(s)	Kinsey Moore
Created	2024-12-29T17:14:39.639Z
Updated	2025-01-06T21:29:29.056Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/102
Commit	e4f17f38d0cb57aeaf9eb620f3d14f4d196256ca

Summary

config/gcc-13: Add support in ISL for FreeBSD on arm64 systems

The ISL configuration script does not recognize “arm64” as a valid system. Just as “arm64-*” was fixed for Apple AArch64 systems, a fix is needed to convert “arm64” to “aarch64-unknown” to allow compilation on non-Apple, non-Linux AArch64 systems.

Closes #69

Author: Kinsey Moore 2024-12-29T17:14:39.880Z

assigned to @opticron

Author: Chris Johns 2025-01-06T04:13:24.241Z

added 3 commits

- 1474eaaf...356068bd - 2 commits from branch `rtems/tools:6`
- e4f17f38 - config/gcc-13: Add support in ISL for FreeBSD on arm64 systems

Compare with previous version

Author: Chris Johns 2025-01-06T21:29:21.231Z

approved this merge request

3.14.2.10 109 - rtems/net: Remove NTP as a 3rd party package

Id	109
State	merged
Merged by	Kinsey Moore
Merged at	2025-01-06T01:45:43.406Z
Assignee(s)	Chris Johns
Created	2025-01-06T01:28:39.767Z
Updated	2025-01-06T01:45:44.917Z
Milestone	6.1
Labels	pkg::network-services, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/109
Commit	356068bd3d25bff52cdda315016aac897ece658d

Remove NTP as a 3rd party package

Use net-services.

Closes #72

Author: Chris Johns 2025-01-06T01:28:41.005Z

assigned to @chris

Author: Chris Johns 2025-01-06T01:29:01.854Z

added 2 commits

- 8fc14dd8 - 1 commit from branch `rtems/tools:6`
- 356068bd - rtems/net: Remove NTP as a 3rd party package

Compare with previous version

Author: Kinsey Moore 2025-01-06T01:45:36.798Z

approved this merge request

3.14.2.11 107 - sb: A build does not accumulate errors, remove assignment

Id	107
State	merged
Merged by	Kinsey Moore
Merged at	2025-01-06T01:23:35.619Z
Assignee(s)	Chris Johns
Created	2025-01-06T01:15:34.279Z
Updated	2025-01-06T01:23:37.930Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/107
Commit	8fc14dd8ae83db80dca8ca321f961d85b4d3824f

A build does not accumulate errors, remove assignment

Closes #74

Author: Chris Johns 2025-01-06T01:15:34.481Z

assigned to @chris

Author: Kinsey Moore 2025-01-06T01:23:23.807Z

approved this merge request

3.14.2.12 99 - source-builder: Set default for force_package_build

Id	99
State	merged
Merged by	Chris Johns
Merged at	2024-12-20T23:04:34.255Z
Assignee(s)	Kinsey Moore
Created	2024-12-20T15:52:31.720Z
Updated	2024-12-20T23:04:35.237Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/99
Commit	1842d15b60141cccdbbc08c6d80d261ab48a87e8

Summary

source-builder: Set default for force_package_build

This variable is missing outside of simhost builds. This adds a default to prevent failures outside that environment.

Closes #66

Author: Kinsey Moore 2024-12-20T15:52:31.903Z

assigned to @opticron

Author: Kinsey Moore 2024-12-20T22:01:16.192Z

added 1 commit

- 1842d15b - source-builder: Set default for force_package_build

Compare with previous version

Author: Chris Johns 2024-12-20T23:04:30.057Z

approved this merge request

3.14.2.13 98 - source-builder: Set default for force_package_build

Id	98
State	merged
Merged by	Chris Johns
Merged at	2024-12-20T23:04:13.623Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Chris Johns
Created	2024-12-20T15:48:21.282Z
Updated	2024-12-20T23:04:14.866Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/98
Commit	94953e0d8aa4195dcf228162e62fa63f4d9c1cb5

Summary

source-builder: Set default for force_package_build

This variable is missing outside of simhost builds. This adds a default to prevent failures outside that environment.

Author: Kinsey Moore 2024-12-20T15:48:21.451Z

assigned to @opticron

Author: Chris Johns 2024-12-20T21:54:27.618Z

requested review from @chris

Author: Kinsey Moore 2024-12-20T22:01:51.004Z

added 1 commit

- 94953e0d - source-builder: Set default for force_package_build

Compare with previous version

Author: Chris Johns 2024-12-20T23:04:07.465Z

approved this merge request

3.14.2.14 97 - sb/simhost: Fix bset parsing in simhost and improve error handling

Id	97
State	merged
Merged by	Amar Takhar
Merged at	2024-12-19T00:18:56.776Z
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Created	2024-12-18T22:00:50.396Z
Updated	2024-12-19T00:18:58.840Z
Milestone	6.1
Labels	network::lwip, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/97
Commit	a77cacae3a86d96df2a1bcf13d9ac4582fb7ed92

Summary

Fix bset parsing in simhost and improve error handling. This fixes getting the lwip sources in a release.

Fixes #57

Closes #57

Author: Chris Johns 2024-12-18T22:00:50.561Z

requested review from @amar

Author: Chris Johns 2024-12-18T22:00:50.575Z

assigned to @chris

Author: Amar Takhar 2024-12-18T22:05:34.242Z

@chris did you see this? https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/issues/65

Author: Amar Takhar 2024-12-19T00:18:51.954Z

approved this merge request

3.14.2.15 89 - bare/texinfo: Add back texinfo-7.0.3.cfg which was removed by sb-track

Id	89
State	merged
Merged by	Amar Takhar
Merged at	2024-12-16T04:28:29.333Z
Assignee(s)	Chris Johns
Created	2024-12-15T23:44:44.831Z
Updated	2024-12-17T16:26:38.320Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/89
Commit	7dd6535a46a08e80fb1bf7713899ed66df029bde

Summary

Add back texinfo-7.0.3.cfg which was removed by `sb-track`

The tool will be fixed on main. This is isolated to the 6 release branch.

Closes #60

Author: Chris Johns 2024-12-15T23:44:45.032Z

assigned to @chris

Author: Amar Takhar 2024-12-16T04:28:24.005Z

approved this merge request

Author: Kinsey Moore 2024-12-17T16:26:38.112Z

mentioned in issue #62

Author: Kinsey Moore 2024-12-17T16:26:58.830Z

mentioned in issue #60

3.14.2.16 93 - bare/texinfo: Add back texinfo-1.cfg which was removed by sb-track

Id	93
State	merged
Merged by	Joel Sherrill
Merged at	2024-12-17T00:59:19.869Z
Assignee(s)	Chris Johns
Reviewer(s)	Kinsey Moore
Created	2024-12-16T23:13:56.357Z
Updated	2024-12-17T16:23:55.113Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/93
Commit	334e5e866c69cf7fcbdb560d71a01561e1471d5e

bare/texinfo: Add back texinfo-1.cfg which was removed by sb-track

The tool will be fixed on main. This is isolated to the 6 release branch.

Closes #61

Author: Chris Johns 2024-12-16T23:13:56.528Z

requested review from @opticron

Author: Chris Johns 2024-12-16T23:13:56.543Z

assigned to @chris

Author: Joel Sherrill 2024-12-17T00:59:15.807Z

approved this merge request

Author: Kinsey Moore 2024-12-17T16:23:55.076Z

Interesting, this didn't close #61 like it should have.

Author: Kinsey Moore 2024-12-17T16:24:20.710Z

mentioned in issue #61

3.14.2.17 92 - rtems/config: Add rtems-lwip build set

Id	92
State	merged
Merged by	Joel Sherrill
Merged at	2024-12-17T02:56:48.575Z
Assignee(s)	Kinsey Moore
Created	2024-12-16T23:01:48.278Z
Updated	2024-12-17T02:56:49.933Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/92
Commit	d5849b56e48b6f68caeca11ec7458dfa297e5edf

Summary

rtems/config: Add rtems-lwip build set

This adds the build sets and metadata required to include rtems-lwip in a stack build.

Closes #57

Closes #6

Author: Kinsey Moore 2024-12-16T23:01:48.473Z

assigned to @opticron

Author: Kinsey Moore 2024-12-17T02:52:53.133Z

added 2 commits

- 334e5e86 - 1 commit from branch `rtems/tools:6`
- d5849b56 - rtems/config: Add rtems-lwip build set

Compare with previous version

Author: Joel Sherrill 2024-12-17T02:56:43.560Z

approved this merge request

3.14.2.18 84 - RTEMS Packages: Add support for –release-branch

Id	84
State	merged
Merged by	Kinsey Moore
Merged at	2024-12-16T14:54:06.491Z
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Created	2024-11-27T02:38:11.930Z
Updated	2024-12-16T14:54:08.486Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/84
Commit	7d8bc0afdc01f3b784e4b4302e1bb90b6ae494f3

Summary

sp/rtems-pkg: Add support for –release-branch

Closes #52

Author: Chris Johns 2024-11-27T02:38:12.121Z

assigned to @chris

Author: Chris Johns 2024-11-27T03:53:41.694Z

added 2 commits

- afd2a47d - 1 commit from branch `rtems/tools:6`
- 4096475e - sp/rtems-pkg: Add support for –release-branch

Compare with previous version

Author: Kinsey Moore 2024-11-27T20:28:35.634Z

added 2 commits

- 6a0772b8 - 1 commit from branch `rtems/tools:6`
- e2b93a3f - sp/rtems-pkg: Add support for –release-branch

Compare with previous version

Author: Kinsey Moore 2024-11-27T22:43:36.521Z

The help text here doesn't seem to be fully coherent. Is it possible there is a misspelled word?

Author: Chris Johns 2024-11-27T22:43:30.158Z

changed this line in version 4 of the diff

Author: Chris Johns 2024-11-27T22:43:30.451Z

added 3 commits

- 9e3f776d - rtems/pkgs: Update all packages post 6 branch
- 8d96b6fc - rtems/c++: Patch to support C++17 filesystem namespace calls
- 23d30ce2 - sp/rtems-pkg: Add support for –release-branch

Compare with previous version

Author: Chris Johns 2024-11-27T22:43:36.537Z

resolved all threads

Author: Chris Johns 2024-11-27T22:43:54.028Z

requested review from @opticron

Author: Amar Takhar 2024-11-28T04:54:50.130Z

approved this merge request

Author: Amar Takhar 2024-11-28T05:02:14.137Z

@chris this needs to be rebased manually.

Author: Chris Johns 2024-11-28T05:02:14.137Z

Please review again. I rebased.

Author: Chris Johns 2024-11-28T04:59:46.234Z

added 3 commits

- 23d30ce2...6a0772b8 - 2 commits from branch `rtems/tools:6`
- be8e9d95 - sp/rtems-pkg: Add support for –release-branch

Compare with previous version

Author: Chris Johns 2024-11-28T05:00:02.874Z

reset approvals from @amar by pushing to the branch

Author: Chris Johns 2024-11-28T05:00:41.100Z

added 3 commits

- be8e9d95...c8f5eea2 - 2 commits from branch `rtems/tools:6`
- 70c0bc0d - sp/rtems-pkg: Add support for –release-branch

Compare with previous version

Author: Chris Johns 2024-11-28T05:01:15.323Z

requested review from @amar and removed review request for @opticron

Author: Chris Johns 2024-11-28T05:02:14.156Z

resolved all threads

Author: Amar Takhar 2024-11-28T05:26:30.610Z

approved this merge request

Author: Amar Takhar 2024-12-16T14:52:50.855Z

Did this change get reverted?

Author: Chris Johns 2024-12-16T14:52:50.855Z

It must have. Thanks.

Author: Kinsey Moore 2024-12-16T14:52:39.346Z

changed this line in version 8 of the diff

Author: Kinsey Moore 2024-12-16T04:09:30.281Z

added 2 commits

- 733a9b18 - 1 commit from branch `rtems/tools:6`
- c091e116 - sp/rtems-pkg: Add support for –release-branch

Compare with previous version

Author: Kinsey Moore 2024-12-16T14:52:39.617Z

added 1 commit

- 368a4db4 - sp/rtems-pkg: Add support for –release-branch

Compare with previous version

Author: Kinsey Moore 2024-12-16T14:52:50.873Z

resolved all threads

Author: Kinsey Moore 2024-12-16T14:52:54.904Z

reset approvals from @amar by pushing to the branch

Author: Kinsey Moore 2024-12-16T14:52:58.580Z

approved this merge request

Author: Kinsey Moore 2024-12-16T14:53:05.548Z

added 2 commits

- 7dd6535a - 1 commit from branch `rtems/tools:6`
- 7d8bc0af - sp/rtems-pkg: Add support for –release-branch

Compare with previous version

3.14.2.19 87 - Remove lwIP build set

Id	87
State	merged
Merged by	Gedare Bloom
Merged at	2024-12-07T02:55:17.629Z
Assignee(s)	Kinsey Moore
Created	2024-12-06T03:46:22.360Z
Updated	2024-12-07T02:55:19.441Z
Milestone	6.1
Labels	network::lwip, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/87
Commit	733a9b18b9e5ae9500f3adf903c0a94656d430e7

Summary

Remove lwIP build set

Closes #55

Author: Kinsey Moore 2024-12-06T03:46:22.560Z

assigned to @opticron

Author: Kinsey Moore 2024-12-06T03:48:26.391Z

changed the description

Author: Gedare Bloom 2024-12-07T02:55:11.837Z

approved this merge request

3.14.2.20 85 - RTEMS: Remove 7 build sets

Id	85
State	merged
Merged by	Amar Takhar
Merged at	2024-11-28T04:54:08.615Z
Assignee(s)	Chris Johns
Created	2024-11-28T01:02:13.252Z
Updated	2024-11-28T04:54:10.892Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/85
Commit	c8f5eea268f28f7ad4085671fc12a296d87858ef

Summary

Remove 7 build sets and non-referenced configuration files.

Updates #53

Author: Chris Johns 2024-11-28T01:02:13.443Z

assigned to @chris

Author: Amar Takhar 2024-11-28T04:53:51.186Z

approved this merge request

Author: Amar Takhar 2024-11-28T04:53:58.583Z

added 3 commits

- 6a0772b8 - 1 commit from branch `rtems/tools:6`
- 30d2f8c3 - rtems: Remove 7 build sets
- c8f5eea2 - rtems: Remove unreferenced configuration files from the release

Compare with previous version

3.14.2.21 80 - RTEMS C++ Patch to support C++17 filesystem namespace calls

Id	80
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-27T15:25:51.833Z
Assignee(s)	Chris Johns
Reviewer(s)	Joel Sherrill
Created	2024-11-26T01:13:35.655Z
Updated	2024-11-27T15:27:28.568Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/80
Commit	6a0772b8a2cc58389b298873bf94324316579076

Summary

Patch to support C++17 filesystem namespace calls.

Updates #46

(cherry picked from commit 8d96b6fc4419a14b6f5be7c1b792805041e014e6)

Co-authored-by: Chris Johns chrisj@rtems.org

Author: Chris Johns 2024-11-26T01:13:35.873Z

requested review from @joel

Author: Chris Johns 2024-11-26T01:13:35.890Z

assigned to @chris

Author: Kinsey Moore 2024-11-27T15:07:23.551Z

approved this merge request

Author: Kinsey Moore 2024-11-27T15:07:32.678Z

added 2 commits

- afd2a47d - 1 commit from branch `6`
- 6a0772b8 - rtems/c++: Patch to support C++17 filesystem namespace calls

Compare with previous version

Author: Kinsey Moore 2024-11-27T15:27:28.318Z

mentioned in issue #46

3.14.2.22 81 - RTEMS Packages Update to the 6 branch packages

Id	81
State	merged
Merged by	Gedare Bloom
Merged at	2024-11-27T02:36:10.570Z
Assignee(s)	Chris Johns
Created	2024-11-26T03:39:46.485Z
Updated	2024-11-27T02:36:13.293Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/81
Commit	afd2a47d08a47fff60a7060ac9e0a6f4962e0ac6

Update the packages in the RSB to the 6 branches.

Author: Chris Johns 2024-11-26T03:39:46.659Z

assigned to @chris

Author: Gedare Bloom 2024-11-27T02:36:03.906Z

approved this merge request

3.14.2.23 77 - rtems/x86_64: Do not build grub or makefs on MacOS

Id	77
State	merged
Merged by	Amar Takhar
Merged at	2024-11-15T10:31:54.871Z
Assignee(s)	Chris Johns
Created	2024-11-15T10:12:09.995Z
Updated	2024-11-20T23:43:37.970Z
Milestone	6.1
Labels	arch:x86_64, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/77
Commit	fbe7b1b93767ed29ec942fa50b3ff73e5ff87360

Do not build grub or makefs on MacOS when building X86_64 tools

Closes #35

Author: Chris Johns 2024-11-15T10:12:10.205Z

assigned to @chris

Author: Chris Johns 2024-11-15T10:13:16.616Z

added 2 commits

- 93a8b66a - 1 commit from branch `rtems/tools:main`
- fbe7b1b9 - rtems/x86_64: Do not build grub or makefs on MacOS

Compare with previous version

Author: Amar Takhar 2024-11-15T10:31:50.357Z

approved this merge request

Author: Chris Johns 2024-11-20T23:43:37.822Z

mentioned in issue #15

3.14.2.24 76 - RTEMS Packages Updates for 6

Id	76
State	merged
Merged by	Amar Takhar
Merged at	2024-11-15T07:39:52.297Z
Assignee(s)	Chris Johns
Created	2024-11-15T07:22:10.384Z
Updated	2024-11-15T07:39:54.253Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/76
Commit	93a8b66a3460c89a979e92170082536c4f594111

Update RTEMS and Tools for RSB builds of these packages.

Author: Chris Johns 2024-11-15T07:22:10.549Z

assigned to @chris

Author: Amar Takhar 2024-11-15T07:39:46.153Z

approved this merge request

3.14.2.25 74 - Fix sb-rtems-pkg and update the packages

Id	74
State	merged
Merged by	Amar Takhar
Merged at	2024-11-01T05:06:28.033Z
Assignee(s)	Chris Johns
Reviewer(s)	Kinsey Moore
Created	2024-11-01T02:14:28.237Z
Updated	2024-11-01T05:06:29.891Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/74
Commit	d82e3f433ba1441dc97e9d3c78eb0eb93212ed16

Fix the `sb-rtems-pkg` and update the packages. This fixes building `rtems-net-legacy`.

Author: Chris Johns 2024-11-01T02:14:28.404Z

assigned to @chris

Author: Kinsey Moore 2024-11-01T04:16:40.509Z

Should this also be fixed to point at `tools/rtems-libbsd-%{rtems_version}.cfg`?

Author: Chris Johns 2024-11-01T04:16:25.173Z

changed this line in version 2 of the diff

Author: Chris Johns 2024-11-01T04:16:40.509Z

Yes and thanks. Fixed.

Author: Chris Johns 2024-11-01T04:16:25.400Z

added 2 commits

- fcfc4108 - sb/rtems-pkg: Fix the libbsd and net-legacy config for rtems_waf
- d82e3f43 - rtems: Update packages with release related changes

Compare with previous version

Author: Chris Johns 2024-11-01T04:16:40.532Z

resolved all threads

Author: Chris Johns 2024-11-01T04:17:04.888Z

requested review from @opticron

Author: Amar Takhar 2024-11-01T05:06:22.425Z

approved this merge request

3.14.2.26 73 - expat: disable docbook to avoid man page generation error

Id	73
State	merged
Merged by	Amar Takhar
Merged at	2024-10-29T22:58:18.073Z
Created	2024-10-29T22:56:59.060Z
Updated	2024-10-29T22:58:20.409Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/73
Commit	e52d2288c8a0df64466010839ca1eb40c6d243ed

Summary

expat: disable docbook to avoid man page generation error

The error occurs when building with the `docbook-utils` package installed on Ubuntu. Disabling docbook prevents the man page for `xmlwf` from being created.

Fixes #44.

Author: Amar Takhar 2024-10-29T22:57:56.603Z

approved this merge request

3.14.2.27 32 - rsb(rtems-build-dep): handle multiple library paths

Id	32
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-05T21:15:57.539Z
Created	2024-06-29T16:49:54.435Z
Updated	2024-10-26T14:58:37.028Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/32
Commit	eda555d1d75f24fd816090e352f77f668ef02437

Summary

The script `rtems-build-dep` might fail to find a library if multiple `-L path` arguments are passed.

The argument parser only keeps the last library path provided:

```
# source-builder/sb/rtems-build-dep
libraries="$2"; shift;
shift;;
```

Take the following example. We are trying to find `libpython3.so`, which can be found on /usr/lib:

```
$ rtems-build-dep -c gcc -L /usr/lib -l libpython3.so # this works because we only pass -L once


  found

  $ rtems-build-dep -c gcc -L /tmp/ -L /usr/lib -l libpython3.so # this also works because /usr/lib is the last path provided


    found

    $ rtems-build-dep -c gcc -L /usr/lib -L /tmp/ -l libpython3.so # this fails because /usr/lib is discarded


      not-found


  I've made a change to handle multiple library paths in the same fashion multiple include directories are handled.

  --

  I don't know the implications of this change. So far, I've managed to build the ``6/rtems-arm`` bset successfully using this changes.
```

Author: Agustin Catellani 2024-06-29T17:00:33.854Z

changed the description

Author: Gedare Bloom 2024-07-05T20:59:13.913Z

requested review from @chris

Author: Gedare Bloom 2024-07-05T20:59:55.824Z

removed review request for @chris

Author: Gedare Bloom 2024-07-05T21:00:15.560Z

approved this merge request

Author: Agustin Catellani 2024-10-26T14:58:36.954Z

mentioned in issue #43

3.14.2.28 50 - Use 4.11 branch for rtems-tools automake patch URL

Id	50
State	merged
Merged by	Chris Johns
Merged at	2024-10-25T21:07:29.557Z
Created	2024-08-21T07:49:30.453Z
Updated	2024-10-25T21:07:31.221Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/50
Commit	6b76c4c7baa6557a068f2082a15bf5cdf410671a

Summary

Use 4.11 branch for rtems-tools automake patch URL

The automake-1.12.6-bugzilla.redhat.com-1239379.diff patch used for the 4.11 toolchain does not exist in the “5” branch in the rtems-tools repository, but does exist in the “4.11” branch, so change the URL used to get rtems-tools files to use the “4.11” branch instead.

This should resolve errors like this in the build:

```
Creating source directory: patches
download: https://gitlab.rtems.org/rtems/tools/rtems-tools/-/raw/5/tools/4.11/automake/automake-...<see log> -> patches/automake-1.12.6-bugzilla.redhat.com-1239379.diff
download: https://gitlab.rtems.org/rtems/tools/rtems-tools/-/raw/5/tools/4.11/automake/automake-...<see log>: error: HTTP Error 404: Not Found
error: downloading https://gitlab.rtems.org/rtems/tools/rtems-tools/-/raw/5/tools/4.11/automake/automake-1.12.6-bugzilla.redhat.com-1239379.diff?h=4.11: all␣
↪paths have failed, giving up
Build FAILED
See error report: rsb-report-automake-1.12.6-x86_64-linux-gnu-1.txt
error: downloading https://gitlab.rtems.org/rtems/tools/rtems-tools/-/raw/5/tools/4.11/automake/automake-1.12.6-bugzilla.redhat.com-1239379.diff?h=4.11: all␣
↪paths have failed, giving up
Build Set: Time 0:00:08.019691
error: downloading https://gitlab.rtems.org/rtems/tools/rtems-tools/-/raw/5/tools/4.11/automake/automake-1.12.6-bugzilla.redhat.com-1239379.diff?h=4.11: all␣
↪paths have failed, giving up
Build Set: Time 0:00:08.020617
error: downloading https://gitlab.rtems.org/rtems/tools/rtems-tools/-/raw/5/tools/4.11/automake/automake-1.12.6-bugzilla.redhat.com-1239379.diff?h=4.11: all␣
↪paths have failed, giving up
Build Set: Time 0:00:08.022781
Build FAILED
```

Author: Martin Werner 2024-08-21T07:50:15.811Z

changed the description

Author: Chris Johns 2024-10-25T21:07:14.390Z

Why use the bare/config/devel/automake-1.12.6-1.cfg from the [5](https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/tree/5?ref_type=heads) branch of the RSB?

Author: Martin Werner 2024-10-25T21:07:14.390Z

I'm assuming there's a "not" missing in that question? Since at the moment it does not use a copy of that file.

The diff between them contains quite a bit more, of which I assume quite a bit is rtems-specific and cannot be replaced wholesale:

```
$ git diff origin/4.11:rtems/config/tools/rtems-automake-1.12.6-1.cfg␣
↪origin/5:bare/config/devel/automake-1.12.6-1.cfg
diff --git a/rtems/config/tools/rtems-automake-1.12.6-1.cfg b/bare/
↪config/devel/automake-1.12.6-1.cfg
index a9c2bbb..d294216 100644
--- a/rtems/config/tools/rtems-automake-1.12.6-1.cfg
+++ b/bare/config/devel/automake-1.12.6-1.cfg
@@ -2,28 +2,23 @@
# Automake 1.12.6
#

-%if %{rtems_arch} == none
- %define _target %{_host}
+%if %{release} == %{nil}
+%define release 1
%endif

-%include %{_configdir}/checks.cfg
%include %{_configdir}/base.cfg
-%include %{_configdir}/versions.cfg

-%define rtems_automake_version 1.12.6
+%define automake_version 1.12.6
+
+%hash sha256 automake-%{automake_version}.tar.gz␣
↪0cbe570db487908e70af7119da85ba04f7e28656b26f717df0265ae08defd9ef

#
# Fix the warning on new perl versions.
#
```

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```
-%patch add automake -p1 %{rtems_automake_patches}/automake-1.12.6-
↪bugzilla.redhat.com-1239379.diff?h=4.11
-%hash  md5 automake-1.12.6-bugzilla.redhat.com-1239379.diff␣
↪8f53b687f9eae7c00c460e80bbef9276
+%patch add automake -p1 https://gitlab.rtems.org/rtems/rtos/rtems/-/
↪blob/main/assets/tracmigration/ticket_attachments/automake-1.12.6-
↪bugzilla.redhat.com-1239379.diff
+%hash  sha256 automake-1.12.6-bugzilla.redhat.com-1239379.diff␣
↪a406f23667f3e7844ebc77b6f4f43811b9e39046365b686cc689cb0ae9c88b8b

#
-# Check the version of automake in the path.
+# The automake build instructions. We use 1.xx Release 1.
#
-%if %{__automake_ver} < %{rtems_automake_version}
- #
- # Tools configuration.
- #
- %include %{_configdir}/devel/automake-1.12.6-1.cfg
-%endif
+%include %{_configdir}/automake-1-1.cfg
```

But I guess it might make sense to use the same tracmigration url (and the nicer sh256 checksum) from that file into the 4.11 branch, if that's what you mean?: https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/assets/tracmigration/ticket_attachments/automake-1.12.6-bugzilla.redhat.com-1239379.diff

Using the tracmigration url solves the build issue similarly for me as far as I can tell.

Would it still make sense to update %{rtems_git_tools} to point at 4.11 instead of 5?

Author: Kinsey Moore 2024-10-25T21:07:14.390Z

@chris I've updated the patch set to resolve related issues. Could you could give this a once-over to see if this thread is now resolvable?

Author: Kinsey Moore 2024-10-25T21:07:14.390Z

Just FYI, I ran through all of the toolchain builds and QEMU and this patchset now resolves all download errors, but several toolchains were not compilable because my native toolchain was too new and threw errors about certain syntax no longer being allowed in C++17.

Author: Kinsey Moore 2024-10-22T13:24:11.620Z

approved this merge request

Author: Kinsey Moore 2024-10-22T13:25:37.028Z

unapproved this merge request

Author: Kinsey Moore 2024-10-22T20:59:37.314Z

added 3 commits

- ef217406 - sb: %if checks are numeric if the left and right values are numbers
- 7efeb59d - gdb: Split python's version into major/minor and check for embed option
- 6b76c4c7 - Update ARM toolchain build for the new newlib patch path

Compare with previous version

Author: Kinsey Moore 2024-10-22T21:00:26.958Z

I've updated this patch set to include a backport of a couple fixes that were required on modern systems plus a change to handle path issues on ARM.

Author: Kinsey Moore 2024-10-22T21:00:33.666Z

approved this merge request

Author: Chris Johns 2024-10-25T21:07:14.407Z

resolved all threads

3.14.2.29 71 - rtems: Update packages

Id	71
State	merged
Merged by	Amar Takhar
Merged at	2024-10-25T19:58:31.608Z
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Created	2024-10-24T06:03:21.733Z
Updated	2024-10-25T19:58:33.712Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/71
Commit	78680c889c2458f26170fe6e4a05c37791aacc87

Update the package to the current `main` for each repo effected.

Author: Chris Johns 2024-10-24T06:03:22.281Z

assigned to @chris

Author: Chris Johns 2024-10-24T20:50:59.938Z

mentioned in issue rtems/pkg/rtems-net-services#3

Author: Chris Johns 2024-10-24T23:06:20.408Z

marked this merge request as **draft**

Author: Chris Johns 2024-10-25T05:29:56.917Z

added 2 commits

- 0fc8e056 - sb/rtems-pkg: Add support for submodules
- 303a1e12 - rtems: Update packages

Compare with previous version

Author: Chris Johns 2024-10-25T06:25:39.102Z

added 2 commits

- f7ba8466 - sb/rtems-pkg: Add support for submodules
- fec227c7 - rtems: Update packages

Compare with previous version

Author: Chris Johns 2024-10-25T06:25:48.647Z

marked this merge request as **ready**

Author: Chris Johns 2024-10-25T06:27:22.273Z

I have fixed `sb-rtems-pkg` to handle submodules so `rtems-net-services``will pick up the updated ``rtems_waf`. I have tested it with the `rtems-deployment` change got AMD K26.

Author: Chris Johns 2024-10-25T06:29:12.073Z

mentioned in merge request rtems-deployment!12

Author: Chris Johns 2024-10-25T19:56:50.155Z

requested review from @amar

Author: Amar Takhar 2024-10-25T19:58:01.521Z

added 3 commits

- d7870131 - 1 commit from branch `rtems/tools:main`
- 875c1c7f - sb/rtems-pkg: Add support for submodules
- 78680c88 - rtems: Update packages

Compare with previous version

Author: Amar Takhar 2024-10-25T19:58:26.875Z

approved this merge request

3.14.2.30 72 - Updated qemu patch to point to rtems.org domain from geisler.se which now 404s

Id	72
State	merged
Merged by	Joel Sherrill
Merged at	2024-10-24T22:24:08.845Z
Created	2024-10-24T14:41:02.508Z
Updated	2024-10-24T22:24:12.133Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/72
Commit	d7870131e4de88f35ed137e62c83874597ccee82

Summary

This resolves issue https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/issues/42

```
RTEMS Source Builder - Set Builder, 6 (d7870131e4de)
Build Set: devel/qemu
Build Set: devel/autotools-internal.bset
config: devel/autoconf-2.69-1.cfg
package: autoconf-2.69-x86_64-linux-gnu-1
download: https://ftp.gnu.org/gnu/autoconf/autoconf-2.69.tar.gz -> sources/
↪autoconf-2.69.tar.gz
downloading: sources/autoconf-2.69.tar.gz - 1.8MB of 1.8MB (100%)
building: autoconf-2.69-x86_64-linux-gnu-1
```

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```
sizes: autoconf-2.69-x86_64-linux-gnu-1: 7.496MB (installed: 0.000B)
cleaning: autoconf-2.69-x86_64-linux-gnu-1
config: devel/automake-1.12.6-1.cfg
package: automake-1.12.6-x86_64-linux-gnu-1
download: https://ftp.gnu.org/gnu/automake/automake-1.12.6.tar.gz -> sources/
↪automake-1.12.6.tar.gz
downloading: sources/automake-1.12.6.tar.gz - 2.0MB of 2.0MB (100%)
download: https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/assets/
↪tracmigration/ticket_atta...<see log> -> patches/automake-1.12.6-bugzilla.
↪redhat.com-1239379.diff
downloading: patches/automake-1.12.6-bugzilla.redhat.com-1239379.diff - 0.0␣
↪bytedownloading: patches/automake-1.12.6-bugzilla.redhat.com-1239379.diff - 408.
↪0 bytes of 408.0 bytes (100%)
building: automake-1.12.6-x86_64-linux-gnu-1
sizes: automake-1.12.6-x86_64-linux-gnu-1: 8.090MB (installed: 0.000B)
cleaning: automake-1.12.6-x86_64-linux-gnu-1
config: devel/libtool-2.4.7-1.cfg
package: libtool-2.4.7-x86_64-linux-gnu-1
download: https://ftp.gnu.org/gnu/libtool/libtool-2.4.7.tar.gz -> sources/libtool-
↪2.4.7.tar.gz
downloading: sources/libtool-2.4.7.tar.gz - 1.8MB of 1.8MB (100%)
building: libtool-2.4.7-x86_64-linux-gnu-1
sizes: libtool-2.4.7-x86_64-linux-gnu-1: 9.905MB (installed: 0.000B)
cleaning: libtool-2.4.7-x86_64-linux-gnu-1
cleaning: autoconf-2.69-x86_64-linux-gnu-1
cleaning: automake-1.12.6-x86_64-linux-gnu-1
cleaning: libtool-2.4.7-x86_64-linux-gnu-1
Build Sizes: usage: 9.905MB total: 183.120MB (sources: 183.098MB, patches: 22.
↪901KB, installed 0.000B)
Build Set: Time 0:00:16.995923
config: devel/libiconv-1.14-1.cfg
config: devel/gettext-0.18.3.1-1.cfg
package: gettext-0.18.3.1-x86_64-linux-gnu-1
download: http://ftp.gnu.org/pub/gnu/gettext/gettext-0.18.3.1.tar.gz -> sources/
↪gettext-0.18.3.1.tar.gz
downloading: sources/gettext-0.18.3.1.tar.gz - 15.6MB of 15.6MB (100%)
building: gettext-0.18.3.1-x86_64-linux-gnu-1
sizes: gettext-0.18.3.1-x86_64-linux-gnu-1: 182.624MB (installed: 23.443MB)
cleaning: gettext-0.18.3.1-x86_64-linux-gnu-1
reporting: devel/gettext-0.18.3.1-1.cfg -> gettext-0.18.3.1-x86_64-linux-gnu-1.txt
reporting: devel/gettext-0.18.3.1-1.cfg -> gettext-0.18.3.1-x86_64-linux-gnu-1.xml
config: devel/libffi-3.0.13-1.cfg
package: libffi-3.0.13-x86_64-linux-gnu-1
download: https://sourceware.org/pub/libffi/libffi-3.0.13.tar.gz -> sources/
↪libffi-3.0.13.tar.gz
downloading: sources/libffi-3.0.13.tar.gz - 825.9kB of 825.9kB (100%)
download: http://gitlab.rtems.org/rtems/tools/rtems-tools/-/raw/main/tools/libffi/
↪libffi-pkg-con...<see log> -> patches/libffi-pkg-config-lib64-fix.diff
redirect: https://gitlab.rtems.org/rtems/tools/rtems-tools/-/raw/main/tools/
```

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```
↪libffi/libffi-pkg-co...<see log>
downloading: patches/libffi-pkg-config-lib64-fix.diff - 0.0 bytes of 451.0␣
↪bytesdownloading: patches/libffi-pkg-config-lib64-fix.diff - 451.0 bytes of 451.
↪0 bytes (100%)
building: libffi-3.0.13-x86_64-linux-gnu-1
sizes: libffi-3.0.13-x86_64-linux-gnu-1: 6.699MB (installed: 666.614KB)
cleaning: libffi-3.0.13-x86_64-linux-gnu-1
reporting: devel/libffi-3.0.13-1.cfg -> libffi-3.0.13-x86_64-linux-gnu-1.txt
reporting: devel/libffi-3.0.13-1.cfg -> libffi-3.0.13-x86_64-linux-gnu-1.xml
config: devel/pixman-0.42.2.cfg
package: pixman-0.42.2-x86_64-linux-gnu-1
download: http://cairographics.org/releases/pixman-0.42.2.tar.gz -> sources/
↪pixman-0.42.2.tar.gz
redirect: https://www.cairographics.org/releases/pixman-0.42.2.tar.gz
downloading: sources/pixman-0.42.2.tar.gz - 937.2kB of 937.2kB (100%)
building: pixman-0.42.2-x86_64-linux-gnu-1
sizes: pixman-0.42.2-x86_64-linux-gnu-1: 115.544MB (installed: 23.267MB)
cleaning: pixman-0.42.2-x86_64-linux-gnu-1
reporting: devel/pixman-0.42.2.cfg -> pixman-0.42.2-x86_64-linux-gnu-1.txt
reporting: devel/pixman-0.42.2.cfg -> pixman-0.42.2-x86_64-linux-gnu-1.xml
config: devel/glib-2.80.2.cfg
package: glib-2.80.2-x86_64-linux-gnu-1
download: https://download.gnome.org/sources/glib/2.80/glib-2.80.2.tar.xz ->␣
↪sources/glib-2.80.2.tar.xz
redirect: https://mirror.umd.edu/gnome/sources/glib/2.80/glib-2.80.2.tar.xz
downloading: sources/glib-2.80.2.tar.xz - 5.3MB of 5.3MB (100%)
building: glib-2.80.2-x86_64-linux-gnu-1
sizes: glib-2.80.2-x86_64-linux-gnu-1: 308.029MB (installed: 85.753MB)
cleaning: glib-2.80.2-x86_64-linux-gnu-1
reporting: devel/glib-2.80.2.cfg -> glib-2.80.2-x86_64-linux-gnu-1.txt
reporting: devel/glib-2.80.2.cfg -> glib-2.80.2-x86_64-linux-gnu-1.xml
config: devel/qemu-5.2.0-1.cfg
package: qemu-5.2.0-rc1-x86_64-linux-gnu-1
download: https://download.qemu.org/qemu-5.2.0-rc1.tar.xz -> sources/qemu-5.2.0-
↪rc1.tar.xz
downloading: sources/qemu-5.2.0-rc1.tar.xz - 101.9MB of 101.9MB (100%)
download: http://patchwork.ozlabs.org/patch/406903/raw -> patches/Provide-the-
↪missing-LIBUSB_LOG_LEVEL_-for-older-libusb-or-FreeBSD.-Providing-just-the-
↪needed-value-as-a-defined..patch
redirect: http://patchwork.ozlabs.org/project/qemu-devel/patch/1415176522-5944-1-
↪git-send-email-...<see log>
downloading: patches/Provide-the-missing-LIBUSB_LOG_LEVEL_-for-older-libusb-or-
↪FreeBSD.-Providing-just-the-needed-value-as-a-defined..patch - 0.0 bytes of 666.
↪0downloading: patches/Provide-the-missing-LIBUSB_LOG_LEVEL_-for-older-libusb-or-
↪FreeBSD.-Providing-just-the-needed-value-as-a-defined..patch - 666.0 bytes of␣
↪666.0 bytes (100%)
**download: https://ftp.rtems.org/pub/rtems/releases/5/5.2/sources/qemu-5.2.0-
↪leon3.patch -> patches/qemu-5.2.0-leon3.patch
downloading: patches/qemu-5.2.0-leon3.patch - 747.0 bytes of 747.0 bytes (100%) **
```

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```
download: https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/assets/
↪tracmigration/ticket_atta...<see log> -> patches/cgem_zynqmp_versal.patch
downloading: patches/cgem_zynqmp_versal.patch - 5.8kB of 5.8kB (100%)
download: https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/main/assets/
↪tracmigration/ticket_atta...<see log> -> patches/gdbus_codegen.patch
downloading: patches/gdbus_codegen.patch - 1.5kB of 1.5kB (100%)
building: qemu-5.2.0-rc1-x86_64-linux-gnu-1
sizes: qemu-5.2.0-rc1-x86_64-linux-gnu-1: 8.026GB (installed: 895.367MB)
cleaning: qemu-5.2.0-rc1-x86_64-linux-gnu-1
reporting: devel/qemu-5.2.0-1.cfg -> qemu-5.2.0-rc1-x86_64-linux-gnu-1.txt
reporting: devel/qemu-5.2.0-1.cfg -> qemu-5.2.0-rc1-x86_64-linux-gnu-1.xml
staging: gettext-0.18.3.1-x86_64-linux-gnu-1 -> /home/cfc/workspace/rtems-source-
↪builder/rtems/build/tmp/sb-0-staging
installing: gettext-0.18.3.1-x86_64-linux-gnu-1 -> /opt/rtems/6
staging: libffi-3.0.13-x86_64-linux-gnu-1 -> /home/cfc/workspace/rtems-source-
↪builder/rtems/build/tmp/sb-0-staging
installing: libffi-3.0.13-x86_64-linux-gnu-1 -> /opt/rtems/6
staging: pixman-0.42.2-x86_64-linux-gnu-1 -> /home/cfc/workspace/rtems-source-
↪builder/rtems/build/tmp/sb-0-staging
installing: pixman-0.42.2-x86_64-linux-gnu-1 -> /opt/rtems/6
staging: glib-2.80.2-x86_64-linux-gnu-1 -> /home/cfc/workspace/rtems-source-
↪builder/rtems/build/tmp/sb-0-staging
installing: glib-2.80.2-x86_64-linux-gnu-1 -> /opt/rtems/6
staging: qemu-5.2.0-rc1-x86_64-linux-gnu-1 -> /home/cfc/workspace/rtems-source-
↪builder/rtems/build/tmp/sb-0-staging
installing: qemu-5.2.0-rc1-x86_64-linux-gnu-1 -> /opt/rtems/6
cleaning: gettext-0.18.3.1-x86_64-linux-gnu-1
cleaning: libffi-3.0.13-x86_64-linux-gnu-1
cleaning: pixman-0.42.2-x86_64-linux-gnu-1
cleaning: glib-2.80.2-x86_64-linux-gnu-1
cleaning: qemu-5.2.0-rc1-x86_64-linux-gnu-1
Build Sizes: usage: 9.031GB total: 1.305GB (sources: 307.593MB, patches: 32.042KB,
↪ installed 1.004GB)
installing: devel/qemu -> /opt/rtems/6
clean staging: devel/qemu
Staging Size: 1.004GB
Build Set: Time 0:15:54.767931
```

Author: CHARLES TAYLOR 2024-10-24T14:41:41.762Z

mentioned in issue #42

Author: CHARLES TAYLOR 2024-10-24T18:06:45.980Z

changed the description

Author: Joel Sherrill 2024-10-24T22:24:00.738Z

approved this merge request

3.14.2.31 70 - rtems-tools needs the Waf build root workaround for windows

Id	70
State	merged
Merged by	Amar Takhar
Merged at	2024-10-21T23:36:32.704Z
Created	2024-10-21T23:31:11.483Z
Updated	2024-10-21T23:36:34.028Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/70
Commit	8fc070bc4a6b4382e4fefbe5872aebb009f976e9

Summary

On Windows there is a workaround to handle the drive letter in the prefix that needs to be picked up when installing rtems-tools.

Author: Amar Takhar 2024-10-21T23:36:12.715Z

approved this merge request

3.14.2.32 66 - dtc: do not attempt to build on windows

Id	66
State	merged
Merged by	Chris Johns
Merged at	2024-10-18T21:24:10.114Z
Assignee(s)	Chris Johns
Created	2024-10-10T04:44:12.552Z
Updated	2024-10-18T21:24:15.269Z
Milestone	6.1
Labels	os::windows
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/66
Commit	4cf0f0c6fa7e33e9fed6961ccc27e2d8fc051e7d

Summary

dtc: do not attempt to build on windows

fixes #25, #36

Author: Gedare Bloom 2024-10-10T04:44:12.823Z

assigned to @chris

Author: Gedare Bloom 2024-10-10T04:48:53.453Z

I confirmed the build still runs on linux (ubuntu).

Author: Chris Johns 2024-10-18T21:09:10.626Z

This should be indented but I get why you have not.

Would it be nicer and simpler to have the RSB **_finish_** the config processing?

Author: Gedare Bloom 2024-10-18T21:09:10.626Z

“nicer and simpler” in what way?

I’m not sure what action has to be taken to close out a partial configuration.

Author: Chris Johns 2024-10-18T21:09:10.626Z

Would adding a new command to the config processing to %``finish`` be cleaner for this type of solution?

Author: Gedare Bloom 2024-10-18T21:09:10.626Z

Having a generic way to terminate a config would be cleaner, but, we don’t have that functionality at the moment unless I’m missing something. It would be some work to add a new feature if that is what you are suggesting.

Currently this dtc config blocks building on Windows.

Author: Gedare Bloom 2024-10-18T21:09:11.380Z

created #41 to continue this discussion

Author: Gedare Bloom 2024-10-18T21:09:10.646Z

resolved all threads

Author: Gedare Bloom 2024-10-18T21:09:10.918Z

mentioned in issue #41

Author: Chris Johns 2024-10-18T21:23:20.579Z

approved this merge request

Author: Chris Johns 2024-10-18T21:23:47.252Z

added 3 commits

- 4f780eb6...4ea7e721 - 2 commits from branch `rtems/tools:main`
- 4cf0f0c6 - dtc: do not attempt to build on windows

Compare with previous version

3.14.2.33 67 - rtems-gdb-15.2.cfg: Correct using 14.2 instead of 15.2

Id	67
State	merged
Merged by	Amar Takhar
Merged at	2024-10-17T18:22:41.852Z
Created	2024-10-17T16:29:23.419Z
Updated	2024-10-17T18:22:43.829Z
Milestone	6.1
Labels	tool::gdb
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/67
Commit	4ea7e721857fdc32ddad9ed5ea76052d38419bad

Summary

rtems-gdb-15.2.cfg: Correct using 14.2 instead of 15.2

Updates previous commit to really use 15.2.

Author: Amar Takhar 2024-10-17T18:22:29.302Z

approved this merge request

3.14.2.34 62 - Update to GDB 15.2

Id	62
State	merged
Merged by	Amar Takhar
Merged at	2024-10-16T04:33:07.227Z
Assignee(s)	Joel Sherrill
Created	2024-10-01T00:23:37.534Z
Updated	2024-10-16T04:33:10.502Z
Milestone	6.1
Labels	tool::gdb
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/62
Commit	7ebed67752d4b2a630e2213f40d1473a26495340

Update to GDB 15.2

Author: Joel Sherrill 2024-10-01T00:23:37.751Z

assigned to @joel

Author: Joel Sherrill 2024-10-01T00:24:00.430Z

added 2 commits

- 88afb1da - 1 commit from branch `rtems/tools:main`
- 68ad3195 - Update to GDB 15.2

Compare with previous version

Author: Joel Sherrill 2024-10-01T02:33:59.422Z

added 1 commit

- b9587182 - Update to GDB 15.2

Compare with previous version

Author: Amar Takhar 2024-10-16T04:32:35.165Z

approved this merge request

Author: Amar Takhar 2024-10-16T04:32:47.826Z

added 8 commits

- b9587182...989ec634 - 7 commits from branch `rtems/tools:main`
- 7ebed677 - Update to GDB 15.2

Compare with previous version

3.14.2.35 65 - sb:sources: Do not raise an error adding a hash if one is present

Id	65
State	merged
Merged by	Amar Takhar
Merged at	2024-10-09T22:08:02.013Z
Assignee(s)	Chris Johns
Created	2024-10-09T22:05:01.293Z
Updated	2024-10-09T22:08:05.277Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/65
Commit	989ec6342f410f21e6585e4828a4c5f4f8da5e83

Do not raise an error adding a hash if one is present

Fixes #40

Closes #40

Author: Chris Johns 2024-10-09T22:05:01.531Z

assigned to @chris

Author: Amar Takhar 2024-10-09T22:07:55.119Z

approved this merge request

3.14.2.36 64 - sys.getwindowsversion only exists on Windows.

Id	64
State	merged
Merged by	Chris Johns
Merged at	2024-10-07T12:55:56.020Z
Assignee(s)	Amar Takhar
Created	2024-10-07T07:26:37.627Z
Updated	2024-10-07T12:55:59.307Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/64
Commit	8c8156d2133a08d5b93de33828ae1e7009f49974

Summary

sys.getwindowsversion only exists on Windows.

Fixes #38

Author: Amar Takhar 2024-10-07T07:26:37.903Z

assigned to @amar

Author: Amar Takhar 2024-10-07T07:27:41.416Z

added 1 commit

- 8c8156d2 - sys.getwindowsversion only exists on Windows.

Compare with previous version

Author: Amar Takhar 2024-10-07T07:27:45.446Z

changed the description

Author: Christian Mauderer 2024-10-07T12:16:10.103Z

approved this merge request

3.14.2.37 63 - Fixes for Windows 10 and Windows 11

Id	63
State	merged
Merged by	Amar Takhar
Merged at	2024-10-06T23:24:32.428Z
Assignee(s)	Gedare Bloom
Created	2024-10-06T22:10:55.082Z
Updated	2024-10-07T07:09:53.372Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/63
Commit	badbcdd61924c88c6bed7844b69d323ab5e62d3a

Summary

The Windows10 and Windows11 builds with MSYS2 encounter a few problems. This should fix most of those problems.

It doesn't deal with https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/issues/25 https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/issues/36

Fixes #27 Fixes https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/4191

Author: Gedare Bloom 2024-10-06T22:10:55.852Z

assigned to @gedare

Author: Amar Takhar 2024-10-06T23:24:26.616Z

approved this merge request

Author: Chris Johns 2024-10-07T07:09:53.282Z

mentioned in issue #38

3.14.2.38 61 - linux.py: Recognize Rocky Linux distribution

Id	61
State	merged
Merged by	Joel Sherrill
Merged at	2024-09-30T21:30:40.236Z
Assignee(s)	Joel Sherrill
Reviewer(s)	Chris Johns, Gedare Bloom
Created	2024-09-30T19:02:35.262Z
Updated	2024-09-30T21:30:40.210Z
Milestone	6.1
Labels	tool
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/61
Commit	88afb1daa87355afa14f4c142a99355e550540db

linux.py: Recognize Rocky Linux distribution

Rocky was slipping through the list of distributions and only needed adding to the list.

Author: Joel Sherrill 2024-09-30T19:02:35.512Z

requested review from @chris and @gedare

Author: Joel Sherrill 2024-09-30T19:02:35.585Z

assigned to @joel

Author: Joel Sherrill 2024-09-30T19:33:28.525Z

enabled an automatic merge when all merge checks for 88afb1daa87355afa14f4c142a99355e550540db pass

Author: Amar Takhar 2024-09-30T21:30:32.046Z

approved this merge request

3.14.2.39 60 - rtems/www: Add civetweb web server package

Id	60
State	merged
Merged by	Amar Takhar
Merged at	2024-09-30T05:19:00.107Z
Assignee(s)	Chris Johns
Created	2024-09-30T05:09:54.451Z
Updated	2024-09-30T05:19:00.076Z
Milestone	6.1
Labels	network
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/60
Commit	d2f00ca6c06f0f5c78eab1128121e9c58fba0443

Add support to build `civetweb` as a package.

Note:

1. The thread type and thread stack size is currently hard coded and not part of the configuration.
2. I have created Github PR rtems: Add support for RTEMS for the patch in my repo.
3. Only tested with libbsd.

Author: Chris Johns 2024-09-30T05:09:54.714Z

assigned to @chris

Author: Amar Takhar 2024-09-30T05:18:49.013Z

enabled an automatic merge when all merge checks for d2f00ca6c06f0f5c78eab1128121e9c58fba0443 pass

Author: Amar Takhar 2024-09-30T05:18:54.878Z

approved this merge request

3.14.2.40 59 - rtems/devel: Add yaml-cpp package

Id	59
State	merged
Merged by	Amar Takhar
Merged at	2024-09-27T04:28:10.318Z
Assignee(s)	Chris Johns
Created	2024-09-27T04:22:12.322Z
Updated	2024-09-27T04:28:12.294Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/59
Commit	5743fb6f1802c44989f37916906726930a61d6cc

Add `yaml-cpp` as a package.

Author: Chris Johns 2024-09-27T04:22:12.534Z

assigned to @chris

Author: Amar Takhar 2024-09-27T04:28:05.998Z

approved this merge request

3.14.2.41 58 - rtems: Update kernel and libbsd

Id	58
State	merged
Merged by	Amar Takhar
Merged at	2024-09-19T02:56:33.676Z
Assignee(s)	Chris Johns
Created	2024-09-19T02:51:20.679Z
Updated	2024-09-19T02:56:35.320Z
Milestone	6.1
Labels	libbsd, rtems::kernel
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/58
Commit	46a5bfdc3fc95d503a63f9bee515e73d9198aa71

Summary

Kernel

- Minor fixes

LibBSD

- Fix build failure installing different files to the install file

Author: Chris Johns 2024-09-19T02:51:20.917Z

assigned to @chris

Author: Amar Takhar 2024-09-19T02:56:27.409Z

approved this merge request

3.14.2.42 57 - rtems: Update kernel and libbsd

Id	57
State	merged
Merged by	Amar Takhar
Merged at	2024-09-18T22:33:50.974Z
Assignee(s)	Chris Johns
Created	2024-09-18T22:32:17.706Z
Updated	2024-09-18T22:33:52.655Z
Milestone	6.1
Labels	libbsd::freebsd-12, rtems::kernel, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/57
Commit	feb5e8b8c36c24105673f0f1a3844977f41063fc

Summary

rtems: Update kernel and libbsd

Kernel: * Updates to ARM exceptions * POSIX support for lio_listio * Remove poll.h from the kernel * Use time_t for ntptime * Updated Zynq and pl001 UART drivers

LibBSD: * Dangling pointer fix in DHCP

Author: Chris Johns 2024-09-18T22:32:17.930Z

assigned to @chris

Author: Amar Takhar 2024-09-18T22:33:43.753Z

approved this merge request

3.14.2.43 56 - Keep RTEMS up to date with the upstream development

Id	56
State	merged
Merged by	Chris Johns
Merged at	2024-09-11T22:18:49.834Z
Assignee(s)	Sebastian Huber
Created	2024-09-05T14:29:28.666Z
Updated	2024-09-11T22:18:51.348Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/56
Commit	2e6e83660f259d28327ac042b4960716781e24d0

Summary

For build logs, see build@rtems.org. The microblaze failures are due to:

```
checking for recent MPFR... checking whether fwrite_unlocked is declared... checking for basename... yes
config.status: executing depfiles commands
checking for g++ -O2 -g -pipe -I/home/EB/sebastian_h/src/rtems-source-builder/rtems/build/tmp/sb-21112/6/rtems-microblaze/opt/rtems/6/include -I/home/EB/sebastian_h/src/rtems-sou
rce-builder/rtems/build/tmp/sb-21112-internal/include option to produce PIC... -fPIC -DPIC
checking if g++ -O2 -g -pipe -I/home/EB/sebastian_h/src/rtems-source-builder/rtems/build/tmp/sb-21112/6/rtems-microblaze/opt/rtems/6/include -I/home/EB/sebastian_h/src/rtems-sour
ce-builder/rtems/build/tmp/sb-21112-internal/include PIC flag -fPIC -DPIC works... yes
checking for stpcpy... yes
checking mach-o/dyld.h usability... no
configure: error: MPFR version >= 4.1.0 required
```

This seems to be unrelated to my update.

Author: Sebastian Huber 2024-09-05T14:29:28.770Z

assigned to @sebhub

Author: Sebastian Huber 2024-09-05T14:30:39.557Z

changed title from **6/7: Update Newlib** to **6/7: Update Newlib{+Keep RTEMS up to date with the upstream development+}**

Author: Sebastian Huber 2024-09-05T14:32:24.664Z

changed title from **{-6/7: Update Newlib-}Keep RTEMS up to date with the upstream development** to **Keep RTEMS up to date with the upstream development**

Author: Sebastian Huber 2024-09-05T14:32:24.692Z

changed the description

Author: Chris Johns 2024-09-11T22:18:30.214Z

approved this merge request

Author: Chris Johns 2024-09-11T22:18:42.509Z

added 4 commits

- 8488d28d - 1 commit from branch `rtems/tools:main`
- d078bf88 - 6/7: Update Newlib
- c0a16881 - 6: Update GCC 12 and 13
- 2e6e8366 - 7: Update Binutils, GDB, and GCC

Compare with previous version

3.14.2.44 51 - rtems: Package updates

Id	51
State	merged
Merged by	Amar Takhar
Merged at	2024-08-28T06:15:37.922Z
Assignee(s)	Chris Johns
Created	2024-08-28T05:22:03.828Z
Updated	2024-08-28T06:15:39.167Z
Milestone	6.1
Labels	libbsd, rtems::kernel, tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/51
Commit	7298cc8103d90177f46517d577f9b661de8424b9

Package updates

- Libbsd
- Install memstat.h
- Net Services
- Fixed spelling in ntpsim
- Kernel
- Coverity fixes

- X86_64 updates
- Fix racecondition in close
- Close all valids FD in libblock
- Fix DOSFS file truncation to length 0
- Fatal error refactor
- ZynqMP ECC memory support
- ZynqMP memory support great than 2G
- RTEMS Tools
- Add x86_64 config
- Add niosvc10lp config
- Update RTEMS pretty printers

Author: Chris Johns 2024-08-28T05:22:04.313Z

assigned to @chris

Author: Amar Takhar 2024-08-28T06:15:34.478Z

approved this merge request

3.14.2.45 45 - add patch file for including rv32imf in the riscv multilib

Id	45
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-23T17:17:25.103Z
Created	2024-08-06T21:15:35.568Z
Updated	2024-08-23T17:17:25.061Z
Milestone	6.1
Labels	arch:riscv
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/45
Commit	7aec6d55b060f89a35608cc8d9dbb374f333f7b3

Summary

Issue #5101

The NIOS V/g processor with FPU enabled needs the rv32imf risc-v architecture. This patch adds that support.

Author: Joel Sherrill 2024-08-15T00:39:26.925Z

It is probably not well documented but the patch should be somewhere other than the RSB. They usually are just attached to the RTEMS issue and the URL referenced here.

Even better would be to submit it upstream and we get it out of their mailing list or git history.

In this case, attach the patch to this issue.

Author: Kevin Kirspel 2024-08-15T00:39:26.925Z

The patch was emailed to gcc-patches. When incorporated, RSB could be updated to use that gcc version.

Author: Kevin Kirspel 2024-08-15T00:36:49.151Z

changed this line in version 3 of the diff

Author: Kevin Kirspel 2024-08-15T00:39:26.925Z

patch has been moved to an attachment in Issue #5101 and referenced from there for downloading to RSB.

Author: Joel Sherrill 2024-08-15T00:40:11.164Z

Please email this to gcc-patches@gcc.gnu.org and cc me. I will then be able to shepherd it to getting merged.

Author: Kevin Kirspel 2024-08-15T00:40:11.164Z

Any special subject and wording in the email?

Author: Kevin Kirspel 2024-08-15T00:40:11.164Z

I plan on putting this in the subject:

[PATCH] t-rtems: add rv32imf architecture to the RTEMS multilib for RISC-V

Author: Kevin Kirspel 2024-08-15T00:40:11.164Z

I sent the email. I will see what happens.

Author: Kevin Kirspel 2024-08-15T00:40:11.164Z

Patch is visible on the gcc-patches mailing list (Aug 7th). No comments so far.

Author: Joel Sherrill 2024-08-15T00:40:11.164Z

Thank you.

Author: Chris Johns 2024-08-15T00:40:11.164Z

This directory is not allowed in the repo.

Author: Amar Takhar 2024-08-15T00:40:11.164Z

@chris then should he create an issue to attach the patch for now?

Author: Amar Takhar 2024-08-15T00:40:11.164Z

Nevermind I see you have answered this.

Author: Chris Johns 2024-08-15T00:40:11.164Z

Only to reference the patch.

Author: Kevin Kirspel 2024-08-15T00:40:11.164Z

Just for my knowledge, patch files do not go in the repo (i.e. source-builder/patches)? What is the purpose of the "source-builder/patches" repo directory?

Secondly, if I have a patch file locally, how should I reference the patch file? My initial assumption was that I would reference it in "rtems/config/tools/rtems-gcc-13.3-newlib-head.cfg" but apparently that is not correct.

Author: Kevin Kirspel 2024-08-15T00:36:51.244Z

changed this line in version 3 of the diff

Author: Kevin Kirspel 2024-08-15T00:40:11.164Z

patch has been moved to an attachment in Issue #5101 and removed from this directory.

Author: Joel Sherrill 2024-08-12T14:34:39.692Z

resolved all threads

Author: Chris Johns 2024-08-23T14:08:13.790Z

The patch handling is not right. The source and patch directories should be added to the repo.

Please attach the patch to an issue or reference and get the RSB to download it. A further change can be made once merged into GCC we.

Author: Kevin Kirspel 2024-08-23T14:08:13.790Z

I attached the patch file to the issue I created for all the merge requests related to the NIOS V BSP. Issue #5101.

Author: Kevin Kirspel 2024-08-23T14:08:13.790Z

The patch I sent to gcc-patches is now merged on the trunk.

Author: Chris Johns 2024-08-14T06:04:04.897Z

marked this merge request as **draft**

Author: Chris Johns 2024-08-14T06:04:31.778Z

Marked as draft until the patch location is resolved.

Author: Chris Johns 2024-08-14T06:05:04.215Z

Please add `rtems:` to the start the commit first line.

Author: Kevin Kirspel 2024-08-14T16:32:38.390Z

added 5 commits

- 5f4f2436...585d8ba4 - 4 commits from branch `rtems/tools:main`
- 63b972dd - add patch file for including rv32imf in the riscv multilib

Compare with previous version

Author: Kevin Kirspel 2024-08-15T00:36:51.571Z

added 1 commit

- f8a14244 - Patch file moved to Issue #5101

Compare with previous version

Author: Joel Sherrill 2024-08-23T14:08:13.810Z

resolved all threads

Author: Joel Sherrill 2024-08-23T14:08:21.501Z

approved this merge request

Author: Joel Sherrill 2024-08-23T14:08:28.507Z

marked this merge request as **ready**

Author: Kevin Kirspel 2024-08-23T17:12:31.833Z

added 15 commits

- f8a14244...fc5ad593 - 13 commits from branch `rtems/tools:main`
- 958a0f8d - add patch file for including rv32imf in the riscv multilib
- 7aec6d55 - Patch file moved to Issue #5101

Compare with previous version

3.14.2.46 49 - Fix config file directive processing in includes

Id	49
State	merged
Merged by	Amar Takhar
Merged at	2024-08-23T02:15:19.554Z
Assignee(s)	Chris Johns
Created	2024-08-21T06:33:12.179Z
Updated	2024-08-23T02:15:21.214Z
Milestone	6.1
Labels	python::gdb, tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/49
Commit	fc5ad5930421d28d0c3c3861def4fec6a62f5300

Fix config file directive processing in includes

Allow includes in directives like %install to be included in the directive's output.

The !48 needs this change to work.

Updates #29

Author: Chris Johns 2024-08-21T06:33:12.380Z

assigned to @chris

Author: Chris Johns 2024-08-21T06:38:53.093Z

mentioned in merge request !48

Author: Amar Takhar 2024-08-23T02:15:16.532Z

approved this merge request

3.14.2.47 35 - RSB modifications to install stdcxx.py in gdb/python/rtems

Id	35
State	merged
Merged by	Chris Johns
Merged at	2024-08-18T06:24:44.143Z
Created	2024-07-10T16:55:08.790Z
Updated	2024-08-19T21:12:29.555Z
Milestone	6.1
Labels	python::gdb, tool::gdb
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/35
Commit	632ccda714fdba59c39bb126cf417f2b101c8929

Summary

The current implementation of auto-loading pretty-printers in GDB depends on a script, `stdcxx.py` to register the pretty-printers provided by GCC. The path to these scripts changes with every evolving version of GCC, and hence the `gcc_version` variable used in `stdcxx.py` would need updating with every new build.

3.14.2.47.1.1 Solution

Modify the `gcc-common-1.cfg` script in `source-builder/config` to:

1. Find the current GCC version according to the target being built
2. Add some instructions to resolve paths to the template script present in `rtems/config`
3. Use that to install `stdcxx.py` with the correct GCC version in `gdb/python/rtems` in the build target directory

Closes rtems/tools/rtems-tools#5

Author: Suraj Kumar 2024-07-10T18:44:26.288Z

changed the description

Author: Suraj Kumar 2024-07-10T18:45:24.533Z

Author: Christian Mauderer 2024-07-12T06:31:47.164Z

Is that file copied from somewhere or did you write it yourself? Depending on that: Please add a standard RTEMS license header (or rather the one from the RSB LICENSE file) to it if you wrote it yourself or use the original license if you copied it from somewhere.

Author: Suraj Kumar 2024-07-12T06:31:47.164Z

I wrote this from scratch by myself, and yes, I shall update it with the license as well.

Author: Suraj Kumar 2024-07-12T06:31:47.164Z

@c-mauderer So this would be prepended to the top of the file, yes?

```
RTEMS Tools Project (http://www.rtems.org/)
Copyright 2010-2017 Chris Johns (chrisj@rtems.org)
All rights reserved.

This package is part of the RTEMS Tools Project.

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
```

(Commented, of course)

Author: Christian Mauderer 2024-07-12T06:31:47.164Z

Yes. But with your copyright instead of Chris Johns'.

Author: Suraj Kumar 2024-07-12T06:31:47.164Z

Okay, I have added the license header. Please let me know if that is fine.

Author: Christian Mauderer 2024-07-12T06:31:47.164Z

Looks good. Thanks.

Author: Christian Mauderer 2024-07-11T05:20:27.849Z

Just to understand these lines:

- `gdb_path` is something like `${PREFIX}/share/gdb/python`, right?
- Then your `gcc_python_path` is something like `${PREFIX}/share/gcc-13.2.1/python`, right?

Author: Suraj Kumar 2024-07-11T05:20:27.849Z

Bingo. Is it clear enough from the name or could the file use some comments?

Author: Christian Mauderer 2024-07-11T05:20:27.849Z

That's OK. I just wanted to make sure that I understand it correctly.

Author: Christian Mauderer 2024-07-11T05:19:23.952Z

Shouldn't we have a %{gcc_version} already? @chris: You know the source builder a lot better.

Author: Suraj Kumar 2024-07-11T05:19:23.952Z

I had talked about this with Chris here, please check out this thread when you find the time: https://gitlab.rtems.org/rtems/tools/rtems-tools/-/issues/5#note_108895

Chris had said:

> Would it end up being confusing? How would know which value the variable holds? Remember the gcc version internal to gcc may not match the version in the macro `gcc_version`. For example we could have a git hash build of the gcc 13 branch. This work needs to know the internal value to find the path gcc will look.
>
> So, I resorted to finding the actual version from the target's GCC compiler itself. Hope that it clear.

Author: Christian Mauderer 2024-07-11T05:19:23.952Z

OK. Thanks for the explanation.

Author: Suraj Kumar 2024-08-13T14:13:55.893Z

changed this line in version 4 of the diff

Author: Suraj Kumar 2024-07-11T21:02:01.393Z

added 1 commit

- a375e806 - rtems/config: added license header to stdcxx-template.py

Compare with previous version

Author: Christian Mauderer 2024-07-12T06:31:47.199Z

resolved all threads

Author: Chris Johns 2024-08-18T06:24:14.862Z

This is looking good.

I think the next step is see if we can find a suitable trick to move this out here and into the RTEMS area. It may not be possible, I am not sure how to do this.

The issue is this file is used in `bare` configs and they do not depend on RTEMS.

Author: Suraj Kumar 2024-08-18T06:24:14.862Z

@chris I had pinged you about this on Discord, but I am not sure what you meant by:

> I think the next step is see if we can find a suitable trick to move this out here and into the RTEMS area. It may not be possible, I am not sure how to do this. The issue is this file is used in `bare` configs and they do not depend on RTEMS.
>
> Are you referring to the modifications or the `stdcxx.py` being installed or ... ? I was not too sure. Please clarify this whenever you find the time. Thank you.

Author: Chris Johns 2024-08-18T06:24:14.862Z

The change is specific to building `gcc` for RTEMS and `gcc-common-1.cfg` is used by the `bare` builds which include `gcc`. This change needs to somehow be moved to just the `rtems` configurations.

Author: Suraj Kumar 2024-08-18T06:24:14.862Z

Okay, I see. So would that mean having some kind of check in here to see if the target is a `bare` GCC or moving it out to some other file itself?

Author: Chris Johns 2024-08-18T06:24:14.862Z

That is a solution. Another is to place a macro label there such a `%{gcc-pre-install}` and that is defined in a file in `config/rtems/tools` and included is included in an RTEMS tools gcc config?

Author: Suraj Kumar 2024-08-18T06:24:14.862Z

Yeah sure, that would work too. I assume that including files will have the variables/macros from the file including it too (?) so that would make for a more modular approach.

I think we can have a file, say `rtems-gcc-preinstall.cfg`, under `rtems/config/tools`, which can have the same changes as my commit, and then have a check like so:

```
%if %{_target} =~ ".*-rtems.*"
%include %{_configdir}/rtems/tools/gcc-pre-install.cfg
%endif
```

How does that sound?

Author: Chris Johns 2024-08-18T06:24:14.862Z

Would a simpler approach work? In `gcc-common-1.cfg` have:

```
%if %(defined gcc-pre-installer}
%{gcc-pre-installer}
%endif
```

Where you want it to execute the include. Then add in the RTEMS configs something like:

```
%define gcc-pre-installer %include %{_configdir}/rtems/tools/gcc-pre-
↪install.cfg
```

I think should work but if not let me know.

Author: Suraj Kumar 2024-08-18T06:24:14.862Z

Okay I got what you meant, I will check out this solution and get back to you. Thanks

Author: Suraj Kumar 2024-08-18T06:24:14.862Z

@chris I had pinged you on Discord regarding this, but I take it you are buried with a lot of work

I think I have a working solution, but I am just not sure which file I can add this definition to such that it would be defined before this script is called? I tried looking at the trace output when dry running building the RSB to see which files are executed

in which order but that did not give me much direction. Could you help me out with this please?

Author: Suraj Kumar 2024-08-18T06:24:14.862Z

@chris I am not sure if this what you had in mind, but here's something:

in `rtems-base.bset` (`{prefix}/rsb/rtems/config`), we can add the following line:

```
%define rtems_build 1
```

The extra code I initially added to `gcc-common-1.cfg` can be moved over to `{prefix}/rtems/tools/gcc-pre-install.cfg` , and this line can be added to `gcc-common-1.cfg`:

```
%define gcc_pre_installer %include %{_configdir}/rtems/tools/gcc-pre-
↪install.cfg
```

Then, in `gcc-common-1.cfg`, we can add:

```
%if %{defined rtems_build}
%{gcc_pre_installer}
%endif
```

How does this sound? Please let me know

Author: Chris Johns 2024-08-18T06:24:14.862Z

Where does ``gcc-pre-install.cfg``get included?

I would include it in rtems/config/tools/rtems-gcc-13.3-newlib-head.cfg and then you should not need `rtems_build` because it is an RTEMS build. The define check in `gcc-common-1.cfg` can be macro name.

Also the name of the file can be what it does and not the name of macro if that helps make things clearer?

Author: Suraj Kumar 2024-08-18T06:24:14.862Z

`gcc_pre_installer` is defined as `%include %{_configdir}/rtems/tools/gcc-pre-install.cfg`, which would handle the include after the check.

I thought about adding it in `rtems-gcc-13.3-newlib-head.cfg` as well, but wouldn't that make it version dependent? (Or at least I think so)

Yep sure, I'll change the filename to reflect what it does, I was just wondering about the version update part fo the change. If that is not an issue then we can consider this issue as solved. :)

Author: Chris Johns 2024-08-18T06:24:14.862Z

It will only work on that version and later which will be based on the 13.3 version as a copy and change.

Author: Suraj Kumar 2024-08-18T06:24:14.862Z

Oh I see, so it acts as a copy + paste + edits from the older versions?

Alright, I will modify my environment as such and test. Will keep you posted on the progress. Thank you

Author: Suraj Kumar 2024-08-13T14:13:59.102Z

changed this line in version 4 of the diff

Author: Chris Johns 2024-08-18T06:24:14.862Z

Thanks

Author: Amar Takhar 2024-08-06T03:22:00.108Z

mentioned in merge request rtems/rtos/rtems!98

Author: Joel Sherrill 2024-08-12T18:13:52.347Z

Please add an SPDX license comment, then a blank line. Do it like the RTEMS code except as Python comments.

Author: Suraj Kumar 2024-08-12T18:13:52.347Z

@joel Where can I find this license comment? I googled for it but came across multiple ones, and the comments in other files in this repo seem similar to the one I have mentioned

Author: Suraj Kumar 2024-08-12T18:13:52.347Z

Nevermind, found it.

Author: Suraj Kumar 2024-08-11T14:03:41.477Z

added 1 commit

- 21057bee - rtems/config: added SPDX license comment

Compare with previous version

Author: Suraj Kumar 2024-08-13T14:13:59.948Z

added 2 commits

- b7895378 - rtems/config/tools: added script to install stdcxx.py to rtems/tools
- 0a29210c - rtems/config/tools: modified gcc-13.3-newlib to define macro signifying RTEMS build

Compare with previous version

Author: Chris Johns 2024-08-18T06:23:04.457Z

This is what you put in `rtems-gcc-13.3-\ |md_0_8206|\ newlib-head.cfg\ |md_0_8206|\ `` and as ``gcc_pre_install`

Author: Suraj Kumar 2024-08-14T18:46:24.784Z

changed this line in version 5 of the diff

Author: Suraj Kumar 2024-08-18T06:23:04.457Z

@chris Fixed

Author: Chris Johns 2024-08-18T06:23:11.818Z

This is `%{gcc_pre_install}`

Author: Suraj Kumar 2024-08-14T18:46:25.260Z

changed this line in version 5 of the diff

Author: Suraj Kumar 2024-08-18T06:23:11.818Z

Fixed

Author: Chris Johns 2024-08-18T06:23:33.899Z

This will not work. You should not assume any order in that path or even need to parse it.

Why explicitly provide the path? The `%include` directive should search `%_confdir`?

I would have thought something like:

```
%define gcc_pre_install %include tools/rtems-install-stdcxx.cfg
```

should work?

Author: Suraj Kumar 2024-08-18T06:23:33.899Z

The thing is, I need a path specifically to `rsb/rtems/config/stdcxx-template.py`, in order to be able to cat it and filter it through `sed`.

If I try doing the following:

```
%define stdcxx_template %{_configdir}/stdcxx-template.py
```

It appends `stdcxx-template.py` to each path in the macro, and it is not in a form which I can `cat` (since it is 4 paths). This is why I decided to define a separate macro for it. I hope I was able to convey the problem clearly enough?

Your solution will work for the rest of the issues I think, since it is only a matter of including the files - but it is not working for the case of running `cat` on `stdcxx-template.py`. Would another approach be to grep the pattern of `rtems/config` instead of assuming a specific ordering within `_configdir`? Please do let me know.

Author: Suraj Kumar 2024-08-14T18:46:25.757Z

changed this line in version 5 of the diff

Author: Suraj Kumar 2024-08-18T06:23:33.899Z

@chris Please let me know what you think of this change.

Author: Chris Johns 2024-08-18T06:23:33.899Z

Good.

Author: Chris Johns 2024-08-18T06:23:47.836Z

This should be something like:

```
%define gcc_pre_install %include tools/rtems-install-stdcxx.cfg
```

Author: Suraj Kumar 2024-08-14T18:46:26.289Z

changed this line in version 5 of the diff

Author: Suraj Kumar 2024-08-18T06:23:47.836Z

Fixed

Author: Chris Johns 2024-08-18T06:23:47.836Z

Thanks

Author: Suraj Kumar 2024-08-14T18:46:26.562Z

added 2 commits

- 37ab3f20 - rtems/config/tools: modified gcc-13.3-newlib to define macro signifying RTEMS build
- 1059bd04 - source-builder/config: added RTEMS check to install stdcxx.py script only for RTEMS builds

Compare with previous version

Author: Suraj Kumar 2024-08-14T19:37:34.010Z

added 11 commits

- 1059bd04...585d8ba4 - 10 commits from branch `rtems/tools:main`
- 5aa1b5c7 - rtems/config/tools: modified gcc-13.3-newlib to define macro signifying RTEMS build

Compare with previous version

Author: Suraj Kumar 2024-08-14T19:38:37.196Z

added 1 commit

- 92df56fe - rtems/config/tools: modified gcc-13.3-newlib to define macro signifying RTEMS build

Compare with previous version

Author: Chris Johns 2024-08-18T06:23:55.587Z

Please move this down to line 17 and add line after so it is on its own. This way it is not in the bits that are about the version of the build.

Author: Suraj Kumar 2024-08-18T06:16:11.901Z

changed this line in version 8 of the diff

Author: Suraj Kumar 2024-08-18T06:23:55.587Z

I have made this change

Author: Suraj Kumar 2024-08-18T06:16:12.099Z

added 1 commit

- 75fd9c66 - rtems/config/tools: modified gcc-13.3-newlib to define macro signifying RTEMS build

Compare with previous version

Author: Chris Johns 2024-08-18T06:22:00.410Z

Sorry I got the line wrong. We need:

```
%include %{_configdir}/checks.cfg
%include %{_configdir}/base.cfg

%define gcc_version 13.3.0
%source set gcc https://ftp.gnu.org/gnu/gcc/gcc-%{gcc_version}/gcc-%
↪{gcc_version}.tar.xz
%hash sha512 gcc-%{gcc_version}.tar.xz \\
7V8vTG7Sx5b88sk3BxWenb092xugY9VJgE3WjNq7ttVQmFrhyEZa6aM2z+KSdKbrD0LiGSQ2BXTr2OXVx8moAQ==

%define newlib_version 1339af4
%define newlib_external 1
%define newlib_expand_name sourceware-mirror-newlib-cygwin-%{newlib_
↪version}
%source set newlib --rsb-file=newlib-%{newlib_version}.tar.gz https://
↪codeload.github.com/RTEMS/sourceware-mirror-newlib-cygwin/tar.gz/%
↪{newlib_version}
%hash sha512 newlib-%{newlib_version}.tar.gz \\
mZWCoi+gMohMTLAtJse3D44qC1kaTefPxy1sDY3y9seRysOhXZCHyADWIjHYaEEJTJKTLkYQfe99mGF5zX6lQA==

%define gcc_pre_install %include tools/rtems-install-stdcxx.cfg

%define with_threads 1
%define with_plugin 0
%define with_iconv 1

%include %{_configdir}/gcc-13.cfg
```

Author: Suraj Kumar 2024-08-18T06:22:00.410Z

Okay, I have changed it accordingly

Author: Suraj Kumar 2024-08-18T06:19:56.204Z

added 1 commit

- 632ccda7 - rtems/config/tools: modified gcc-13.3-newlib to define macro signifying RTEMS build

Compare with previous version

Author: Chris Johns 2024-08-18T06:24:14.900Z

resolved all threads

Author: Chris Johns 2024-08-18T06:24:36.044Z

marked this merge request as **ready**

Author: Chris Johns 2024-08-18T06:24:39.947Z

approved this merge request

Author: Suraj Kumar 2024-08-19T07:30:50.820Z

mentioned in merge request rtems/docs/rtems-docs!43

Author: Frank Kuehndel 2024-08-19T08:55:16.102Z

mentioned in issue #29

Author: Suraj Kumar 2024-08-19T21:12:29.405Z

mentioned in merge request !48

3.14.2.48 20 - Update RSB 4.11 for the gitlab migration

Id	20
State	merged
Merged by	Chris Johns
Merged at	2024-06-11T04:38:16.954Z
Assignee(s)	Kinsey Moore
Created	2024-06-11T03:57:11.647Z
Updated	2024-08-10T00:40:54.349Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/20
Commit	337ba081e74d8f5d57608af9178f74ec4f4796d3

Summary

Migrate devel links to gitlab

I did the best I could, but there were still some issues on my local machine. This needs to be thoroughly checked by someone familiar with it, especially since sb-get-sources in this version does not have the error flag.

Author: Kinsey Moore 2024-06-11T03:57:11.799Z

assigned to @opticron

Author: Chris Johns 2024-06-11T04:38:13.842Z

approved this merge request

3.14.2.49 18 - Bump newlib head hash to 1ed1516 in mulitple cfgs

Id	18
State	merged
Merged by	Joel Sherrill
Merged at	2024-06-10T13:55:14.073Z
Assignee(s)	Joel Sherrill
Reviewer(s)	Chris Johns
Created	2024-06-09T18:39:28.147Z
Updated	2024-08-10T00:40:54.252Z
Milestone	6.1
Labels	tool::newlib
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/18
Commit	ac974f70ecdb9c9ee64ff0611b78960437efc8da

Summary

Bump newlib head hash to 1ed1516 in mulitple cfgs

This was needed to address a build issue with long double files on m68k, sh, and nios2.

Author: Joel Sherrill 2024-06-09T18:39:28.351Z

requested review from @chris

Author: Joel Sherrill 2024-06-09T18:39:28.374Z

assigned to @joel

Author: Chris Johns 2024-06-10T03:09:10.246Z

approved this merge request

Author: Chris Johns 2024-06-10T03:09:43.223Z

Why is this draft? Is it OK to merge?

Author: Amar Takhar 2024-06-10T03:13:28.507Z

The default is to have 'Draft' checked on he most likely forgot it I would say it's OK to merge.

Author: Joel Sherrill 2024-06-10T13:55:07.416Z

marked this merge request as **ready**

3.14.2.50 14 - gdb: Split python's version into major/minor and check for embed option

Id	14
State	merged
Merged by	Chris Johns
Merged at	2024-06-03T20:38:22.961Z
Created	2024-06-02T12:44:41.678Z
Updated	2024-08-10T00:40:54.162Z
Milestone	6.1
Labels	tool::gdb
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/14
Commit	ee67f236f2f171982b1c7fa0fb7d1e533d734049

Summary

gdb: Split python's version into major/minor and check for embed option

Cherry-pick from 70f302e08c9053637f5eff7dfb52d3442aaf76cb for rtems5, so that we can close #4897.

Author: Chris Johns 2024-06-03T20:38:15.272Z

approved this merge request

3.14.2.51 19 - Update RSB 5 branch for gitlab migration

Id	19
State	merged
Merged by	Chris Johns
Merged at	2024-06-11T04:36:25.824Z
Assignee(s)	Kinsey Moore
Created	2024-06-11T02:28:21.643Z
Updated	2024-08-10T00:40:53.871Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/19
Commit	7a6476f27a8d208b71ebce8df0944e45ab64f2fa

Summary

This updates git.rtems.org and devel.rtems.org URLs as necessary to allow “sb-get-sources –stop-on-error” to complete without error.

Author: Kinsey Moore 2024-06-11T02:28:21.892Z

assigned to @opticron

Author: Chris Johns 2024-06-11T04:36:22.125Z

approved this merge request

3.14.2.52 22 - Source downloads fail

Id	22
State	merged
Merged by	Amar Takhar
Merged at	2024-06-12T01:41:26.385Z
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Created	2024-06-12T01:36:13.115Z
Updated	2024-08-10T00:40:41.938Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/22
Commit	05179d3cc8a26975f9b5e3d95797117069faeab1

This MR fixes:

1. Fix `_dry_run` macro support
2. Fix the default version in `bare/devel/expat-internal`
3. Add MPFR support for RTEMS 7

4. Remove support for `gcc-4.9` because the default build config contains GCC git patches and these break everytime GNU GCC upgrades their version of git

The issue #11 details the work.

Author: Chris Johns 2024-06-12T01:36:13.239Z

requested review from @amar

Author: Chris Johns 2024-06-12T01:36:13.286Z

assigned to @chris

Author: Amar Takhar 2024-06-12T01:41:23.712Z

approved this merge request

3.14.2.53 23 - base/glib: Do not check for meson when getting sources

Id	23
State	merged
Merged by	Amar Takhar
Merged at	2024-06-12T03:34:21.315Z
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Created	2024-06-12T03:30:38.480Z
Updated	2024-08-10T00:40:41.653Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/23
Commit	8037d9ad83d74b5d5eee6ac13ead3580772609cd

Do not check for `meson` if a dry run and downloading.

Author: Chris Johns 2024-06-12T03:30:38.591Z

requested review from @amar

Author: Chris Johns 2024-06-12T03:30:38.613Z

assigned to @chris

Author: Amar Takhar 2024-06-12T03:34:12.281Z

approved this merge request

3.14.2.54 24 - rsb: Add makefs to tools and use it in 6/rtems-x86_64

Id	24
State	merged
Merged by	Chris Johns
Merged at	2024-06-19T22:56:02.331Z
Created	2024-06-12T10:19:00.800Z
Updated	2024-08-10T00:40:27.004Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/24
Commit	4c6dfb7aef9811258457971aa9213d5aebb9ce8d

Summary

Add makefs needed for the amd64 test configs

Author: Matheus Pecoraro 2024-06-13T19:26:09.078Z

Author: Chris Johns 2024-06-19T22:54:53.229Z

added 7 commits

- 47e7a6fb...d282a172 - 6 commits from branch `rtems/tools:main`
- 4c6dfb7a - rsb: Add makefs to tools and use it in 6/rtems-x86_64

Compare with previous version

Author: Chris Johns 2024-06-19T22:55:58.987Z

approved this merge request

3.14.2.55 33 - windows.py: Disable chmod on Cygwin

Id	33
State	merged
Merged by	Chris Johns
Merged at	2024-07-09T20:49:28.531Z
Created	2024-07-08T17:11:54.821Z
Updated	2024-08-10T00:40:16.511Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/33
Commit	571791cfe50c74ff306b2aa9aa9cd36972800864

Summary

windows.py: Disable chmod on Cygwin

The command chmod as invoked by the RSB has begun to fail on Cygwin. It was determined that doing a chmod is not necessary. This disabling it was seen as a solution.

Closes #22.

Author: Chris Johns 2024-07-09T20:49:01.571Z

The macro is __setup_post so I am confused how this change helps?

Author: Joel Sherrill 2024-07-09T20:49:01.571Z

Me too. Let me sort this out.

Author: Joel Sherrill 2024-07-09T13:58:27.324Z

changed this line in version 2 of the diff

Author: Chris Johns 2024-07-08T21:37:07.361Z

requested changes

Author: Joel Sherrill 2024-07-09T13:58:27.542Z

added 2 commits

- eda555d1 - 1 commit from branch `rtems/tools:main`
- 571791cf - windows.py: Disable chmod on Cygwin

Compare with previous version

Author: Chris Johns 2024-07-09T20:49:01.588Z

resolved all threads

Author: Chris Johns 2024-07-09T20:49:22.748Z

approved this merge request

3.14.2.56 31 - rtems-tools-6.cfg: Bump hash to fix build issue on Cygwin

Id	31
State	merged
Merged by	Amar Takhar
Merged at	2024-06-27T19:53:00.958Z
Assignee(s)	Joel Sherrill
Created	2024-06-27T19:52:18.775Z
Updated	2024-08-10T00:40:16.422Z
Milestone	6.1
Labels	tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/31
Commit	0c685d82082ab6d821b5a4da89b2d904ea7a705c

Summary

Bump hash of rtems-tools to pick up fix for not compiling on Cygwin

Author: Joel Sherrill 2024-06-27T19:52:18.911Z

assigned to @joel

Author: Amar Takhar 2024-06-27T19:52:57.630Z

approved this merge request

3.14.2.57 36 - rtems-tools: Fetch rtems-syms improvements

Id	36
State	merged
Merged by	Chris Johns
Merged at	2024-07-11T05:34:31.052Z
Assignee(s)	Sebastian Huber
Created	2024-07-11T05:23:42.065Z
Updated	2024-08-10T00:40:03.773Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/36
Commit	c085b3bafb66e7cf2f9afd8b2622b5c1799e1616

Summary

rtems-tools: Fetch rtems-syms improvements

Update #rtos/rtems/4941.

Author: Sebastian Huber 2024-07-11T05:23:42.156Z

assigned to @sebhub

Author: Chris Johns 2024-07-11T05:34:27.311Z

approved this merge request

Author: Sebastian Huber 2024-07-11T05:37:25.894Z

mentioned in merge request rtems/rtos/rtems!111

3.14.2.58 37 - rtems-gcc-13.3-newlib-head.cfg: Update hash to 1339af4

Id	37
State	merged
Merged by	Chris Johns
Merged at	2024-07-15T22:18:48.806Z
Created	2024-07-15T19:19:56.301Z
Updated	2024-08-10T00:40:03.580Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/37
Commit	dd7e6b0c040018fcaa5f9683338c8230ea6c53d4

Summary

rtems-gcc-13.3-newlib-head.cfg: Update hash to 1339af4

This picked up the following patches of interest to RTEMS:

- sys/tree.h: Remove from rtems includes
- sys/resource.h: Add RUSAGE_THREAD

Closes #24.

Author: Amar Takhar 2024-07-15T19:21:45.453Z

Question .. What was the point of opening #24?

The MR has more detail and the issue is just a title and the summary says to read the title. I went and looked over the issue expecting more details but it was just a waste of time since the details are here.

You can skip opening the issue if there aren't going to be more details there it saves everyone time and it's easier to search as you don't have to look in 2 places.

Author: Joel Sherrill 2024-07-15T20:46:54.390Z

To have an issue for the MR. No more. No less.

Author: Amar Takhar 2024-07-15T20:46:54.390Z

Okay.

Author: Amar Takhar 2024-07-15T20:46:54.409Z

resolved all threads

Author: Chris Johns 2024-07-15T22:18:43.155Z

approved this merge request

3.14.2.59 39 - rtems/6: Update MicroBlaze GCC to 12

Id	39
State	merged
Merged by	Chris Johns
Merged at	2024-07-16T22:30:36.745Z
Created	2024-07-16T14:32:29.819Z
Updated	2024-08-10T00:40:03.425Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/39
Commit	c4975f3bc2a9b5db87eab5290dd0f0141c947d68

Summary

rtems/6: Update MicroBlaze GCC to 12

GCC 10 fails to build.

Closes #23.

Author: Chris Johns 2024-07-16T22:30:30.957Z

approved this merge request

Author: Sebastian Huber 2024-07-19T06:33:32.248Z

I get build errors on microblaze:

```
1 /home/EB/sebastian_h/src/rtems/cpukit/libcsupport/src/getrusage.c: In␣
  ↪function 'getrusage':
2 /home/EB/sebastian_h/src/rtems/cpukit/libcsupport/src/getrusage.
  ↪c:113:8: error: 'RUSAGE_THREAD' undeclared (first use in this␣
  ↪function); did you mean 'SIGEV_THREAD'?
```

(continues on next page)

(continued from previous page)

```
113 |   case RUSAGE_THREAD:
|        ^~~~~~~~~~~~~
|        SIGEV_THREAD
```

Maybe the Newlib version is not the right one.

3.14.2.60 42 - rtems-tools: Fetch rtems-syms fixes

Id	42
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-25T22:31:33.159Z
Assignee(s)	Sebastian Huber
Created	2024-07-20T15:23:51.771Z
Updated	2024-08-10T00:40:03.235Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/42
Commit	8d70e4b54d2dc813ef0884c44314a5790136fa1c

Summary

rtems-tools: Fetch rtems-syms fixes

Fix placement of symbol table.

Author: Sebastian Huber 2024-07-20T15:23:51.868Z

assigned to @sebhub

Author: Kinsey Moore 2024-07-25T22:31:29.985Z

approved this merge request

3.14.2.61 40 - sb/build:Fix reference a null object when a package is unnecessary.

Id	40
State	merged
Merged by	Chris Johns
Merged at	2024-08-07T02:48:38.820Z
Created	2024-07-19T09:53:06.388Z
Updated	2024-08-10T00:39:47.489Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/40
Commit	0884fffa90e35754762343f050fd172364f32a28

Summary

sb/build:Fix reference a null object when a package is unnecessary. close #26

Author: Kinsey Moore 2024-07-25T22:32:55.072Z

added 4 commits

- 3f8dadc9...892e966e - 3 commits from branch `rtems/tools:main`
- 0884fffa - sb/build:Fix reference a null object when a package is unnecessary.

Compare with previous version

Author: Chris Johns 2024-08-07T02:48:35.188Z

approved this merge request

3.14.2.62 46 - sb: Pull the repos after fetching

Id	46
State	merged
Merged by	Kinsey Moore
Merged at	2024-08-08T23:21:03.249Z
Assignee(s)	Chris Johns
Created	2024-08-08T22:40:05.104Z
Updated	2024-08-10T00:39:47.240Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/46
Commit	d534dbc0512db8e67e442396fdee6613ab83aad0

Pull the repo after fetching to get the latest.

Author: Chris Johns 2024-08-08T22:40:05.809Z

assigned to @chris

Author: Kinsey Moore 2024-08-08T23:20:58.578Z

approved this merge request

3.14.2.63 47 - Update tools, rtems, libbsd, net legacy and net services

Id	47
State	merged
Merged by	Kinsey Moore
Merged at	2024-08-08T23:27:27.479Z
Assignee(s)	Chris Johns
Created	2024-08-08T23:24:26.548Z
Updated	2024-08-08T23:27:29.052Z
Milestone	6.1
Labels	network::legacy, tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/47
Commit	585d8ba43f8d207cfc961a5d8eb7387c750ba407

Summary

rtems: Update tools, rtems, libbsd, net legacy and net services

- net-services:
- Doc to MD
- rtems:
- Python pretty printer section
- X86_64 APCI support
- move tree.h to internal
- libdl sym fixes
- updates to READMEs and other docs
- libbsd
- Memory leak fixed
- updates to READMEs
- net-legacy
- updates to READMEs
- tools
- updates to READMEs
- fixes to syms
- add pdoc documentation
- add testing

Author: Chris Johns 2024-08-08T23:24:26.709Z

assigned to @chris

Author: Kinsey Moore 2024-08-08T23:27:23.912Z

approved this merge request

3.14.2.64 44 - Update rtems6 tools to binutils 2.43

Id	44
State	merged
Merged by	Chris Johns
Merged at	2024-08-07T02:53:55.230Z
Assignee(s)	Joel Sherrill
Created	2024-08-06T13:50:46.706Z
Updated	2024-08-07T02:53:57.948Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/44
Commit	077d200e1ca1d25bdae81118098a43f65bb5996f

Summary

Update rtems6 tools to binutils 2.43

This only impacts targets using the rtems-default.bset.

Closes #28.

Author: Joel Sherrill 2024-08-06T13:50:46.874Z

assigned to @joel

Author: Chris Johns 2024-08-07T02:53:33.315Z

added 2 commits

- 0884fffa - 1 commit from branch `rtems/tools:main`
- 077d200e - Update rtems6 tools to binutils 2.43

Compare with previous version

Author: Chris Johns 2024-08-07T02:53:50.065Z

approved this merge request

3.14.2.65 41 - Convert LICENSE to MarkDown

Id	41
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-25T22:32:43.392Z
Assignee(s)	Amar Takhar
Created	2024-07-20T04:59:00.116Z
Updated	2024-07-25T22:32:45.164Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/41
Commit	892e966e4331f977cca8c83fc3bc22c8fa9d2754

Summary

Author: Amar Takhar 2024-07-20T04:59:00.634Z

assigned to @amar

Author: Kinsey Moore 2024-07-25T22:32:29.547Z

added 2 commits

- 8d70e4b5 - 1 commit from branch `rtems/tools:main`
- 892e966e - Convert LICENSE to MarkDown

Compare with previous version

Author: Kinsey Moore 2024-07-25T22:32:40.087Z

approved this merge request

3.14.2.66 29 - Fix the handling of the hash in sb-rtems-pkg

Id	29
State	merged
Merged by	Amar Takhar
Merged at	2024-06-15T18:26:25.386Z
Assignee(s)	Chris Johns
Created	2024-06-15T05:26:37.423Z
Updated	2024-06-15T18:26:27.273Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/29
Commit	d282a1723359dc689ca49fe6a7241423d0f10e97

Fix the handling of the hash in `sb-rtems-pkg`. The logic was confused of the tar file name was in another macro. Expand the macros and check for the package name.

Close #13

Author: Chris Johns 2024-06-15T05:26:37.569Z

assigned to @chris

Author: Amar Takhar 2024-06-15T18:26:18.385Z

added 2 commits

- a961b7c5 - 1 commit from branch `rtems/tools:main`
- d282a172 - sb/rtemspkg: Fix the handling of the hash

Compare with previous version

Author: Amar Takhar 2024-06-15T18:26:22.089Z

approved this merge request

3.14.2.67 30 - rtems/tools,kernel: Update tools after elftoolchain update

Id	30
State	merged
Merged by	Amar Takhar
Merged at	2024-06-15T06:57:34.690Z
Assignee(s)	Chris Johns
Created	2024-06-15T05:34:23.681Z
Updated	2024-06-15T06:57:35.796Z
Milestone	6.1
Labels	rtems::kernel, tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/30
Commit	a961b7c5673c2e2614760aa3ee544de04892ed16

Update tools after elftoolchain update

Pick up the latest kernel changes

Author: Chris Johns 2024-06-15T05:34:23.857Z

assigned to @chris

Author: Amar Takhar 2024-06-15T06:57:31.704Z

approved this merge request

3.14.2.68 28 - RSB tar strip components double percent

Id	28
State	merged
Merged by	Amar Takhar
Merged at	2024-06-14T05:07:38.037Z
Assignee(s)	Chris Johns
Created	2024-06-14T04:34:06.598Z
Updated	2024-06-14T05:07:39.100Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/28
Commit	3306c4aa59960df895ff8e32b631e4fb56972776

A bug was introduced when lowering the tar output in the log

Author: Chris Johns 2024-06-14T04:34:06.736Z

assigned to @chris

Author: Amar Takhar 2024-06-14T05:07:34.147Z

approved this merge request

3.14.2.69 27 - rtems-tools-6.cfg: Checksum updated

Id	27
State	merged
Merged by	Amar Takhar
Merged at	2024-06-13T17:03:37.914Z
Assignee(s)	Joel Sherrill
Created	2024-06-13T15:41:54.484Z
Updated	2024-06-14T04:08:05.369Z
Milestone	6.1
Labels	tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/27
Commit	c50d52d7ca55eb168b581d592e62bbde2dc0a843

Summary

rtems-tools-6.cfg: Checksum updated

The hash was updated without the checksum being updated.

Author: Joel Sherrill 2024-06-13T15:41:54.643Z

assigned to @joel

Author: Amar Takhar 2024-06-13T17:03:34.057Z

approved this merge request

Author: Chris Johns 2024-06-14T04:08:05.352Z

This checksum is automatically generated in the `sb-rtems-pkg` tool. This means something is broken in that tool.

3.14.2.70 26 - Update RTEMS packages after moving to gitlab.rtems.org

Id	26
State	merged
Merged by	Amar Takhar
Merged at	2024-06-13T07:28:05.156Z
Assignee(s)	Chris Johns
Created	2024-06-13T07:17:52.631Z
Updated	2024-06-13T07:28:06.311Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/26
Commit	87a855a763299b0af923f3fa5cd7faa857963f64

Summary

This merge request updates the RTEMS packages after moving to `gitlab.rtems.org`

Author: Chris Johns 2024-06-13T07:17:52.762Z

assigned to @chris

Author: Chris Johns 2024-06-13T07:23:56.857Z

added 2 commits

- 86016e9a - 1 commit from branch `rtems/tools:main`
- 87a855a7 - rtems: Update RTMES packages after moving to gitlab.rtems.org

Compare with previous version

Author: Chris Johns 2024-06-13T07:24:25.875Z

changed title from **Update RT{-M-}ES packages after moving to gitlab.rtems.org** to **Update RTE{+M+}S packages after moving to gitlab.rtems.org**

Author: Amar Takhar 2024-06-13T07:28:00.134Z

approved this merge request

3.14.2.71 25 - sb/rtemspkg: Use git:// paths for download URLs

Id	25
State	merged
Merged by	Amar Takhar
Merged at	2024-06-13T07:18:11.809Z
Assignee(s)	Chris Johns
Created	2024-06-13T07:13:07.911Z
Updated	2024-06-13T07:18:13.372Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/25
Commit	86016e9a50e3d3a5ea5e2ab6f0f3740bb1a4cd64

Use `git://` paths for download URLs

Add `protocol=https` to support `gitlab.rtems.org`

Close #12

Author: Chris Johns 2024-06-13T07:13:08.088Z

assigned to @chris

Author: Amar Takhar 2024-06-13T07:18:08.291Z

approved this merge request

3.14.2.72 21 - Fix MacOS python patch to the GDB 14.2 build and reduce down tar output

Id	21
State	merged
Merged by	Amar Takhar
Merged at	2024-06-11T04:48:36.449Z
Assignee(s)	Chris Johns
Created	2024-06-11T04:34:38.110Z
Updated	2024-06-12T01:01:30.448Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/21
Commit	f788d9011bf5882d5ecad3db73b5596f59739a4f

1. Add the MacOS python patch to the GDB 14.2 build

2. No verbose tar output when `--trace` is not used

Closes #9

Author: Chris Johns 2024-06-11T04:34:38.258Z

assigned to @chris

Author: Amar Takhar 2024-06-11T04:48:20.561Z

Are these changes and the ones below intentional? Is it a different change that slipped through?

Author: Chris Johns 2024-06-11T04:48:20.561Z

Forgot the change was in the repo. I have updated the MR details to reflect the changed.

Author: Chris Johns 2024-06-11T04:47:34.175Z

changed title from **{-rtems/6: Add the-} MacOS python patch to the GDB 14.2 build** to **{+Fix+} MacOS python patch to the GDB 14.2 build{+ and reduce down tar output+}**

Author: Chris Johns 2024-06-11T04:47:34.203Z

changed the description

Author: Chris Johns 2024-06-11T04:48:20.601Z

resolved all threads

Author: Amar Takhar 2024-06-11T04:48:30.371Z

approved this merge request

Author: Chris Johns 2024-06-12T01:01:30.426Z

mentioned in issue #11

3.14.2.73 16 - gdb: Build MPFR before GDB as it now depeneds on it

Id	16
State	merged
Merged by	Amar Takhar
Merged at	2024-06-08T19:42:26.396Z
Assignee(s)	Chris Johns
Reviewer(s)	Joel Sherrill, Amar Takhar
Created	2024-06-08T00:47:02.398Z
Updated	2024-06-08T19:42:28.385Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/16
Commit	423d98d2058a7dac0921f9a13113b024696236b9

Summary

Build MPFR before GDB as it now depeneds on it

Closes #7

Author: Chris Johns 2024-06-08T00:47:02.540Z

requested review from @amar and @joel

Author: Chris Johns 2024-06-08T00:47:02.556Z

assigned to @chris

Author: Chris Johns 2024-06-08T01:18:12.315Z

added 11 commits

- f1bfcd6e...f39e9584 - 10 commits from branch `rtems/tools:main`
- 148922b4 - gdb: Build MPFR before GDB as it now depeneds on it

Compare with previous version

Author: Chris Johns 2024-06-08T04:35:59.768Z

added 1 commit

- 423d98d2 - gdb: Build MPFR before GDB as it now depeneds on it

Compare with previous version

Author: Chris Johns 2024-06-08T04:37:10.262Z

This MR builds Expat, GMP and MPFR as internal libraries for static linking

Author: Chris Johns 2024-06-08T04:44:17.260Z

mentioned in issue #7

Author: Amar Takhar 2024-06-08T19:42:20.345Z

This builds and works fine now.

Author: Amar Takhar 2024-06-08T19:42:22.698Z

approved this merge request

3.14.2.74 15 - Update for gitlab changes and fix minor issues

Id	15
State	merged
Merged by	Chris Johns
Merged at	2024-06-06T23:25:31.643Z
Assignee(s)	Kinsey Moore
Reviewer(s)	Chris Johns
Created	2024-06-05T18:20:12.821Z
Updated	2024-06-06T23:26:44.870Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/15
Commit	f39e9584775a0bccdbd6959a9c55d473330d08e2

This MR is to fix the gitlab migration issues for main (6/7) branch for #3

The rtems_waf changes and the rtemspkg.py changes in particular need additional eyes as I'm not familiar with all parts of the RSB workflow.

Author: Kinsey Moore 2024-06-05T18:20:12.973Z

assigned to @opticron

Author: Kinsey Moore 2024-06-05T18:22:05.654Z

mentioned in issue #3

Author: Kinsey Moore 2024-06-05T18:25:08.992Z

added 16 commits

- 3fc04f12...108b765c - 7 commits from branch `rtems/tools:main`
- 9b231161 - rtems/config: Cleanup orphaned configs
- 1039f6af - sis: Handle renaming
- 892e6217 - rtems-tools: Update location to gitlab
- bcd838fc - config/rtems-kernel: Update error text
- ff51caa9 - config/rtems-kernel: Update for gitlab
- 31602629 - config/rtems-libbsd: Update for gitlab
- 55084f6f - config/rtems-net-legacy: Update for gitlab
- 0ffb6192 - config/rtems-net-services: Update for gitlab
- 514e6253 - config: Update rtems_waf for gitlab

Compare with previous version

Author: Kinsey Moore 2024-06-05T19:25:19.809Z

requested review from @chris

Author: Kinsey Moore 2024-06-05T20:50:25.012Z

It looks like the libffi patch path isn't quite right.

Author: Kinsey Moore 2024-06-05T20:55:25.360Z

added 9 commits

- c261531d - rtems/config: Cleanup orphaned configs
- 263444aa - sis: Handle renaming
- 819d5e92 - rtems-tools: Update location to gitlab
- 3fdb8e9f - config/rtems-kernel: Update error text
- b7be268a - config/rtems-kernel: Update for gitlab
- 29396592 - config/rtems-libbsd: Update for gitlab
- 8a4c26f7 - config/rtems-net-legacy: Update for gitlab
- d68c65b2 - config/rtems-net-services: Update for gitlab
- 10f494df - config: Update rtems_waf for gitlab

Compare with previous version

Author: Kinsey Moore 2024-06-05T20:56:13.597Z

I had a stale patch in patches that prevented it from picking up the failure to find the patch on the 6 branch that doesn't exist yet. The updated patch set fixes the libffi patch download issue.

Author: Kinsey Moore 2024-06-05T21:04:15.822Z

added 1 commit

- 227582a6 - Migrate devel links to gitlab

Compare with previous version

Author: Kinsey Moore 2024-06-05T21:04:36.118Z

The final patch also addresses #4

Author: Kinsey Moore 2024-06-06T14:22:12.671Z

Also of note, I don't have a lot of the platforms that these patches affect, so I can't verify the download of patches for things like darwin.

Author: Chris Johns 2024-06-06T14:22:12.671Z

The `sb-get-source --stop-on-error` is your friend here. It will make sure all build sets and so all configurations are run through all possible host types. The `--stop-on-error` option is needed or you miss issues.

Note, delete the `sources` and `patches` directories before running or the RSB will see the cached files and assume they are all OK.

Author: Kinsey Moore 2024-06-06T14:22:12.671Z

I have updated the one hash that threw an error.

Author: Chris Johns 2024-06-06T00:50:46.658Z

marked this merge request as **draft**

Author: Chris Johns 2024-06-06T14:24:41.075Z

I suspect this change in this `.bset` file is not accessible in `.cfg` files so I wonder if this file is copied to `rtems-urls.cfg` and `rtems-urls.bset` includes the `.cfg` file? We may not need a `.bset` version if no extension is added to the include but I would need to check this to be certain.

Over time references to our git repos have been added to a number of config files. I am fine with the changes in this MR staying as they are and then a separate issue

added to clean up the build set and config files to have a single reference if that is too much for this change?

Author: Kinsey Moore 2024-06-06T14:24:41.075Z

I'd prefer the cleanup to happen in a different MR/issue. I definitely noticed that the defined URLs were not consistently used or available and were often redefined instead of pulling in the global set.

Author: Chris Johns 2024-06-06T01:07:05.678Z

@opticron awesome set of changes, thank you. I have made the MR draft until the `sb-get-sources` command has been run and completes. The https://gitlab.rtems.org/administration/integration/-/issues/6 issue will use this command to update the cache on ftp.rtems.org so it will be checked once we have the CI running.

Author: Kinsey Moore 2024-06-06T14:21:36.053Z

added 2 commits

- e4a69442 - config: Update rtems_waf for gitlab
- 1549a7b9 - Migrate devel links to gitlab

Compare with previous version

Author: Kinsey Moore 2024-06-06T14:24:41.091Z

resolved all threads

Author: Kinsey Moore 2024-06-06T14:24:57.667Z

marked this merge request as **ready**

Author: Kinsey Moore 2024-06-06T23:10:13.801Z

added 2 commits

- 0ed7e8c6 - config: Update rtems_waf for gitlab
- f39e9584 - Migrate devel links to gitlab

Compare with previous version

Author: Kinsey Moore 2024-06-06T23:11:33.510Z

The patch set has been updated for the rtems-waf -> rtems_waf renaming and passes sb-get-sources.

Author: Chris Johns 2024-06-06T23:24:45.448Z

I have also done my testing and it looks good. I have found an unrelated bug I will post in a separate merge request. Thanks for the change.

Author: Chris Johns 2024-06-06T23:24:55.676Z

approved this merge request

Author: Kinsey Moore 2024-06-06T23:26:44.724Z

mentioned in issue #4

3.14.2.75 13 - Update binutils, gdb, and gcc

Id	13
State	merged
Merged by	Chris Johns
Merged at	2024-06-03T21:36:14.381Z
Assignee(s)	Joel Sherrill
Created	2024-06-01T16:21:13.425Z
Updated	2024-06-03T21:36:15.618Z
Milestone	6.1
Labels	tool::binutils
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/13
Commit	108b765c96bfa494824eae0101630aa1bbfbf435

Summary

Update binutils, gdb, and gcc

- Update to binutils 2.41
- Update to gdb 14.2
- Update to gcc 13.3

updates #4768

Author: Joel Sherrill 2024-06-01T16:21:13.597Z

assigned to @joel

Author: Chris Johns 2024-06-03T21:36:09.620Z

approved this merge request

3.14.2.76 12 - Format all code with yapf defaults

Id	12
State	merged
Merged by	Amar Takhar
Merged at	2024-05-25T21:48:38.307Z
Assignee(s)	Chris Johns
Created	2024-05-25T05:17:51.466Z
Updated	2024-05-25T21:48:39.157Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/12
Commit	0e02b48b80941d68c7cb0da42c12938162a2abe4

Summary

Format the RSB source code with `yapf` defaults to meet the coding standard's Python formatting rules

Author: Chris Johns 2024-05-25T05:17:51.763Z

assigned to @chris

Author: Amar Takhar 2024-05-25T21:48:34.994Z

approved this merge request

3.14.2.77 11 - Fix –url paths so they download the –rsb-file

Id	11
State	merged
Merged by	Chris Johns
Merged at	2024-05-23T22:08:28.262Z
Assignee(s)	Chris Johns
Created	2024-05-17T06:03:32.582Z
Updated	2024-05-23T22:08:29.517Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/11
Commit	a3819b8e4f3d6fc846fcf2aa53474eff62093bfd

Summary

Fix `--url` paths so they download the `--rsb-file`

This lets `--url` point to a cache of files

Closes #5

Author: Chris Johns 2024-05-17T06:03:32.740Z

assigned to @chris

Author: Chris Johns 2024-05-17T06:04:10.123Z

added 3 commits

- 229afea7...484c7a40 - 2 commits from branch `rtems/tools:main`
- d8ac75e2 - sb/download: Fix –url paths so they download the –rsb-file

Compare with previous version

Author: Chris Johns 2024-05-17T06:04:59.528Z

marked this merge request as **draft**

Author: Chris Johns 2024-05-17T06:49:46.811Z

added 1 commit

- a3819b8e - sb/download: Fix –url paths so they download the –rsb-file

Compare with previous version

Author: Chris Johns 2024-05-17T06:50:14.914Z

marked this merge request as **ready**

Author: Gedare Bloom 2024-05-23T20:57:55.882Z

approved this merge request

3.14.2.78 10 - Update QEMU to build on FreeBSD 14.0

Id	10
State	merged
Merged by	Amar Takhar
Merged at	2024-05-16T05:07:07.000Z
Assignee(s)	Chris Johns
Created	2024-05-16T04:51:47.589Z
Updated	2024-05-16T05:07:08.068Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/10
Commit	484c7a4095fe8cebba0320b58bf9477f2f40b1b6

Update QEMU

This update allows QEMU to build on FreeBSD. The updates are:

- `sb/pkg-config`:
- Support `--version`. Meson uses `--version` to determine if `pkg-config` is valid.
- Supoort `--modversion`. Meson uses `--modversion` to determine the version of a library.
- Update `pixman` because it did not build
- Update `glib` because it did not build. This meant adding support for `meson`.
- Update `qemu` build to resolve shared libraries. For some reason `qemu` does not accept an `-rpath` that is `$prefix/lib`. The option seems to be removed. Add a trailing `/` to the path lets `qemu` keep the `-rpath` option and the executable can find the installed shared libraries.
- Add `-rpath` to all the packages in the vertical stack so any shared libraries loaded can find other shared libraries they depend on

Closes #2

Author: Chris Johns	2024-05-16T04:51:47.748Z

assigned to @chris

Author: Chris Johns	2024-05-16T04:59:38.773Z

added 15 commits

- 20ede602...35ef965f - 13 commits from branch `rtems/tools:main`
- 89a24469 - sb/pkg-config: Support –version and –modversion
- 484c7a40 - bare/devel/qemu: Update to glib and pixman to build QEMU

Compare with previous version

Author: Chris Johns 2024-05-16T05:01:46.222Z

changed the description

Author: Chris Johns 2024-05-16T05:02:25.991Z

changed the description

Author: Amar Takhar 2024-05-16T05:06:54.570Z

approved this merge request

3.14.2.79 9 - qemu-xilinx: Allow build with conflicting libspice

Id	9
State	merged
Merged by	Chris Johns
Merged at	2024-05-07T21:11:17.532Z
Created	2024-05-07T21:08:30.689Z
Updated	2024-05-07T21:11:18.461Z
Milestone	6.1
Labels	arch:aarch64
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/9
Commit	35ef965f83aa43d261a1741a1042e6222471d0d7

Summary

qemu-xilinx: Allow build with conflicting libspice

Allow Xilinx QEMU to build on systems where there is a version of libspice available that isn't what the QEMU build system expects. This resolves linking errors against libspice and libgstreamer.

Author: Chris Johns 2024-05-07T21:11:10.847Z

approved this merge request

3.14.2.80 8 - Update Newlib, Binutils, GDB, GCC for RTEMS 6/7

Id	8
State	merged
Merged by	Chris Johns
Merged at	2024-05-07T05:09:19.478Z
Created	2024-05-02T14:56:44.484Z
Updated	2024-05-07T07:35:45.464Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/8
Commit	5faa46ce70702afcef65afe180676a7d580f1243

Summary

Keep RTEMS up to date with the upstream development.

Author: Chris Johns 2024-05-07T07:35:46.183Z

Is the NIOS2 going to be 7?

Author: Sebastian Huber 2024-05-07T07:35:46.183Z

The nios2 target is still supported in GCC 14. If we ship RTEMS 7 with GCC 14, then I would say yes, with a later GCC no.

Author: Chris Johns 2024-05-07T07:35:46.183Z

We need to announce removal of an arch in 7 when we release 6. If we do not ship GCC 14 with 7 we could let the nios2 stay on GCC 14 for 7 and we announce it's removal?

Author: Sebastian Huber 2024-05-07T07:35:46.183Z

I am not sure why you rush for the nios2 removal. Currently it builds fine.

Author: Chris Johns 2024-05-07T07:35:46.183Z

We track GCC and this merge request **enables obsolete** architectures. That raises a warning to me.

We cannot just remove the BSP as we have a policy of tagging it for removal in one release for removal in the next. If we are not proactive in managing this we end up carrying dead architectures. We have a few now.

Author: Sebastian Huber 2024-05-07T07:35:46.183Z

The nios2 target is definitely not recommended for new designs. We can still support it on a best effort basis. Right now the tools are fine.

Author: Chris Johns 2024-05-07T05:08:41.254Z

approved this merge request

Author: Chris Johns 2024-05-07T05:09:10.702Z

resolved all threads

3.14.2.81 7 - sync in changes from master

Id	7
State	merged
Merged by	Gedare Bloom
Merged at	2024-05-02T04:57:54.704Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Chris Johns
Created	2024-05-02T04:27:52.540Z
Updated	2024-05-02T04:57:56.894Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/7
Commit	9c38d92a6dd02d257e04fb7d7feacc412c3276e5

Summary

Replay commits from master that were missed during the transition to gitlab.

Closes #1

Author: Gedare Bloom 2024-05-02T04:27:52.990Z

requested review from @chris

Author: Gedare Bloom 2024-05-02T04:27:53.027Z

assigned to @gedare

Author: Chris Johns 2024-05-02T04:43:33.841Z

approved this merge request

3.14.2.82 2 - Change README to markdown

Id	2
State	merged
Merged by	Amar Takhar
Merged at	2024-05-01T03:42:13.781Z
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Created	2024-05-01T02:35:15.609Z
Updated	2024-05-01T03:42:14.724Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/2
Commit	93321bacf219039a02b3150c83ed1114d5bd1657

Change README to markdown

Author: Chris Johns 2024-05-01T02:35:15.724Z

requested review from @amar

Author: Chris Johns 2024-05-01T02:35:15.755Z

assigned to @chris

Author: Amar Takhar 2024-05-01T03:42:07.211Z

Sorry for the noise we were testing the CODEOWNER setup.

Author: Amar Takhar 2024-05-01T03:42:08.881Z

approved this merge request

3.14.2.83 6 - rsb: Minor README change (closed)

Id	6
State	closed
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-05-01T04:34:18.639Z
Closed	2024-05-01T04:37:25.825Z
Updated	2025-09-19T02:39:34.375Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/6
Commit	12ef73fdb66d2fec435c0d9c0c16f9a5a0cb3981

Minor README update

Testing templates

Author: Chris Johns 2024-05-01T04:34:18.752Z

requested review from @amar

Author: Chris Johns 2024-05-01T04:34:18.800Z

assigned to @chris

3.14.2.84 17 - Fix ncpu on FreeBSD so default jobs works. (closed)

Id	17
State	closed
Closed by	Amar Takhar
Created	2024-06-08T05:44:37.719Z
Closed	2024-06-08T19:43:30.286Z
Updated	2025-09-19T02:39:15.361Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/17
Commit	e7a135eff47226c0af01c429727c07129060ce67

Summary

Fix ncpu on FreeBSD so default jobs works.

We can use os.cpu_count() safely since we're on Python 3.

Author: Amar Takhar 2024-06-08T19:43:29.472Z

This actually works already for some reason and I'm unsure why as it was late GCC hung while building. Quickly using truss and ktrace didn't show anything this was on a FreeBSD 14 machine I've since upgraded to 14.1 and it works fine. If it happens again I will make a stronger effort in debugging.

3.14.2.85 91 - bare/texinfo: Add back texinfo-1.cfg which was removed by sb-track (closed)

Id	91
State	closed
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2024-12-16T22:59:39.048Z
Closed	2024-12-17T02:56:03.332Z
Updated	2024-12-17T02:56:03.302Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/91
Commit	334e5e866c69cf7fcbdb560d71a01561e1471d5e

Summary

bare/texinfo: Add back texinfo-1.cfg which was removed by sb-track

The tool will be fixed on main. This is isolated to the 6 release branch.

Closes #61

Author: Kinsey Moore 2024-12-16T22:59:39.257Z

assigned to @opticron

Author: Kinsey Moore 2024-12-17T02:52:55.021Z

added 1 commit

- 334e5e86 - 1 commit from branch `rtems/tools:6`

Compare with previous version

3.14.2.86 83 - Draft: RTEMS Package Add support for –release-branch (closed)

Id	83
State	closed
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-11-26T03:48:51.777Z
Closed	2024-11-27T02:36:11.903Z
Updated	2024-11-27T02:36:11.863Z
Milestone	6.1
Labels	tool::rtems-source-builder
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/83
Commit	a703d04e7e3b0b01f13ee379486438091e43b9e6

Add support for –release-branch

Closes #52

Author: Chris Johns 2024-11-26T03:48:51.952Z

assigned to @chris

Author: Chris Johns 2024-11-26T03:49:21.541Z

changed title from **RTEMS Pa{-k-}cage Add support for –release-branch** to **RTEMS Pac{+k+}age Add support for –release-branch**

Author: Chris Johns 2024-11-27T02:20:22.670Z

added 3 commits

- 548ae545...8d96b6fc - 2 commits from branch `rtems/tools:main`
- a703d04e - sp/rtems-pkg: Add support for –release-branch

Compare with previous version

Author: Chris Johns 2024-11-27T02:27:59.243Z

changed target branch from `main` to `6`

Author: Chris Johns 2024-11-27T02:28:25.161Z

marked this merge request as **draft**

Author: Chris Johns 2024-11-27T02:29:01.041Z

changed target branch from `6` to `main`

Author: Chris Johns 2024-11-27T02:33:24.697Z

changed target branch from `main` to `6`

Author: Chris Johns 2024-11-27T02:36:11.327Z

The MR was created with the wrong branch and editing the MR to change the branch to 6 brings in extra commits. I do not know how to stop that.

3.14.2.87 1 - Resolve “Migrate commits from master to main after gitlab transition” (closed)

Id	1
State	closed
Assignee(s)	Gedare Bloom
Reviewer(s)	Chris Johns
Closed by	Gedare Bloom
Created	2024-04-29T15:54:04.265Z
Closed	2024-05-01T16:10:10.483Z
Updated	2024-05-01T16:10:10.469Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/1
Commit	92265b779076f6a30ea9efe4c7a06ac7744a0f8c

Summary

Closes #1

Author: Gedare Bloom 2024-04-29T15:54:04.396Z

requested review from @chris

Author: Gedare Bloom 2024-04-29T15:54:04.428Z

assigned to @gedare

Author: Gedare Bloom 2024-04-29T15:54:35.486Z

added 8 commits

- e959a3e7 - rtems-tools-6.cfg: Bump hash to account for 5 months of changes
- 35493576 - rtems-gcc-*-newlib-head.cfg: Bump hash for newlib
- b0b7454c - rtems: Update RTEMS packages to their HEAD

- 00344e21 - sb: Add sb-rtems-pkg to update the RTEMS package hashes and checksums
- 801daf78 - glib: Update to 2.56.4
- c479ed3a - qemu-xilinx: Update to 2023.2
- 2a3323cb - rtems: Checksum fixes
- 92265b77 - 6/rtems-gcc: Revert to the gcc-13 release branch for MacOS fixes

Compare with previous version

Author: Gedare Bloom 2024-04-29T15:54:47.482Z

marked this merge request as **ready**

3.14.2.88 5 - rsb: Minor README change (closed)

Id	5
State	closed
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-05-01T04:30:37.579Z
Closed	2024-05-01T04:32:59.718Z
Updated	2024-05-01T04:32:59.709Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/5
Commit	12ef73fdb66d2fec435c0d9c0c16f9a5a0cb3981

Summary

Author: Chris Johns 2024-05-01T04:30:37.697Z

requested review from @amar

Author: Chris Johns 2024-05-01T04:30:37.717Z

assigned to @chris

3.14.2.89 4 - rsb: Minor README change (closed)

Id	4
State	closed
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-05-01T04:24:31.506Z
Closed	2024-05-01T04:27:01.044Z
Updated	2024-05-01T04:27:01.034Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/4
Commit	12ef73fdb66d2fec435c0d9c0c16f9a5a0cb3981

Minor README update

Author: Chris Johns 2024-05-01T04:24:31.619Z

requested review from @amar

Author: Chris Johns 2024-05-01T04:24:31.639Z

assigned to @chris

3.14.2.90 3 - rsb: Minor README change (closed)

Id	3
State	closed
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-05-01T04:02:14.215Z
Closed	2024-05-01T04:22:02.238Z
Updated	2024-05-01T04:22:02.224Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/merge_requests/3
Commit	12ef73fdb66d2fec435c0d9c0c16f9a5a0cb3981

Minor change to the README

This is part of the GitLab testing

Author: Chris Johns 2024-05-01T04:02:14.335Z

requested review from @amar

Author: Chris Johns 2024-05-01T04:02:14.479Z

assigned to @chris

Author: Chris Johns 2024-05-01T04:19:06.422Z

Closing to remake for testing.

Author: Chris Johns 2024-05-01T04:22:01.711Z

Closing. Part of testing.

3.15 RTEMS / Tools / RTEMS Tools

Go to *Issues* (page 3563) or *Merge Requests* (page 3586)

Issues Summary

17 - GDB Python rtems.pprinter is missing (page 3582)
16 - Xilinx MPSoC BSP Names Need Updating (page 3581)
11 - Create a script for updating the ACPICA code in the RTEMS codebase (page 3563)
9 - rtems-tools Do Not Compile on Cygwin (page 3583)
8 - Python tests GIT checks (page 3584)
7 - README does not document how to run the tests (page 3585)
6 - Unsupported DWARF version (page 3578)
5 - Provide an RTEMS STD C++ script in Python (page 3564)
4 - rtems-bin2c: Allow adding a license header (page 3572)
3 - spark.py:122: SyntaxWarning: invalid escape sequence 'e' (page 3575)
2 - rtems-ld does not know aarch64 (page 3577)

Merge Requests Summary

43 - waf: update to 2.1.4 (page 3590)
41 - trace/record: Fix warnings on FreeBSD 14.1 (page 3592)
40 - GDB Python: Install all python files (page 3591)
39 - tester: Update ZynqMP and Versal BSP names (page 3597)
38 - misc/bin2c: Silence warning on FreeBSD (clang) (page 3598)
37 - rtemstoolkit/elf: Update support machine types to match RTEMS (page 3599)
36 - Improve event record handling (page 3592)
35 - Remove import of host (page 3600)
34 - execute.py: restore accidentally deleted command construction (page 3602)
33 - Fixes for tester running on windows MSYS (page 3601)
31 - Reformat code using yapf (page 3602)
28 - stty: fix open and read calls (page 3604)
27 - Remove index and total from the console open and close methods which was added... (page 3586)
26 - gdb/python: add file pprinter.py to register RTEMS and GCC pretty-printers (page 3587)
25 - tester/amd64: Add amd64_qemu_smp config (page 3587)
24 - Added niosvc10lp BSP support (page 3605)
23 - Direct users to submit an MR (page 3625)
22 - Update to GitLab URLs. (page 3624)
21 - Add script for updating ACPICA code in the RTEMS source tree (page 3608)
20 - linkers: Constify TLS offsets (page 3615)
19 - linkers: Fix symbol table size placement (page 3607)
17 - linkers: Improve generation of symbol map file (page 3629)
16 - rtems-test: Fix –jobs option in –help output (page 3614)
15 - elftoolchain/common/_elftc.h: Add Cygwin definition of ELFTC_VCSID (page 3630)
13 - Add API documentation using pdoc (page 3626)
12 - tests: Mark using xfail instead of skipping the file. (page 3638)

continues on next page

Table 7 – continued from previous page

11 - Don't run Git tests in release version. (page 3631)
10 - rtemstoolkit: Drop requirement for 'svn'. (page 3612)
9 - Convert README to MarkDown and update. (page 3611)
8 - Simplify usage of patch_argv fixture. (page 3639)
7 - Remove old tests that have been moved to pytest (page 3632)
6 - Add test suite for rtemstoolkit. (page 3616)
5 - rtemstoolkit/elftoolchain: Update to the latest version (page 3640)
4 - Fix Python 3.12 PEP-701 (page 3643)
3 - tester/amd64: Add amd64 tester configurations (page 3613)
2 - rld: recognize aarch64. (page 3610)

44 - Update waf to 2.1.4 (closed) (page 3646)
18 - Add pprinter.py for pretty-printer support (closed) (page 3646)
14 - Draft: arm: added stdcxx.py to gdb/python to register C++ pretty-printers (closed) (page 3645)
1 - Revert "linker/rap: Ignore relocation records with no section" (closed) (page 3644)

3.15.1 Issues

3.15.1.1 11 - Create a script for updating the ACPICA code in the RTEMS codebase

Id	11
State	closed
Type	ISSUE
Author	Matheus Pecoraro
Closed by	Joel Sherrill
Created	2024-07-16T23:27:14.678Z
Closed	2024-08-23T14:36:53.920Z
Updated	2025-09-19T01:03:40.721Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/11
Merges	1

Summary

Create a python script for updating the ACPICA code in the RTEMS codebase. The script will convert commits from the ACPICA tree to a patch that can be applied to the RTEMS codebase (as long as the ACPICA commit actually changes a file we have imported). This means the process of updating the ACPICA code would be as such:

- Check git log on the RTEMS source tree for the last ACPICA commit (All ACPICA commits should contain "ACPICA commit {hash}" in their message);
- Use the script to generate patches for the missing commits;
- Apply the commits to the RTEMS source tree;

Author: Matheus Pecoraro 2024-07-16T23:27:36.064Z

mentioned in merge request rtems/rtos/rtems!119

Author: Matheus Pecoraro 2024-07-22T17:35:03.300Z

mentioned in merge request !21

Author: Matheus Pecoraro 2024-07-22T19:56:58.510Z

3.15.1.2 5 - Provide an RTEMS STD C++ script in Python

Id	5
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2024-06-11T06:07:08.930Z
Closed	2024-08-18T06:24:44.572Z
Updated	2025-09-19T01:03:40.584Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/5
Merges	1

Summary

This issue is for the development of a python script called `stdcxx.py` that lives under the installed prefix of the RTEMS built tools. The script is to load the GCC libstdc++ pretty printers.

3.15.1.2.1.1 Script Requirements

1. The script is called by the `.debug_gdb_scripts` python text when the executable loads
2. Determine the path to the GCC libstdc++ pretty printer scripts. These will installed and available however they are under the version of GCC built for the `$prefix`
3. There is only ever be one version of GCC installed under a `$prefix`
4. Inspect the GCC pretty printer scripts and determine what they require

3.15.1.2.1.2 Setting GCC Version

The installed `stdcxx.py` script is for one version of GCC that is installed then the script is installed. A `$prefix` for a build of tools is only for a single version. You should not mix versions under the same prefix. This includes versions of GCC for different architectures. As a result the last installed version of tools is the one we consider **_current_** or **_active_** and `stdcxx.py` so reference that version explicitly.

The GCC build uses the common configuration script and I recommend adding the support there in install section. The version however may not be the same version GCC considers itself. For example the version the RSB has could be a git hash while GCC will have a dot version number such as `1.2.3`. A suitable solution to this needs to be found. One possible method is to locate the architecture specific GCC command in the staging area such as `arm-rtems6-gcc` and to run the command with the `--version` option to get the version. For example:

```
$ arm-rtems6-gcc --version | grep arm-rtems6-gcc
arm-rtems6-gcc (GCC) 13.3.0 20240521 (RTEMS 6, RSB␣
↪d282a1723359dc689ca49fe6a7241423d0f10e97, Newlib 1ed1516)
```

This line could need to be split and the `13.3.0` extracted.

The RSB could contain a temple `stdcxx.py` script with the version set to `@RSB_GCC_VERSION@` and the script could be filter with the version tag being replaced by the detected GCC version and placed in the staging area. Once in the staging area the RSB will install it when the build successfully completes.

The RSB has the option `--keep` so the staging area can be keep and inspected and the `--dry-run` option is useful when debugging RSB configuration scripts. Another consideration is the RSB will preprocess the macros and external commands (`%()`) before the build starts while the `install:` section of the script will be added to the `do-build` script and that is run when the script runs.

Author: Chris Johns 2024-06-11T06:17:49.308Z

assigned to @chris

Author: Chris Johns 2024-06-11T06:07:09.335Z

Author: Chris Johns 2024-06-11T06:07:26.158Z

assigned to @chris

Author: Chris Johns 2024-06-11T06:12:57.056Z

changed the description

Author: Suraj Kumar 2024-06-11T06:25:09.834Z

@chris Question: the GCC path and and GDB path would both live under the `share` directory in the installed `$prefix`, so the GCC path would be relatively the same always from the path provided by `gdb.PYTHONDIR`. Could that be a possible solution to finding the location of the installed pretty-printer scripts?

Author: Chris Johns 2024-06-11T06:25:09.802Z

Yes but the version changes and that is independent of the RTEMS Tools repo (this repo). How do we find the right path and set it? We do not want to add a dependency that need to change each time we change the version of the tools.

Author: Suraj Kumar 2024-06-12T23:03:56.408Z

Does this work? @chris

```
import os
import subprocess
import sys
import re
import gdb

# get the objfile name
filename = gdb.objfiles()[0].filename

# get the arch of the objfile
output = subprocess.check_output(['file', filename]).strip().decode(
↪'utf-8')
arch = output.split(',')[1].lower().strip()
gcc = arch + "-rtems6-gcc"

# get path to GCC
gcc_path = subprocess.check_output(f"which {gcc}", shell=True).strip().
↪decode('utf-8')
gcc_path = gcc_path.split('/')[:-1]
gcc_path = '/'.join(gcc_path)

# get version of GCC
output = subprocess.check_output([gcc, '--version']).strip().decode(
↪'utf-8')

regex = r'gcc \\(GCC\\) ([\\d.]+)'
match = re.search(regex, output)
if match:
gcc_version = match.group(1)
else:
print(f"Could not find GCC version for {gcc}.")
exit()

gcc_full_path = gcc_path + "/../share/gcc-" + gcc_version

print(gcc_full_path)
```

Sourcing this from inside GDB seems to work well for me, though I would like to find a more reliable way to find the architecture perhaps... I was thinking of a way to do that for a while before "hacking" it like this. Let me know if this would be suitable

This is just POC script to confirm with you whether the design is fine or not, after

this importing would be pretty easy.

Author: Chris Johns 2024-06-12T23:39:57.255Z

Thanks for this. The scripts contains lots and maybe lots more than we need. Something to consider is the script will be installed when the tools are built by the RSB and the RSB should know the version of gcc or it can find it out and it also have all the files to be installed including the libstdcxx pretty printer scripts.

For now we know the gcc version is 13.3.0 so may just have this:

```
gcc_version = '13.3.0'
```

and then concentrate on figuring out how to load the C++ pretty printers and have them print a `std::vector`.

Author: Amar Takhar 2024-06-12T23:46:26.587Z

```
gcc_path.split('/')[:-1]
gcc_path = '/'.join(gcc_path)
```

Please use os.path.basename() for this so it works on all operating systems. Also use os.path.join() later on so we don't have to worry about path deliminators.

Author: Chris Johns 2024-06-11T06:17:49.731Z

moved from rtems-source-builder#10

Author: Chris Johns 2024-06-14T04:10:15.573Z

The existing python scripts installed by `rtems-tools` may need to be clean up for a `stdcxx.py` script to load. Please track those changes so we can update the `rtems-tools` repo

Author: Suraj Kumar 2024-06-14T04:10:15.573Z

The only modification I needed to make was commenting out this line from `__init__.py`:

```
_cmds = rtems.create()
```

which was causing the following error:

```
Traceback (most recent call last):
File "<string>", line 6, in <module>
File "/home/the.m3chanic/quick-start/rtems/6/share/gdb/python/rtems/__
↪init__.py", line 38, in <module>
```

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```
_cmds = rtems.create()
^^^^^^^^^^^^
AttributeError: partially initialized module 'rtems' has no attribute
↪'create' (most likely due to a circular import)
```

I created a new file called `stdcxx.py` as you had said, and added the following content to it:

```
import sys
import traceback
import gdb
import os


gdb_path = gdb.PYTHONDIR
gcc_version = "13.2.0"

gcc_path = os.path.dirname(os.path.dirname(gdb_path))
gcc_path = os.path.join(gcc_path, "gcc-" + gcc_version)
gcc_python_path = os.path.join(gcc_path, "python")

sys.path.insert(0, gcc_python_path)

try:
from libstdcxx.v6.printers import register_libstdcxx_printers
register_libstdcxx_printers(None)
print("Script executed successfully")
except Exception as e:
print(f"Exception during execution: {e}")
traceback.print_exc()
```

This script strangely gives 3 warnings (which do not affect pretty-printing output) from the `printers.py` file present in `{prefix}/share/gcc-13.2.0/python/libstdcxx/v6/printers.py`, where some regex patterns were not `r` prefixed, so I fixed those up.

Here is the program I tested this with:

```
#include <iostream>
#include <cstdlib>
#include <vector>


#define DEFINE_GDB_PY() \\
asm( \\
".pushsection \\".debug_gdb_scripts\\", \\"MS\\",@progbits,1\\n" \\
".byte 4\\n" \\
".ascii \\"gdb.inlined-script\\\\n\\"\\n" \\
".ascii \\"import sys\\\\n\\"\\n" \\
".ascii \\"import os.path\\\\n\\"\\n" \\
```

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```
".ascii \\"sys.path.append(os.path.join(gdb.PYTHONDIR, 'rtems'))\\\\n\\
↪"\\n" \\
".ascii \\"print(sys.path)\\\\n\\"\\n" \\
".ascii \\"print(gdb.PYTHONDIR)\\\\n\\"\\n" \\
".ascii \\"import rtems.stdcxx as stdcxx\\\\n\\"\\n" \\
".byte 0\\n" \\
".popsection\\n" \\
)

int main() {
DEFINE_GDB_PY();
std::cout << "Hello World" << std::endl;

auto v = std::vector<int>({1, 2, 3, 5, 7, 8});
for (auto i: v) {
std::cout << i << ' ';
}
std::cout << std::endl;

return 0;
}
```

Running with this configuration, and debugging in GDB gives me:

```
0x001046ac      67        for (auto i: v) {
(gdb) p v
$1 = std::vector of length 6, capacity 6 = {1, 2, 3, 5, 7, 8}
```

Please let me know if this is okay. We can find another way to find the GCC Path if the relative approach I am currently using might be unstable long-term.

Author: Chris Johns 2024-06-14T04:10:15.573Z

This looks good and on the right track. I will close this issue as done.

Author: Chris Johns 2024-06-14T04:10:59.686Z

The work for this issue is now complete.

Author: Suraj Kumar 2024-06-27T16:40:14.729Z

mentioned in merge request !14

Author: Chris Johns 2024-07-02T23:42:14.173Z

changed the description

Author: Chris Johns 2024-07-02T23:42:45.027Z

changed the description

Author: Suraj Kumar 2024-07-07T22:19:41.068Z

@chris

Here are the modifications I have in mind for making this change. Please let me know if they are in line with what you have in mind as well

```
- gcc_version = "13.3.0"
+ gcc_version = "@RSB_GCC_VERSION@"
```

```
%define gcc_version %{_target}-%{rtems_version}-gcc --version | grep %{_
↪target}-%{rtems_version}-gcc | awk '{print $3}'

%define stdcxx_script stdcxx.py
%define gcc_install_dir lib/gcc/%{_target}/%{gcc_version}/python
```

```
sed "s/@RSB_GCC_VERSION@/${gcc_version}/g" %{stdcxx_script} > ${DESTDIR}
↪/%{gcc_install_dir}/%{stdcxx_script}
```

I am not very familiar with config script editing, so there might be silly mistakes. I just wanted to make sure we were both thinking the same thing(s) when it came to RSB modifications.

Author: Chris Johns 2024-07-07T22:19:41.022Z

This looks close to what is need. I am sure you will discover further detail that will need resolving. Some points aret:

1. Where is the location of `stdcxx.py` in the RSB?
2. The label `gcc_version` is being used so another macro name is needed
3. To execute a shell command in a config file wrap it in `%()`. The output to `stdout` is returned and assigned to the macro
4. You will need to locate the staged gcc executable. It will be under `%{build_dir}/$SB_BIULD_ROOT <https://gitlab.rtems.org/rtems/tools/rtems-source-builder/-/blob/main/source-builder/config/gcc-common-1.cfg?ref_type=heads#L220>`_ path after being installed
5. I always `cat a_file | sed -e 's/xxx/yyy/g' > ${build_dir}/$SB_BUILD_ROOT/share/gdb/what-ever/stdcxx.py` which using `sed` to filter a file
6. The `%{name}` macros are expanded when the config is processed by the RSB. The shell variables are only valid when the build is running in the shell

Author: Suraj Kumar 2024-07-08T22:20:46.054Z

@chris Thank you, I have gotten a better understanding of things from your comments.

1. I was thinking of having it in the `src/rsb/source-builder/sb` directory along with where the other Python files seem to be situated. I was wondering if something like `../sb/stdcxx.py` would work or if there is an OS-independent form of resolving this relative path?
2. Sure, fixed (Although, if it is already defined, is there anything stopping us from using that macro instead?)
3. Fixed
4. Okay, this made the idea a lot clearer to me, I have implemented it in my code.
5. Noted, fixed
6. Noted, thanks

Here are my updated modifications to `gcc-common-1.cfg`:

```
%define stdcxx_script stdcxx-template.py
%define gcc_install_dir %{build_dir}/$SB_BUILD_ROOT/bin
%define rtems_gcc_version %(%{gcc_install_dir}/%{_target}-%{rtems_
↪version}-gcc --version | head -1 | awk '{print $3}')
%define stdcxx_template_path ${build_top}/../sb/%{stdcxx_script}
```

```
cat %{stdcxx_template_path} | sed "s/@RSB_GCC_VERSION@/%{rtems_gcc_
↪version}/g" > %{build_dir}/$SB_BUILD_ROOT/share/gdb/python/rtems/
↪stdcxx.py
```

I hope this resolves the standing issues with the original version

Author: Chris Johns 2024-07-09T01:15:34.255Z

1. The support for gdb pretty printing is RTEMS specific so I think that should be under the `rtems/config` tree. The `gcc-common-1.cfg` is in the common area so I think the support eventually end up in the RTEMS side of things. I think we will have to progress to this point
2. Would it end up being confusing? How would know which value the variable holds? Remember the gcc version internal to gcc may not match the version in the macro `gcc_version`. For example we could have a git hash build of the gcc 13 branch. This work needs to know the internal value to find the path gcc will look.
3. The path `${build_top}` is not in the RSB source tree and you cannot assume the `build` is always in the RSB source. The `rtems-deployment` repo is example of extending the RSB configs. I think we need to find a way to get the path. I suggest using `--trace` and `--dry-run` and then reviewing the log and macro variables that are printed to see what is suitable

Author: Suraj Kumar 2024-07-09T17:16:51.067Z

@chris Thanks, I have made the required changes and debugged them with `--dry-run` and `--log` and see that they are the outputs that I would like. Here are the final set of changes:

```
%define rtems_configdir %(echo %{_configdir} | cut -d':' -f1)
%define stdcxx_template %{rtems_configdir}/stdcxx-template.py
%define rsb_rtems_gcc_version %(%{_bindir}/%{_target}-gcc --version |␣
↪head -1 | awk '{print $3}')
%define stdcxx_script %{_prefix}/share/gdb/python/rtems/stdcxx.py

cat %{stdcxx_template} | sed "s/@RSB_GCC_VERSION@/%{rsb_rtems_gcc_
↪version}/g" > %{stdcxx_script}
```

I found that `_configdir` was the directory pointing to `rtems/config`, but was 4 copies of the same path separated by ":", so `rtems_configdir` is a singular copy of that path.

For reference, the macros expand to the following on my system:

```
1. rtems_configdir - /home/the.m3chanic/quick-start/src/rsb/rtems/config
2. stdcxx_template - /home/the.m3chanic/quick-start/src/rsb/rtems/
↪config/stdcxx-template.py
3. stdcxx_script - /home/suslaptop/quick-start/rtems/6/share/gdb/python/
↪rtems/stdcxx.py
```

I think these would work well, I will do a test build in the meantime and verify everything works as it is supposed to.

[Edit: Just did a build on ARM, no build issues and the updated `stdcxx.py` script got placed there.]

Author: Suraj Kumar 2024-07-10T18:44:26.377Z

mentioned in merge request rtems-source-builder!35

Author: Suraj Kumar 2024-07-10T18:51:06.920Z

3.15.1.3 4 - rtems-bin2c: Allow adding a license header

Id	4
State	closed
Type	ISSUE
Author	Christian Mauderer
Closed by	Chris Johns
Created	2024-06-03T13:50:56.532Z
Closed	2025-04-03T22:55:11.952Z
Updated	2025-09-19T01:03:40.476Z
Milestone	6.1
Labels	feature::request
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/4
Merges	2

Summary

3.15.1.3.1.1 Purpose

If files generated by rtems-bin2c are committed into a repository, there is no license information. It would be great if the tool would provide some options to add a license.

For an example, the device tree file in the i.MXRT BSP is processed with bin2c and the [resulting source file](https://gitlab.rtems.org/rtems/rtos/rtems/-/blob/7141afbb0ea41675ef8cf7e60f398aaf900defd9/bsps/arm/imxrt/dts/imxrt1050-evkb.c) has been added as a C file to avoid the necessity for a working dtc on all platforms to build RTEMS. The C file is missing a license.

3.15.1.3.1.2 Result

There are multiple possible directions for a feature like that:

- Take an extra file that is prepended to the resulting file as a license header.
- Read the license comments from a file (same or different one to the file that is processed) and use that as a header.
- Provide only some RTEMS-relevant default license headers.

Author: Christian Mauderer 2024-06-03T13:54:47.066Z

mentioned in merge request rtems/rtos/rtems!35

Author: Joel Sherrill 2024-06-04T05:43:12.168Z

I would suggest that the default behavior is 2-BSD with an option to include another license file verbatim.

Author: Christian Mauderer 2024-06-04T05:43:12.132Z

That's the right one for RTEMS, yes.

Usually there is a copyright line with a name and year right before the license text. Would we just skip that in the default case?

I would also suggest to not make it default but use an option flag instead. There are most likely lots of use cases where rtems-bin2c is used already and where a different license applies. So something like:

```
-l <file> - Add the specified file as license header.
-B - Add a default BSD-2-clause license header. Can't be combined with -
↪l.
```

Author: Joel Sherrill 2024-06-04T21:59:41.864Z

Will not adding any arguments result in the current behavior? If so, then I am happy.

Author: Christian Mauderer 2024-06-05T05:54:48.493Z

I would strongly suggest that the default behavior (without an argument) should be the same as the current default behavior, yes.

Author: Gedare Bloom 2024-06-20T19:32:38.954Z

If the input has spdx, that should be simple enough to support?

Author: Joel Sherrill 2024-06-20T20:44:59.088Z

If the goal is to only pass through the SPDX annotation line. But that doesn't include author info.

It still may be a good option if not too much trouble to implement.

Author: Harinder Singh Dhanoa 2025-03-17T15:54:13.454Z

mentioned in merge request !58

Author: Joel Sherrill 2025-04-04T18:32:39.671Z

@hsd1807 Your MR to address this introduced a leak reported by Coverity Scan. Looks like it is a simple matter of adding a free. The commit message should mention the CID number and include "closes NNN" where the NNN is this issue number.

> ** CID 1639194: Resource leaks (RESOURCE_LEAK)/misc/bin2c/rtems-bin2c.c: 346 in process()_____<wbr>_____
> CID 1639194: Resource leaks (RESOURCE_LEAK)/misc/bin2c/rtems-bin2c.c: 346 in process()340 /*****<wbr>*****
> (createC) { fclose(ocfile); }344 if (createH) { fclose(ohfile);

}345 free(ifbasename_to_free);>>> CID 1639194: Resource leaks (RESOURCE_LEAK)>>> Variable “license_header” going out of scope leaks the storage it points to.346 }347 348 void usage(void)349 {350 fprintf(351 stderr,

Author: Chris Johns 2025-04-04T18:32:39.671Z

If a call `malloc` the memory and returns it please add a new function to deallocate it. Please do not add a `free` call else where in the code.

Author: Harinder Singh Dhanoa 2025-04-04T18:32:39.671Z

I have fixed the memory leak for `license_header` by introducing a `free_license_header` function and using it in the `process` function. The commit includes the Coverity CID 1639194 and closes issue #4 . Please review the changes. Thank you!

Author: Joel Sherrill 2025-04-04T18:32:39.671Z

Confirming for everyone that Coverity Scan reports this as resolved.

Thanks

Author: Harinder Singh Dhanoa 2025-04-03T04:56:28.017Z

mentioned in merge request !60

Author: Harinder Singh Dhanoa 2025-04-03T06:41:27.000Z

mentioned in merge request !61

3.15.1.4 3 - spark.py:122: SyntaxWarning: invalid escape sequence ‘e’

Id	3
State	closed
Type	ISSUE
Author	Frank Kuehndel
Assignee(s)	Chris Johns, Amar Takhar
Closed by	Chris Johns
Created	2024-05-22T17:38:24.578Z
Closed	2024-06-08T04:06:23.139Z
Updated	2025-09-19T01:03:40.361Z
Milestone	6.1
Labels	tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/3
Merges	1

Summary

@chris I am testing my updated Rust documentation. When running the `rtems-tester`, I am getting a warning:

```
ferris@0fa931a464ca:~/example-rust$ rtems-run --rtems-bsp=rv64imafdc hello_rtems_
↪riscv.exe
/opt/rtems/6/share/rtems/tester/rt/pygdb/spark.py:122: SyntaxWarning: invalid␣
↪escape sequence '\\e'
_NULLABLE = '\\e_'
[...]
```

This happens in a newly build container with freshly cloned source-builder.git and rtems.git.

```
Ubuntu 24.04 LTS
Python 3.12.3
RTEMS version: 6.0.0.e74cea4172ee8564bef5f8500c5dd07512257d99
RTEMS tools: 13.2.1 20240502 (RTEMS 6, RSB␣
↪484c7a4095fe8cebba0320b58bf9477f2f40b1b6, Newlib 730703b)
```

The file seems to be in `rtems-tool.git`: `tester/rt/pygdb/spark.py`

Author: Frank Kuehndel 2024-05-22T17:55:50.868Z

The warning appears only when run for the first time. That is, one must delete the cache to re-produce it:

```
rm -rf /opt/rtems/6/share/rtems/tester/rt/pygdb/__pycache__/
```

Author: Amar Takhar 2024-05-22T18:38:58.428Z

Does adding an extra before e work? So it should look like `\e_.'`

Python 3.12 no longer allows as an escape sequence in strings

- https://docs.python.org/3/whatsnew/3.12.html#pep-701-syntactic-formalization-of-f-strings
- https://peps.python.org/pep-0701/

Author: Amar Takhar 2024-05-22T18:39:06.137Z

assigned to @chris and @amar

Author: Amar Takhar 2024-05-26T19:30:05.625Z

@frank_k did this suggested change fix the issue? I don't have rtems-tools running currently let me know thanks.

Author: Frank Kuehndel 2024-05-27T12:51:14.092Z

@amar When I manually changing this, I do not get any warning message anymore and `rtems-run` works as expected. Yet, I did not check the use of `_NULLABLE`.

```
$ diff /opt/rtems/6/share/rtems/tester/rt/pygdb/spark.py.ori /opt/rtems/
↪6/share/rtems/tester/rt/pygdb/spark.py
122c122
<       _NULLABLE = '\\e_'
---


  _NULLABLE = '\\\\e_'
```

Author: Amar Takhar 2024-05-27T20:23:10.862Z

Thanks.

@chris how would we test this to make sure this change works?

Author: Frank Kuehndel 2024-05-28T07:38:07.341Z

Python supports only known backslash escape sequences. Citing that page:

> Unlike Standard C, all unrecognized escape sequences are left in the string unchanged, i.e., _the backslash is left in the *result* (page 3573).
>
> From my point of view making the change suggested by @amar is safe as it will not change the behavior (a single backslash appears before and after the change in the string). Only the warning – and the error planed in future Python versions – goes away.

Author: Amar Takhar 2024-06-08T04:05:22.584Z

mentioned in merge request !4

3.15.1.5 2 - rtems-ld does not know aarch64

Id	2
State	closed
Type	ISSUE
Author	xiaojun zheng
Closed by	Chris Johns
Created	2024-05-15T06:22:23.100Z
Closed	2024-05-15T23:46:44.971Z
Updated	2025-09-19T01:03:40.236Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/2
Merges	1

Summary

rtems-ld does not know aarch64.

Steps to reproduce

```
rtems-ld -n -e appmain -s -O rap --base rtems.elf build/aarch64-rtems6-rockchip_
↪rk3568/app.elf -o build/aarch64-rtems6-rockchip_rk3568/app.out
error: machine-type: unknown machine type: 183
```

Author: xiaojun zheng 2024-05-15T06:24:14.970Z

mentioned in merge request !2

3.15.1.6 6 - Unsupported DWARF version

Id	6
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Amar Takhar
Created	2024-06-14T06:44:46.080Z
Closed	2024-06-15T02:00:15.661Z
Updated	2025-02-14T10:40:24.917Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/6
Merges	1

Summary

RTEMS Tools does not support the version of DWARF GCC is now gnerating

Steps to reproduce

```
$ rtems-exeinfo -D build/arm/xilinx_zynq_a9_qemu/testsuites/samples/hello.exe
RTEMS Executable Info 6.423d98d2058a
/opt/work/rtems/6/bin/rtems-exeinfo -D build/arm/xilinx_zynq_a9_qemu/testsuites/
↪samples/hello.exe
May take a while ...
exe: build/arm/xilinx_zynq_a9_qemu/testsuites/samples/hello.exe

Compilation:
Producers: 0
Common flags: 0
|

DWARF Data:
error: dwarf:compilation_unit::sibling: Unsupported version [_dwarf_info_
↪load(229)]
```

Resolution

Update `elftoolchain` to the latest in SVN on ELF Tool Chain on Sourceforge. The version is [r4040-trunk](https://sourceforge.net/p/elftoolchain/code/4040/).

Author: Chris Johns 2024-06-14T06:44:46.155Z

assigned to @chris

Author: Chris Johns 2024-06-14T06:46:15.460Z

changed the description

Author: Chris Johns 2024-06-14T08:29:03.910Z

changed title from **Unsupported D{-RAW-}F version** to **Unsupported D{+WAR+}F version**

Author: Chris Johns 2024-06-14T08:32:14.273Z

mentioned in merge request !5

Author: Chris Johns 2024-06-15T02:06:57.461Z

changed the description

Author: Chris Johns 2024-06-15T02:11:19.941Z

```
$ rtems-exeinfo `find build -name hello.exe`
RTEMS Executable Info 6.ed300ed60617-modified
/opt/work/chris/rtems/rt/rtems-tools.git/build/linkers/rtems-exeinfo␣
↪build/x86_64/amd64efi/testsuites/samples/hello.exe
exe: build/x86_64/amd64efi/testsuites/samples/hello.exe

Compilation:
Producers: 2
|  GNU AS 2.41: 5 objects
|  GNU C17 13.2.0 20230727 (RTEMS 6, RSB␣
↪f1a36b851161480ff0a0a1addb22fb44e102d339, Newlib 3cacedb): 282 objects
Common flags: 2
| -ftls-model=local-exec -march=x86-64
```

```
$ rtems-exeinfo build/aarch64/xilinx_zynqmp_lp64_zu3eg/testsuites/
↪samples/hello.exe
RTEMS Executable Info 6.ed300ed60617-modified
/opt/work/chris/rtems/rt/rtems-tools.git/build/linkers/rtems-exeinfo␣
↪build/aarch64/xilinx_zynqmp_lp64_zu3eg/testsuites/samples/hello.exe
exe: build/aarch64/xilinx_zynqmp_lp64_zu3eg/testsuites/samples/hello.exe

Compilation:
Producers: 2
|  GNU AS 2.42: 11 objects
|  GNU C17 13.3.0 20240521 (RTEMS 6, RSB␣
↪423d98d2058a7dac0921f9a13113b024696236b9, Newlib 730703b): 266 objects
Common flags: 7
| -ftls-model=local-exec -mno-outline-atomics -mcpu=cortex-a53 -mfix-
↪cortex-a53-835769 -mfix-cortex-a53-843419 -mlittle-endian -mabi=lp64
```

```
$ rtems-exeinfo `find build -name hello.exe`
RTEMS Executable Info 6.ed300ed60617-modified
/opt/work/chris/rtems/rt/rtems-tools.git/build/linkers/rtems-exeinfo␣
↪build/powerpc/mvme2700/testsuites/samples/hello.exe
exe: build/powerpc/mvme2700/testsuites/samples/hello.exe

Compilation:
Producers: 3
|  GNU AS 2.42: 6 objects
|  GNU C17 13.3.0 20240521 (RTEMS 6, RSB␣
↪423d98d2058a7dac0921f9a13113b024696236b9, Newlib 730703b): 354 objects
|  GNU AS 2.41: 1 objects
Common flags: 2
| -ftls-model=local-exec -mcpu=604
```

```
$ rtems-exeinfo `find build -name hello.exe`
```

(continues on next page)

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```
RTEMS Executable Info 6.ed300ed60617-modified
/opt/work/chris/rtems/rt/rtems-tools.git/build/linkers/rtems-exeinfo␣
↪build/sparc/erc32/testsuites/samples/hello.exe
exe: build/sparc/erc32/testsuites/samples/hello.exe

Compilation:
Producers: 3
|  GNU AS 2.42: 5 objects
|  GNU C17 13.3.0 20240521 (RTEMS 6, RSB␣
↪8037d9ad83d74b5d5eee6ac13ead3580772609cd, Newlib 1ed1516): 272 objects
|  GNU AS 2.41: 3 objects
Common flags: 1
| -ftls-model=local-exec
```

```
$ rtems-exeinfo `find build -name hello.exe`
RTEMS Executable Info 6.ed300ed60617-modified
/opt/work/chris/rtems/rt/rtems-tools.git/build/linkers/rtems-exeinfo␣
↪build/riscv/rv32imac/testsuites/samples/hello.exe
exe: build/riscv/rv32imac/testsuites/samples/hello.exe

Compilation:
Producers: 2
|  GNU AS 2.42: 5 objects
|  GNU C17 13.3.0 20240521 (RTEMS 6, RSB␣
↪8037d9ad83d74b5d5eee6ac13ead3580772609cd, Newlib 1ed1516): 291 objects
Common flags: 4
| -ftls-model=local-exec -mabi=ilp32 -misa-spec=20191213 -march=rv32imac
```

```
$ rtems-exeinfo `find build -name hello.exe`
RTEMS Executable Info 6.ed300ed60617-modified
/opt/work/chris/rtems/rt/rtems-tools.git/build/linkers/rtems-exeinfo␣
↪build/riscv/rv64imac/testsuites/samples/hello.exe
exe: build/riscv/rv64imac/testsuites/samples/hello.exe

Compilation:
Producers: 2
|  GNU AS 2.42: 5 objects
|  GNU C17 13.3.0 20240521 (RTEMS 6, RSB␣
↪8037d9ad83d74b5d5eee6ac13ead3580772609cd, Newlib 1ed1516): 287 objects
Common flags: 5
| -ftls-model=local-exec -mabi=lp64 -mcmodel=medany -misa-spec=20191213␣
↪-march=rv64imac
```

Author: Amar Takhar 2025-02-14T10:40:24.852Z

mentioned in merge request !52

3.15.1.7 16 - Xilinx MPSoC BSP Names Need Updating

Id	16
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Kinsey Moore
Closed by	Kinsey Moore
Created	2024-11-13T15:48:26.547Z
Closed	2024-11-22T00:45:31.978Z
Updated	2024-11-22T00:45:31.989Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/16
Merges	0

Summary

The configuration files for rtems-test use the old names for these BSPs. Please update.

Steps to reproduce

3.15.1.7.2.1 Pre-set options

Author: Joel Sherrill	2024-11-13T15:48:26.636Z

assigned to @opticron

Author: Kinsey Moore	2024-11-13T16:06:31.750Z

mentioned in merge request !39

3.15.1.8 17 - GDB Python rtems.pprinter is missing

Id	17
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Amar Takhar
Created	2024-11-15T05:29:12.954Z
Closed	2024-11-15T06:48:05.891Z
Updated	2024-11-15T06:48:05.951Z
Milestone	6.1
Labels	tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/17
Merges	1

Summary

There is a module missing from the RTEMS GDB C++ Pretty Printer support. Starting gdb results in:

```
Find the GDB manual and other documentation resources online at:
<http://www.gnu.org/software/gdb/documentation/>.

For help, type "help".
Type "apropos word" to search for commands related to "word"...
Reading symbols from build/arm-rtems6-xilinx_zynq_microzed/app/spu/spu...
RTEMS GDB Support
Python Exception <class 'ModuleNotFoundError'>: No module named 'rtems.pprinter'
(gdb)
```

This issue is set to the %6.1 milestone because it is fixing the support being documented by https://gitlab.rtems.org/rtems/rtos/rtems-release/-/merge_requests/9.

Steps to reproduce

Start an RTEMS gdb with an RTEMS executable.

Author: Chris Johns 2024-11-15T05:29:13.073Z

assigned to @chris

Author: Chris Johns 2024-11-15T06:14:00.357Z

The problem is the some files where added in https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/26 the MR did not update the `waf` script to install them.

I have also fixed the case of the RSB failing to install the version specific GCC support. A warning is now printed:

```
Type "apropos word" to search for commands related to "word"...
Reading symbols from build/arm-rtems6-xilinx_zynq_microzed/app/spu/spu..
↪.
RTEMS GDB Support
warning: no C++ pretty printers; invalid install
(gdb)
```

Author: Chris Johns 2024-11-15T06:30:27.810Z

mentioned in merge request !40

3.15.1.9 9 - rtems-tools Do Not Compile on Cygwin

Id	9
State	closed
Type	ISSUE
Author	Joel Sherrill
Assignee(s)	Joel Sherrill
Closed by	Amar Takhar
Created	2024-06-27T19:05:28.339Z
Closed	2024-06-27T19:15:22.337Z
Updated	2024-06-27T20:03:05.844Z
Milestone	6.1
Labels	tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/9
Merges	1

Summary

rtems-tools do not build on Cygwin. Multiple files fail to compile and report this:

```
[ 15/270] Compiling rtemstoolkit/elftoolchain/libelf/gelf_cap.c
../rtemstoolkit/elftoolchain/libelf/gelf_cap.c:36:13: error: expected declaration␣
↪specifiers or \ |md_0_8216|\ ...\ |md_0_8217|\  before string constant
36 | ELFTC_VCSID("$Id: gelf_cap.c 3977 2022-05-01 06:45:34Z jkoshy $");
|             ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
|
Waf: Leaving directory `/home/jrs007/rtems-work/rtems-tools/build'
```

Steps to reproduce

Simple to reproduce – just build on Cygwin.

Author: Joel Sherrill 2024-06-27T19:05:28.458Z

assigned to @joel

Author: Joel Sherrill 2024-06-27T19:14:34.527Z

mentioned in merge request !15

Author: Amar Takhar 2024-06-27T19:16:32.874Z

Should we upstream that fix? Though libelf makes no claims to build on cygwin that seems like a very simple change.

Author: Amar Takhar 2024-06-27T19:18:05.806Z

I don't see an issue open for it:

- https://sourceforge.net/p/elftoolchain/tickets/

Author: Amar Takhar 2024-06-27T20:03:05.820Z

Joel has submitted the patch here:

- https://sourceforge.net/p/elftoolchain/tickets/621/

3.15.1.10 8 - Python tests GIT checks

Id	8
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-06-19T00:37:16.952Z
Closed	2024-06-19T22:54:39.236Z
Updated	2024-06-19T22:54:39.274Z
Milestone	6.1
Labels	tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/8
Merges	1

Summary

The python tests in RTEMS Tools check the state of the git repo and raise an error if there are untracked files or changes not staged and committed. This complicates using the tests for development because an error is raise.

A release is a tarball of files and there is no GIT repo associated to the tarball. The tests should pass for a release.

A release is created by using git to export the repo and adding a `VERSION` file to top. The `version.py` code knows to check and load the `VERSION` file set the various version values based on the contents.

Author: Chris Johns 2024-06-19T00:37:17.039Z

assigned to @amar

Author: Chris Johns 2024-06-19T00:39:20.573Z

changed the description

Author: Amar Takhar 2024-06-19T02:48:59.497Z

mentioned in merge request !11

3.15.1.11 7 - README does not document how to run the tests

Id	7
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Amar Takhar
Closed by	Chris Johns
Created	2024-06-18T23:06:56.952Z
Closed	2024-06-19T00:22:58.991Z
Updated	2024-06-19T00:22:59.056Z
Milestone	6.1
Labels	tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/work_items/7
Merges	1

The README does not explain how to run the new tests.

If you wish to move the file to README.md please do so. Thanks.

Author: Chris Johns 2024-06-18T23:06:57.049Z

assigned to @amar

Author: Amar Takhar 2024-06-18T23:19:48.375Z

mentioned in merge request !9

3.15.2 Merge Requests

3.15.2.1 27 - Remove index and total from the console open and close methods which was added...

Id	27
State	merged
Merged by	Chris Johns
Merged at	2024-09-04T02:35:23.363Z
Created	2024-09-02T19:26:25.796Z
Updated	2025-09-19T02:36:48.595Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/27
Commit	1c0cc8491afe2042be400d5ffe937bc93f3f4c55

Summary

Remove index and total from the console open and close methods which was added in previous merge request.

Addresses Issue #13

Author: Amar Takhar 2024-09-02T20:05:23.335Z

Can you add "Closes #13" to your commit message and line wrap it to 80 chars please thanks.

Author: Amar Takhar 2024-09-02T20:05:55.287Z

We will wait for @chris to take a look at this before merging in case there is an alternate method we can use outside of reverting he knows these tools best.

Author: Kevin Kirspel 2024-09-02T21:33:24.527Z

added 1 commit

- 4d348ad2 - Remove index and total from the console open and close methods

Compare with previous version

Author: Chris Johns 2024-09-02T21:46:41.476Z

Can you please add the MR number to the commit message?

Author: Kevin Kirspel 2024-09-02T22:46:15.138Z

added 1 commit

- 1c0cc849 - Remove index and total from the console open and close methods

Compare with previous version

Author: Chris Johns 2024-09-04T02:35:17.983Z

approved this merge request

3.15.2.2 25 - tester/amd64: Add amd64_qemu_smp config

Id	25
State	merged
Merged by	Kinsey Moore
Merged at	2024-08-21T17:25:19.855Z
Created	2024-08-14T09:02:58.034Z
Updated	2025-09-19T02:36:46.678Z
Milestone	6.1
Labels	arch:x86_64, smp
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/25
Commit	78266a247e76cf1b875b2f30b445d7e490a1e420

Summary

Config for running tests with SMP enabled once !169 gets merged.

Author: Matheus Pecoraro 2024-08-14T09:04:18.308Z

Author: Kinsey Moore 2024-08-21T17:25:09.601Z

approved this merge request

3.15.2.3 26 - gdb/python: add file pprinter.py to register RTEMS and GCC pretty-printers

Id	26
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-23T17:24:39.526Z
Created	2024-08-18T07:21:46.173Z
Updated	2025-09-19T02:36:45.966Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/26
Commit	7882ad692fb4cbdcc489dc1ddfc4c934861fa4ea

Summary

This MR adds a new file, `pprinter.py` to act as a layer that we can modify to add RTEMS pretty-printers as well as load the existing GCC printers. The `stdcxx.py` script it references is installed by the RSB at build time.

Author: Suraj Kumar 2024-08-18T07:22:54.741Z

added 1 commit

- 89dfacec - gdb/python: add file pprinter.py to register RTEMS and GCC pretty-printers

Compare with previous version

Author: Suraj Kumar 2024-08-18T20:46:37.645Z

added 1 commit

- 6134c641 - gdb/python: Comment out line causing circular import error when GDB loads pprinter.py

Compare with previous version

Author: Suraj Kumar 2024-08-21T13:35:24.178Z

added 2 commits

- 086cc999 - gdb/python: add pprinter.py to register RTEMS and GCC pretty-printers
- 486ed752 - gdb/python: add rtems_pprinters.py for RTEMS pretty-printer support

Compare with previous version

Author: Kinsey Moore 2024-08-23T17:23:43.962Z

If this doesn't need to be run, you should remove the line.

Author: Suraj Kumar 2024-08-21T19:53:34.816Z

changed this line in version 5 of the diff

Author: Suraj Kumar 2024-08-23T17:23:43.962Z

@opticron I have made this change

Author: Suraj Kumar 2024-08-21T19:53:35.054Z

added 1 commit

- e0c2c782 - gdb/python: Removed line causing Circular Import error

Compare with previous version

Author: Suraj Kumar 2024-08-23T06:34:32.422Z

Author: Joel Sherrill 2024-08-23T17:23:43.984Z

resolved all threads

Author: Joel Sherrill 2024-08-23T17:23:54.823Z

added 12 commits

- e0c2c782...18e38d5d - 6 commits from branch `rtems/tools:main`
- c57c2bdd - gdb/python: add file pprinter.py to register RTEMS and GCC pretty-printers
- 5720bea4 - gdb/python: add file pprinter.py to register RTEMS and GCC pretty-printers
- 1cbb89a1 - gdb/python: Comment out line causing circular import error when GDB loads pprinter.py
- f3192c0a - gdb/python: add pprinter.py to register RTEMS and GCC pretty-printers
- 49ce3c46 - gdb/python: add rtems_pprinters.py for RTEMS pretty-printer support
- 7882ad69 - gdb/python: Removed line causing Circular Import error

Compare with previous version

Author: Joel Sherrill 2024-08-23T17:24:30.963Z

approved this merge request

Author: Chris Johns 2024-11-15T06:13:37.996Z

mentioned in issue #17

3.15.2.4 43 - waf: update to 2.1.4

Id	43
State	merged
Merged by	Gedare Bloom
Merged at	2024-11-20T23:42:00.506Z
Assignee(s)	Gedare Bloom
Reviewer(s)	Chris Johns
Created	2024-11-20T23:32:37.760Z
Updated	2024-11-21T00:11:53.263Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/43
Commit	ca7bcc490ee84e65a173386a4ef5bb55635fc9d6

Summary

Bump waf version from 2.1.2 to 2.1.4

Tested on Windows/MSYS2.

Author: Gedare Bloom 2024-11-20T23:32:37.948Z

assigned to @gedare

Author: Gedare Bloom 2024-11-20T23:34:26.670Z

requested review from @chris

Author: Chris Johns 2024-11-20T23:35:05.129Z

approved this merge request

Author: Chris Johns 2024-11-20T23:35:19.711Z

Milestone?

Author: Gedare Bloom 2024-11-20T23:41:48.381Z

Tested on Ubuntu

Author: Gedare Bloom 2024-11-21T00:11:53.220Z

mentioned in merge request !44

3.15.2.5 40 - GDB Python: Install all python files

Id	40
State	merged
Merged by	Amar Takhar
Merged at	2024-11-15T06:48:05.500Z
Assignee(s)	Chris Johns
Created	2024-11-15T06:30:20.644Z
Updated	2024-11-15T07:21:23.103Z
Milestone	6.1
Labels	tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/40
Commit	f47296248bad5c510e3359d3324515f8b64df1a8

Install all python files to C++ pretty printers work. Also reformat the python code.

Closes #17

Author: Chris Johns 2024-11-15T06:30:20.845Z

assigned to @chris

Author: Amar Takhar 2024-11-15T06:47:50.192Z

added 4 commits

- 729284d2 - 1 commit from branch `rtems/tools:main`
- d5a6976a - tools/gdb/python: Install all python files
- a84c2a34 - tools/gdb/python: Print an error if the C++ support is not installed
- f4729624 - tools/gdb/python: Format using yapf

Compare with previous version

Author: Amar Takhar 2024-11-15T06:47:54.624Z

approved this merge request

Author: Chris Johns 2024-11-15T07:21:23.158Z

changed title from **GDB Py{-rh-}ton: Install all python files** to **GDB Pyt{+h+}on: Install all python files**

3.15.2.6 41 - trace/record: Fix warnings on FreeBSD 14.1

Id	41
State	merged
Merged by	Sebastian Huber
Merged at	2024-11-15T06:39:12.909Z
Assignee(s)	Chris Johns
Reviewer(s)	Sebastian Huber
Created	2024-11-15T06:37:53.747Z
Updated	2024-11-15T06:39:14.888Z
Milestone	6.1
Labels	tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/41
Commit	729284d20cc100bb88dd3101bea428d67e54d21d

Fix warnings on FreeBSD 14.1 in trace recorder from https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/36.

Author: Chris Johns 2024-11-15T06:37:53.922Z

assigned to @chris

Author: Chris Johns 2024-11-15T06:38:14.177Z

requested review from @sebhub

Author: Sebastian Huber 2024-11-15T06:39:05.874Z

approved this merge request

3.15.2.7 36 - Improve event record handling

Id	36
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-15T00:41:56.821Z
Assignee(s)	Sebastian Huber
Created	2024-10-29T10:39:12.709Z
Updated	2024-11-15T06:37:59.883Z
Milestone	6.1
Labels	api
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/36
Commit	55e045c821fed3cca6c26032532b69d2b65031e6

Summary

The event record handling had some reliability issues especially on SMP systems. This is fixed by a new approach to fetch the event records. See also: https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/282

Author: Sebastian Huber 2024-10-29T10:39:12.781Z

assigned to @sebhub

Author: Sebastian Huber 2024-10-29T10:40:41.872Z

mentioned in merge request rtems/rtos/rtems!282

Author: Sebastian Huber 2024-10-29T10:41:02.588Z

changed title from **{-Update company name-}** to **{+Improve event record handling+}**

Author: Sebastian Huber 2024-10-29T10:41:02.611Z

changed the description

Author: Gedare Bloom 2024-11-06T05:10:10.529Z

`tools/4.12/newlib/newlib-cygwin-git-461152e4ebd94f7d8b1e20f4cd1c704138ba2083.patch` this seems unrelated. I think this patch is merged upstream. Please send an MR to delete this file if it is not longer needed.

Author: Sebastian Huber 2024-11-06T05:10:10.529Z

Yes, sorry, this was an oversight. I will remove it from the commit.

Author: Sebastian Huber 2024-11-01T05:26:47.187Z

added 4 commits

- 8096c5d9 - Update company name
- 9d0b7002 - record: Fix base64 decoding
- 8d8c3660 - record: Use event records v10
- 043e266a - record: Add -t option

Compare with previous version

Author: Sebastian Huber 2024-11-06T05:09:26.274Z

added 8 commits

- 043e266a...56e81e76 - 2 commits from branch `rtems/tools:main`
- ffff1583 - Update company name
- 0cd1b241 - record: Fix base64 decoding
- 65deca21 - record: Fix zlib decompression
- 9681de2b - record: Use memset() to initialize the zlib stream
- 034f8d9d - record: Add -t option
- f24f8c29 - record: Use event records v10

Compare with previous version

Author: Sebastian Huber 2024-11-06T05:10:10.557Z

resolved all threads

Author: Sebastian Huber 2024-11-06T05:10:36.715Z

I fixed another bug in the zlib decompression filter.

Author: Sebastian Huber 2024-11-06T05:20:22.014Z

added 1 commit

- 3a962ce5 - trace: Check for latest C++ standard early

Compare with previous version

Author: Sebastian Huber 2024-11-06T05:21:19.735Z

I added a fix to improve the llvm/DebugInfo/Symbolize/Symbolize.h detection.

Author: Chris Johns 2024-11-08T01:34:26.777Z

Why not use smart pointers?

Author: Sebastian Huber 2024-11-08T01:34:26.777Z

I program in C++ once in a year. There are probably plenty of opportunities to turn this into a real C++ code, but is this really necessary?

Author: Sebastian Huber 2024-11-08T01:33:53.450Z

changed this line in version 5 of the diff

Author: Chris Johns 2024-11-08T01:34:29.401Z

Why not use shared or unique?

Author: Sebastian Huber 2024-11-08T01:33:54.015Z

changed this line in version 5 of the diff

Author: Sebastian Huber 2024-11-08T01:33:54.228Z

added 1 commit

- 51b500f4 - trace: Use smart pointers

Compare with previous version

Author: Sebastian Huber 2024-11-08T01:34:29.433Z

resolved all threads

Author: Gedare Bloom 2024-11-09T19:52:52.862Z

approved this merge request

Author: Sebastian Huber 2024-11-11T06:16:12.289Z

added 5 commits

- 0970ae1a - record: Add -t option
- 7d952150 - record: Use smart pointers
- fc6ee411 - record: Add error messages
- a7a2553d - trace: Check for latest C++ standard early
- f5f3d683 - record: Use event records v10

Compare with previous version

Author: Sebastian Huber 2024-11-11T06:16:28.259Z

reset approvals from @gedare by pushing to the branch

Author: Sebastian Huber 2024-11-12T07:39:33.786Z

added 1 commit

- 55e045c8 - record: Add -o option

Compare with previous version

Author: Sebastian Huber 2024-11-13T00:50:48.261Z

Due to rtems/rtos/rtems!282, this should be merged as well. I have to update the RSB afterwards.

Author: Chris Johns 2024-11-15T00:41:47.887Z

Why not use std::make_unique? I think C++ is better with no direct use of `new` and `delete`.

Author: Sebastian Huber 2024-11-15T00:41:47.887Z

For me this is good enough, I have to move to other topics on my TODO list.

Author: Sebastian Huber 2024-11-14T23:36:17.827Z

resolved all threads

Author: Chris Johns 2024-11-15T00:41:37.659Z

approved this merge request

Author: Chris Johns 2024-11-15T00:41:47.906Z

resolved all threads

Author: Chris Johns 2024-11-15T06:37:59.851Z

mentioned in merge request !41

3.15.2.8 39 - tester: Update ZynqMP and Versal BSP names

Id	39
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-15T00:47:07.137Z
Assignee(s)	Kinsey Moore
Created	2024-11-13T16:06:25.879Z
Updated	2024-11-15T00:47:08.578Z
Milestone	6.1
Labels	arch:aarch64, tool::test
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/39
Commit	c01e39d232a717f08714cc25506d3ea1583d91d1

Summary

tester: Update ZynqMP and Versal BSP names

CLoses #16

Author: Kinsey Moore 2024-11-13T16:06:26.133Z

assigned to @opticron

Author: Kinsey Moore 2024-11-13T16:06:42.431Z

added 2 commits

- 56e81e76 - 1 commit from branch `rtems/tools:main`
- 293054e8 - tester: Update ZynqMP and Versal BSP names

Compare with previous version

Author: Chris Johns 2024-11-15T00:46:54.221Z

added 11 commits

- 293054e8...55e045c8 - 10 commits from branch `rtems/tools:main`
- c01e39d2 - tester: Update ZynqMP and Versal BSP names

Compare with previous version

Author: Chris Johns 2024-11-15T00:47:01.081Z

approved this merge request

3.15.2.9 38 - misc/bin2c: Silence warning on FreeBSD (clang)

Id	38
State	merged
Merged by	Amar Takhar
Merged at	2024-11-01T01:54:09.584Z
Assignee(s)	Chris Johns
Created	2024-11-01T01:52:45.141Z
Updated	2024-11-01T01:54:12.007Z
Milestone	6.1
Labels	tool
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/38
Commit	56e81e761612a4c6185b46b060305c2f19ae4417

Silence the following warning on FreeBSD:

```
../misc/bin2c/rtems-bin2c.c:143:16: warning: '_Generic' is a C11 extension [-Wc11-extensions]
143 |   ifbasename = basename(ifbasename_to_free);
|                ^
/usr/include/libgen.h:60:21: note: expanded from macro 'basename'
60 | #define basename(x)     __generic(x, const char *, __old_basename, __basename)(x)
|                         ^
/usr/include/sys/cdefs.h:322:2: note: expanded from macro '__generic'
322 |         _Generic(expr, t: yes, default: no)
|         ^
1 warning generated.
```

Author: Chris Johns 2024-11-01T01:52:45.336Z

assigned to @chris

Author: Amar Takhar 2024-11-01T01:54:03.891Z

approved this merge request

3.15.2.10 37 - rtemstoolkit/elf: Update support machine types to match RTEMS

Id	37
State	merged
Merged by	Kinsey Moore
Merged at	2024-11-01T00:34:44.168Z
Assignee(s)	Chris Johns
Reviewer(s)	Kinsey Moore
Created	2024-11-01T00:15:19.459Z
Updated	2024-11-01T00:45:34.795Z
Milestone	6.1
Labels	arch:microblaze
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/37
Commit	8ff9a5086f032e94174ca2abe67a78befa099ff2

Update support machine types to match RTEMS

Match the machine types to the libdl arch support.

Updates rtems/rtos/rtems#5141

Author: Chris Johns 2024-11-01T00:15:19.629Z

requested review from @opticron

Author: Chris Johns 2024-11-01T00:15:19.644Z

assigned to @chris

Author: Chris Johns 2024-11-01T00:15:47.833Z

added 33 commits

- 1337023c...db3a6e34 - 32 commits from branch `rtems/tools:main`
- 8ff9a508 - rtemstoolkit/elf: Update support machine types to match RTEMS

Compare with previous version

Author: Kinsey Moore 2024-11-01T00:34:39.426Z

approved this merge request

Author: Amar Takhar 2024-11-01T00:45:29.433Z

Related to https://gitlab.rtems.org/rtems/rtos/rtems/-/merge_requests/285

3.15.2.11 35 - Remove import of host

Id	35
State	merged
Merged by	Chris Johns
Merged at	2024-10-28T04:03:50.195Z
Assignee(s)	Amar Takhar
Reviewer(s)	Chris Johns, Gedare Bloom
Created	2024-10-28T03:36:27.500Z
Updated	2024-10-28T04:03:51.956Z
Milestone	6.1
Labels	tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/35
Commit	db3a6e34d816a77885a27a2d7948bab5b748b736

Summary

Remove import of host

This avoids a circular dependency in execute.py since other modules that will also use host import it as well.

This uses os.name to detect if we're on Windows which is "nt"

Author: Amar Takhar 2024-10-28T03:36:27.643Z

requested review from @chris

Author: Amar Takhar 2024-10-28T03:36:27.660Z

assigned to @amar

Author: Amar Takhar 2024-10-28T03:36:44.916Z

requested review from @gedare

Author: Amar Takhar 2024-10-28T03:36:54.949Z

This executes but I'm not on a Windows machine to test if this works OK until @gedare tests it.

Author: Chris Johns 2024-10-28T04:03:05.190Z

Does this work on Cygwin?

Author: Amar Takhar 2024-10-28T04:03:05.190Z

No it won't it'll return posix. Native Python will return 'nt' and mingw python will return 'nt'. Does it need to? I guess I should have asked didn't think about it since it didn't come up in conversation.

Author: Amar Takhar 2024-10-28T04:03:05.190Z

I could change it to use sys.platform and check for `win32`, `cygwin` and `msys` that would cover those 3.

Author: Chris Johns 2024-10-28T04:03:05.190Z

Great. The Cyginw vs MSYS2 verses native Windows can become tricky.

Author: Amar Takhar 2024-10-28T03:49:10.728Z

added 1 commit

- db3a6e34 - Remove import of host

Compare with previous version

Author: Gedare Bloom 2024-10-28T03:57:39.942Z

This MR works for me on MSYS2 and on Ubuntu. The os.name == 'nt' should only pick up MSYS2, not pick up Cygwin, so this should be non-functional change for Cygwin.

Author: Gedare Bloom 2024-10-28T04:00:31.930Z

approved this merge request

Author: Chris Johns 2024-10-28T04:03:05.209Z

resolved all threads

3.15.2.12 33 - Fixes for tester running on windows MSYS

Id	33
State	merged
Merged by	Amar Takhar
Merged at	2024-10-28T02:44:36.527Z
Created	2024-10-28T02:42:40.253Z
Updated	2024-10-28T02:50:16.139Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/33
Commit	2a0bc3d2ea6131cd783d439afd492ba91a9d0e33

Summary

Windows path needs to be corrected for configparser.load() to work. and the execute.py in rtemstoolkit seems to need to invoke commands in a shell.

Author: Amar Takhar 2024-10-28T02:44:31.288Z

approved this merge request

3.15.2.13 34 - execute.py: restore accidentally deleted command construction

Id	34
State	merged
Merged by	Amar Takhar
Merged at	2024-10-28T02:49:37.856Z
Created	2024-10-28T02:47:59.988Z
Updated	2024-10-28T02:50:11.515Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/34
Commit	218b1cfd9bb0c5f58b0e21dbacd730d6533ce9a7

Summary

Author: Amar Takhar 2024-10-28T02:49:33.690Z

approved this merge request

3.15.2.14 31 - Reformat code using yapf

Id	31
State	merged
Merged by	Chris Johns
Merged at	2024-10-21T04:42:51.379Z
Assignee(s)	Amar Takhar
Reviewer(s)	Chris Johns
Created	2024-10-21T04:22:20.469Z
Updated	2024-10-21T04:42:53.405Z
Milestone	6.1
Labels	lang::python, tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/31
Commit	88c7f5df82dbdbb87205e414847caa11b6a5912f

Summary

Reformat code using yapf

Done using default settings.

Author: Amar Takhar 2024-10-21T04:22:20.710Z

assigned to @amar

Author: Chris Johns 2024-10-21T04:25:01.573Z

The following are imported and should not be reformatted:

- `misc/tool\ |md_0_8206|\ s/getmac`
- `tester/r\ |md_0_8206|\ t/pygdb`

Author: Chris Johns 2024-10-21T04:42:38.182Z

These files are python:

- `tester/rtems-bsp-builder`
- `tester/rtems-test`
- `tester/rtems-run`
- `tester/rtems-tftp-server`
- `misc/rtems-tftp-proxy`
- `misc/rtems-boot-image`

Author: Amar Takhar 2024-10-21T04:42:38.182Z

Updated.

Author: Chris Johns 2024-10-21T04:29:29.708Z

requested review from @chris

Author: Amar Takhar 2024-10-21T04:33:06.125Z

oh, duh wonder why i didn't think to check for the binaries i just did `*.py` doh thanks I'll grab it.

I tried to exclude imported code didn't notice those thanks.

Author: Amar Takhar 2024-10-21T04:35:55.651Z

added 1 commit

- 88c7f5df - Reformat code using yapf

Compare with previous version

Author: Chris Johns 2024-10-21T04:42:38.200Z

resolved all threads

Author: Chris Johns 2024-10-21T04:42:43.245Z

approved this merge request

3.15.2.15 28 - stty: fix open and read calls

Id	28
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-07T14:34:17.358Z
Created	2024-09-28T21:18:43.316Z
Updated	2024-10-07T14:34:18.794Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/28
Commit	a56eff6358763820847930668188d7f3c7eb4ab9

Summary

This merge request fixes the open() and read() calls for tty devices on rtems tester and run.

Opening a device in 'rw' mode causes:

`error: opening tty dev: /dev/ttyACM0: must have exactly one of create/read/write/append mode`

Reading from device:

```
Exception in thread tty[/dev/ttyACM0]:
[...]
File "/usr/lib/python3.10/codecs.py", line 321, in decode
data = self.buffer + input
TypeError: can't concat NoneType to bytes
```

Author: Ranulfo Raphael 2024-09-28T21:20:12.206Z

changed the description

Author: Kinsey Moore 2024-10-07T14:34:10.859Z

approved this merge request

3.15.2.16 24 - Added niosvc10lp BSP support

Id	24
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-23T17:18:39.368Z
Created	2024-08-06T20:12:59.200Z
Updated	2024-09-02T12:43:42.923Z
Milestone	6.1
Labels	arch:riscv
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/24
Commit	18e38d5dfdbbca5a2c187e95f764b9f0ea309e0c

Summary

Added niosvc10lp BSP support for Issue #5101 1. Add niosvc10lp bsp and tier 2. Added support for Intel's juart_terminal.exe JTAG UART application as a console device 3. Changed the way GDB shuts down after closing to work with ash-riscv-gdb-server.exe GDB Server a. Ashling ash-riscv-gdb-server.exe GDB Server doesn't shut down properly when killing it through SIGTERM. b. When closing gdb.py, call stop() instead of kill() to allow graceful shutdown. c. Ashling ash-riscv-gdb-server.exe GDB Server doesn't respond to the -exec-interrupt command. d. Send SIGINT signal to break active GDB session e. Added disconnect before quiting GDB session f. commented out print() when sending signals to keep output clean with these changes 4. When opening and closing the console, added the current test index and total test value to allow console to perform actions on first and last test case. Important for opening and closing the juart_terminal.exe only once since to lower the chance of a failed initialization when it runs over the JTAG cable.

Author: Joel Sherrill 2024-08-11T13:59:02.253Z

Looks like an accidental insertion.

Author: Kevin Kirspel 2024-08-07T13:35:20.490Z

changed this line in version 2 of the diff

Author: Kevin Kirspel 2024-08-11T13:59:02.253Z

Fixed accidental insertion

Author: Joel Sherrill 2024-08-11T13:59:34.427Z

I am not sure rtems-tools is uniformly doing it, but please add an SPDX comment as line 1 followed by a blank line.

Author: Kevin Kirspel 2024-08-11T13:59:34.427Z

Added SPDX comment

Author: Joel Sherrill 2024-08-11T14:00:14.805Z

This is your contribution. :)

Author: Kevin Kirspel 2024-08-07T13:35:21.346Z

changed this line in version 2 of the diff

Author: Kevin Kirspel 2024-08-11T14:00:14.805Z

Updated copyright to reflect my contribution

Author: Joel Sherrill 2024-08-11T14:00:31.342Z

SPDX line please – add to all new files.

Author: Kevin Kirspel 2024-08-11T14:00:31.342Z

Added SPDX comment

Author: Joel Sherrill 2024-08-06T20:53:14.497Z

This will need a more thorough review by @kiwichris.

Author: Kevin Kirspel 2024-08-07T13:35:21.790Z

added 1 commit

- b0e71d98 - Fixed issues identified by Joel: accidental insertion, SPDX comments, and contribuition

Compare with previous version

Author: Kevin Kirspel 2024-08-11T14:00:31.369Z

resolved all threads

Author: Kevin Kirspel 2024-08-23T17:15:25.762Z

added 6 commits

- b0e71d98...24475571 - 4 commits from branch `rtems/tools:main`

- 518e09e0 - Added niosvc10lp BSP support
- 18e38d5d - Fixed issues identified by Joel: accidental insertion, SPDX comments, and contribuition

Compare with previous version

Author: Joel Sherrill 2024-08-23T17:18:34.532Z

approved this merge request

Author: Frank Kuehndel 2024-09-02T12:43:42.825Z

mentioned in issue #13

3.15.2.17 19 - linkers: Fix symbol table size placement

Id	19
State	merged
Merged by	Chris Johns
Merged at	2024-07-20T00:01:01.418Z
Assignee(s)	Sebastian Huber
Created	2024-07-18T18:40:11.225Z
Updated	2024-08-28T22:37:54.939Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/19
Commit	0483fe3a4bc54e7e928d29c5658a42de4e80ed15

Summary

linkers: Fix symbol table size placement

The symbol table size label must be in the same section as the symbol table base label. Otherwise relocation errors may occur on some targets.

Author: Sebastian Huber 2024-07-18T18:40:12.237Z

assigned to @sebhub

Author: Sebastian Huber 2024-07-19T06:02:19.289Z

added 1 commit

- d282b57d - linkers: Single asm() block for the symbol table

Compare with previous version

Author: Chris Johns 2024-07-20T00:00:40.526Z

approved this merge request

Author: Chris Johns 2024-07-20T00:00:47.477Z

added 4 commits

- d282b57d...98ddf340 - 2 commits from branch `rtems/tools:main`
- 9a732207 - linkers: Fix symbol table size placement
- 0483fe3a - linkers: Single asm() block for the symbol table

Compare with previous version

Author: Sebastian Huber 2024-08-28T22:37:54.778Z

mentioned in issue rtems/rtos/rtems#5123

3.15.2.18 21 - Add script for updating ACPICA code in the RTEMS source tree

Id	21
State	merged
Merged by	Joel Sherrill
Merged at	2024-08-23T14:36:53.533Z
Created	2024-07-22T17:34:59.729Z
Updated	2024-08-23T14:36:55.949Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/21
Commit	24475571e6455e851d0a8cbe12d61219ba24a4ad

Summary

This MR also contains changes in rtemstoolkit:

- Adding a missing import in path.py which was needed for the “removeall” method
- Adding methods to git.py which are used by the script

I tested the script on Gentoo Linux, FreeBSD and Windows with Cygwin. I don’t have any means to test it on macOS.

Closes #11

Author: Matheus Pecoraro 2024-07-22T17:40:44.446Z

added 1 commit

- 793a5aaf - misc: Add rtems-gen-acpica-patches script

Compare with previous version

Author: Matheus Pecoraro 2024-07-22T19:56:59.617Z

Author: Matheus Pecoraro 2024-07-22T20:06:42.131Z

changed the description

Author: Chris Johns 2024-08-07T02:57:07.678Z

marked this merge request as **draft**

Author: Chris Johns 2024-08-23T14:35:44.179Z

Please run the python code thru `yapf` with the default arguments. Thanks.

Author: Matheus Pecoraro 2024-08-23T14:35:44.179Z

Done

Author: Matheus Pecoraro 2024-08-07T15:54:51.340Z

added 5 commits

- 793a5aaf...478c0727 - 2 commits from branch `rtems/tools:main`
- 132c9c36 - rtemstoolkit: Add missing import to path.py
- bc50035b - rtemstoolkit: Add more methods to git.py
- 97493568 - misc: Add rtems-gen-acpica-patches script

Compare with previous version

Author: Joel Sherrill 2024-08-23T14:35:44.198Z

resolved all threads

Author: Joel Sherrill 2024-08-23T14:35:49.934Z

approved this merge request

Author: Joel Sherrill 2024-08-23T14:36:20.882Z

marked this merge request as **ready**

Author: Joel Sherrill 2024-08-23T14:36:36.736Z

added 4 commits

- 78266a24 - 1 commit from branch `rtems/tools:main`
- 2c5ae13c - rtemstoolkit: Add missing import to path.py
- 77d32062 - rtemstoolkit: Add more methods to git.py
- 24475571 - misc: Add rtems-gen-acpica-patches script

Compare with previous version

3.15.2.19 2 - rld: recognize aarch64.

Id	2
State	merged
Merged by	Chris Johns
Merged at	2024-05-15T23:46:44.734Z
Created	2024-05-15T06:24:12.717Z
Updated	2024-08-10T00:40:54.524Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/2
Commit	2f1c2ebbe254ac24bb62acba4fdadf19b7d488e2

Summary

close #2

Author: Kinsey Moore 2024-05-15T15:20:53.164Z

These are in alphabetical order and aarch64 comes before arm. This addition needs to be moved up one line.

Author: xiaojun zheng 2024-05-15T14:47:00.503Z

changed this line in version 1 of the diff

Author: xiaojun zheng 2024-05-15T14:50:19.008Z

added 1 commit

- 2f1c2ebb - rld: recognize aarch64.

Compare with previous version

Author: Kinsey Moore 2024-05-15T15:20:53.181Z

resolved all threads

Author: Kinsey Moore 2024-05-15T15:21:13.298Z

approved this merge request

Author: Kinsey Moore 2024-05-15T17:40:21.194Z

I'd like @chris to double check this before it gets merged as I'm not familiar at all with the codebase or what else might be required when adding an architecture.

Author: Chris Johns 2024-05-15T23:46:40.273Z

approved this merge request

3.15.2.20 9 - Convert README to MarkDown and update.

Id	9
State	merged
Merged by	Chris Johns
Merged at	2024-06-19T00:22:58.774Z
Created	2024-06-18T23:19:45.647Z
Updated	2024-08-10T00:40:27.535Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/9
Commit	5c5d4927ae4130e50bad6f7d772d28f1e808a92e

Summary

Convert README to MarkDown and update.

Also fix some URL references and general cleanup. Point to Discord instead of IRC.

Closes #7

Author: Chris Johns 2024-06-19T00:22:52.056Z

Is there something I need to install to run `pytest`?

```
(r-py-3) chris@torea:/opt/work/chris/rtems/rt/rtems-tools.git $ python --version
Python 3.9.18
(r-py-3) chris@torea:/opt/work/chris/rtems/rt/rtems-tools.git $ type pytest
pytest: not found
```

Author: Amar Takhar 2024-06-19T00:22:52.056Z

Yes you need to install pytest I will update the readme.

Author: Amar Takhar 2024-06-18T23:35:18.051Z

added 1 commit

- 5c5d4927 - Add note about installing pytest first and it's location.

Compare with previous version

Author: Chris Johns 2024-06-19T00:22:52.072Z

resolved all threads

Author: Chris Johns 2024-06-19T00:22:55.470Z

approved this merge request

3.15.2.21 10 - rtemstoolkit: Drop requirement for 'svn'.

Id	10
State	merged
Merged by	Chris Johns
Merged at	2024-06-19T00:51:36.443Z
Assignee(s)	Amar Takhar
Created	2024-06-19T00:36:22.107Z
Updated	2024-08-10T00:40:27.438Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/10
Commit	61b383f99fe7ac30884b6505a8021e823c98d2b7

Summary

rtemstoolkit: Drop requirement for 'svn'.

We don't use or require subversion for anything no need to force users to install it.

Author: Amar Takhar 2024-06-19T00:36:28.547Z

assigned to @amar

Author: Chris Johns 2024-06-19T00:51:00.644Z

added 3 commits

- ffcf694d...5c5d4927 - 2 commits from branch `rtems/tools:main`
- 61b383f9 - rtemstoolkit: Drop requirement for 'svn'.

Compare with previous version

Author: Chris Johns 2024-06-19T00:51:31.371Z

approved this merge request

3.15.2.22 3 - tester/amd64: Add amd64 tester configurations

Id	3
State	merged
Merged by	Gedare Bloom
Merged at	2024-06-18T16:07:28.353Z
Created	2024-06-03T19:39:26.806Z
Updated	2024-08-10T00:40:27.242Z
Milestone	6.1
Labels	arch:x86_64
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/3
Commit	8138b87f0b9e5b95d7abd991f335701d01b8564d

Summary

Add tester configurations for both amd64 (using the FreeBSD bootloader) and amd64efi (using GRUB).

Additionally fix a typo causing @FEXE@ to not expand to the correct value and add an option to qemu.cfg allowing the image path to be specified by the BSP config.

Author: Matheus Pecoraro 2024-06-05T18:13:22.566Z

added 1 commit

- 58d0d6c9 - tester/amd64: Add amd64_qemu config

Compare with previous version

Author: Matheus Pecoraro 2024-06-12T10:19:03.693Z

mentioned in merge request rtems-source-builder!24

Author: Matheus Pecoraro 2024-06-13T19:26:09.051Z

Author: Joel Sherrill 2024-06-18T16:06:41.525Z

Looks ok. The process of creating a bootable executable and booting it should be documented in the Users Guide. Please create an issue for that.

Once I see the other issue, I will approve this.

Author: Matheus Pecoraro 2024-06-18T16:06:41.525Z

Issue created.

Author: Matheus Pecoraro 2024-06-15T20:41:56.631Z

mentioned in issue rtems/docs/rtems-docs#15

Author: Gedare Bloom 2024-06-18T16:06:41.541Z

resolved all threads

Author: Gedare Bloom 2024-06-18T16:06:46.755Z

approved this merge request

Author: Gedare Bloom 2024-06-18T16:06:56.107Z

added 7 commits

- 58d0d6c9...3a639da1 - 3 commits from branch `rtems/tools:main`
- e0931e62 - tester: Make @FEXE@ expand to filtered executable
- 37653db6 - tester: Add option to specify image loaded by QEMU
- e4ab5711 - tester/amd64: Add amd64efi_grub_qemu config
- 8138b87f - tester/amd64: Add amd64_qemu config

Compare with previous version

3.15.2.23 16 - rtems-test: Fix –jobs option in –help output

Id	16
State	merged
Merged by	Kinsey Moore
Merged at	2024-06-27T21:12:54.933Z
Created	2024-06-27T20:19:04.371Z
Updated	2024-08-10T00:40:17.286Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/16
Commit	9ca988052b2a4c525649d43e24e1038113e1df48

Summary

This merge request fixes the `--jobs` option in `--help` output.

```
$ rtems-test --help | grep jobs
--jobs=[0..n,none,half,full] : Run with specified number of jobs, default: num␣
↪CPUs.

```

(continues on next page)

(continued from previous page)

```
$ rtems-test --jobs=full
error: invalid jobs option: full
```

The valid jobs option is `max`.

Author: Ranulfo Raphael 2024-06-27T20:35:22.868Z

added 1 commit

- 9ca98805 - rtems-test: Fix –jobs option in –help output

Compare with previous version

Author: Kinsey Moore 2024-06-27T21:12:51.300Z

approved this merge request

3.15.2.24 20 - linkers: Constify TLS offsets

Id	20
State	merged
Merged by	Chris Johns
Merged at	2024-07-19T21:14:10.483Z
Assignee(s)	Sebastian Huber
Created	2024-07-19T06:30:13.360Z
Updated	2024-08-10T00:40:04.479Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/20
Commit	6d7ac242b4bf2c2ee7d2083ff32e5e6a8109cf4f

Summary

Author: Sebastian Huber 2024-07-19T06:30:14.277Z

assigned to @sebhub

Author: Chris Johns 2024-07-19T21:14:03.828Z

approved this merge request

3.15.2.25 6 - Add test suite for rtemstoolkit.

Id	6
State	merged
Merged by	Chris Johns
Merged at	2024-06-18T03:42:52.289Z
Assignee(s)	Amar Takhar
Created	2024-06-17T03:47:15.380Z
Updated	2024-07-30T02:51:05.653Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/6
Commit	3a639da113534dc12cbd99e9f5790e045bb49e94

Summary

Add test suite for rtemstoolkit.

This was written in 2020.

To run do:

Author: Amar Takhar 2024-06-17T03:47:15.530Z

assigned to @amar

Author: Chris Johns 2024-06-18T03:42:42.996Z

This looks great and thanks for doing it. I some questions:

1. Would `rtemstoolkit/tests` be a better place for the code? It would be nice to add `doctest` support to the C++ code at some point.
2. There is test code at the end of each module which could be migrated over and deleted. It is run with `./waf test`. Will these tests take over from those tests?

Author: Amar Takhar 2024-06-18T03:42:42.996Z

I was planning to eventually write tests for other components of `rtems-tools` eventually which is why it's toplevel. Also other directories that have required files like `config/` it made sense to have it toplevel. Though nothing stops us from having lots of different `test` directories the tools aren't all insular.

Oh yes sorry I completely forgot to delete those! Yes this replaces all of them should I delete it in this commit or should I do it in another? I think it may be cleaner to do it in another so there is at least one commit where they live side-by-side makes for easier testing if required.

In my defense I wrote this 4 years ago and I just copied the test files but forgot there were source changes.

Author: Chris Johns 2024-06-18T03:42:42.996Z

The `rtemstoolkit` is isolated so `tests` is fine but should it be `tests/rtemstoolkit` or even `tests` and that references `rtemstoolkit/tests`. This way we can add tests to things that are not related to the `rtemstoolkit`?

The current tests should be migrated before being deleted or we will forget what those tests did.

Author: Amar Takhar 2024-06-18T03:42:42.996Z

I have renamed them to `test_rt_*` .. subdirs won't work because it messes with the python import it's easier to just have them all in the same directory anyway.

I think all the tests have been migrated but if any haven't been in the next commit I'll leave them behind and then migrate the rest. I'm pretty sure I did all of them unless more have been added.

Author: Amar Takhar 2024-06-18T03:42:42.996Z

Hold on something screwed up in my merge.

Author: Amar Takhar 2024-06-18T03:42:42.996Z

Interesting it seems the file rename didn't carry through on my squash so it just deleted the files that's not good.

Author: Amar Takhar 2024-06-18T03:42:42.996Z

haha I forgot to add the files after I renamed them so they got deleted I didn't notice when I squashed so the files I renamed got left behind while the moved files got deleted. I've never done that before, funny.

Author: Chris Johns 2024-06-18T03:42:42.996Z

Yes I agree a sub-directory will not work. This is good.

Author: Amar Takhar 2024-06-17T05:51:48.945Z

added 1 commit

- 544d8970 - Add test suite for rtemstoolkit.

Compare with previous version

Author: Amar Takhar 2024-06-17T06:00:39.499Z

added 1 commit

- d7b53bd6 - Add test suite for rtemstoolkit.

Compare with previous version

Author: Amar Takhar 2024-06-17T17:24:45.914Z

added 1 commit

- 4d69f1a7 - Add test suite for rtemstoolkit.

Compare with previous version

Author: Amar Takhar 2024-06-17T17:25:31.460Z

added 1 commit

- 0889179b - Add test suite for rtemstoolkit.

Compare with previous version

Author: Amar Takhar 2024-06-17T17:26:49.552Z

added 1 commit

- fdeede90 - Add test suite for rtemstoolkit.

Compare with previous version

Author: Amar Takhar 2024-06-17T17:43:29.147Z

mentioned in merge request !7

Author: Amar Takhar 2024-06-17T17:43:41.715Z

requested review from @amar

Author: Gedare Bloom 2024-06-18T03:23:48.297Z

make it more clear the scope of what was copied, and from exactly where it comes from, so someone may update it easier.

Author: Amar Takhar 2024-06-18T03:23:48.297Z

This was already there I have no idea where it was taken from, either. I'll ask @chris

Author: Amar Takhar 2024-06-18T03:23:48.297Z

Found the location and linked.

Author: Gedare Bloom 2024-06-18T03:22:24.780Z

suggest making the reason for commenting out upstream code more clear

Author: Amar Takhar 2024-06-18T03:22:24.780Z

This isn't commented out? It's in the commit message that this was upgraded the implementation is from upstream.

Author: Amar Takhar 2024-06-18T03:22:24.780Z

Sorry I see what you mean now no idea why that is commented. I wish GitLab had an easier to see colour for commented code.

Author: Amar Takhar 2024-06-18T03:22:24.780Z

I found it fixed the comment and linked the source.

Author: Gedare Bloom 2024-06-18T01:17:12.437Z

should be 2 blank lines. please pass through yapf or similar, I think we prefer PEP-8 unless there is another prevailing style to use. https://docs.rtems.org/branches/master/eng/python-devel.html#python-code-formatting

Author: Amar Takhar 2024-06-18T01:17:12.437Z

Fixed.

Author: Gedare Bloom 2024-06-18T01:19:56.314Z

?

Author: Amar Takhar 2024-06-18T01:16:41.867Z

changed this line in version 7 of the diff

Author: Amar Takhar 2024-06-18T01:19:56.314Z

Fixed

Author: Gedare Bloom 2024-06-18T01:17:19.019Z

IIRC, 1 line separates methods

Author: Amar Takhar 2024-06-18T01:16:42.177Z

changed this line in version 7 of the diff

Author: Amar Takhar 2024-06-18T01:17:19.019Z

Fixed

Author: Gedare Bloom 2024-06-18T01:17:23.723Z

line length, but I think `yapf` should fix it.

Author: Amar Takhar 2024-06-18T01:16:42.478Z

changed this line in version 7 of the diff

Author: Amar Takhar 2024-06-18T01:17:23.723Z

Fixed

Author: Gedare Bloom 2024-06-18T01:19:31.002Z

?

Author: Amar Takhar 2024-06-18T01:19:31.002Z

Fixed

Author: Gedare Bloom 2024-06-18T03:40:48.484Z

I think we want to explicitly `return None`

Author: Amar Takhar 2024-06-18T03:40:48.484Z

The default behavior or Python is to return None. A return statement is useful if you want to let others know you didn't forget anything but it will always be None.

Author: Chris Johns 2024-06-18T03:40:48.484Z

We will move to typing and return type interfaces once 3.10 (I think) and later is widely adopted. Before that version typing in python is not great to use. I have this in the release notes generator and after working on 3.12 and then testing on FreeBSD 3.9 I had to unwind a bunch of things.

Author: Gedare Bloom 2024-06-18T01:17:40.930Z

I would rather see proper path building

Author: Amar Takhar 2024-06-18T01:16:43.423Z

changed this line in version 7 of the diff

Author: Amar Takhar 2024-06-18T01:17:40.930Z

Fixed

Author: Gedare Bloom 2024-06-18T01:18:08.313Z

path construction

Author: Amar Takhar 2024-06-18T01:18:08.313Z

Fixed

Author: Gedare Bloom 2024-06-18T01:17:57.511Z

?

Author: Amar Takhar 2024-06-18T01:17:57.511Z

Fixed

Author: Gedare Bloom 2024-06-18T01:17:55.145Z

?

Author: Amar Takhar 2024-06-18T01:16:45.217Z

changed this line in version 7 of the diff

Author: Amar Takhar 2024-06-18T01:17:55.145Z

Fixed

Author: Gedare Bloom 2024-06-18T01:17:53.711Z

excessive blank lines

Author: Amar Takhar 2024-06-18T01:16:45.646Z

changed this line in version 7 of the diff

Author: Amar Takhar 2024-06-18T01:17:53.711Z

Fixed

Author: Gedare Bloom 2024-06-18T01:18:44.609Z

not clear to me why this is a string.

Author: Amar Takhar 2024-06-18T01:16:46.078Z

changed this line in version 7 of the diff

Author: Amar Takhar 2024-06-18T01:18:44.609Z

This was meant to be uncommented when I skipped the entire file.

Author: Gedare Bloom 2024-06-18T01:18:56.696Z

?

Author: Amar Takhar 2024-06-18T01:16:46.511Z

changed this line in version 7 of the diff

Author: Amar Takhar 2024-06-18T01:18:56.696Z

Fixed

Author: Gedare Bloom 2024-06-17T20:05:48.943Z

requested changes

Author: Amar Takhar 2024-06-18T01:16:46.676Z

added 1 commit

- 53383500 - Add test suite for rtemstoolkit.

Compare with previous version

Author: Amar Takhar 2024-06-18T01:20:10.653Z

removed review request for @amar

Author: Amar Takhar 2024-06-18T03:22:07.417Z

added 1 commit

- 3a639da1 - Add test suite for rtemstoolkit.

Compare with previous version

Author: Chris Johns 2024-07-30T02:51:05.608Z

Could `pytest -v` be linked to `./waf test`? This way you could do `./waf configure test`?

I like `waf` handling the interface so we can add C++ tests and not break or add anything new for users.

Author: Amar Takhar 2024-07-30T02:51:05.608Z

pytest doesn't like being run inside anything. I wouldn't recommend running tests inside of another program like that. I think it's OK as with python it's really common for the test command to be something separate.

Author: Chris Johns 2024-06-18T03:40:48.504Z

resolved all threads

Author: Chris Johns 2024-06-18T03:42:33.364Z

approved this merge request

Author: Chris Johns 2024-06-18T03:42:43.017Z

resolved all threads

Author: Chris Johns 2024-07-30T02:51:05.633Z

resolved all threads

3.15.2.26 22 - Update to GitLab URLs.

Id	22
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-27T21:31:45.003Z
Assignee(s)	Amar Takhar
Created	2024-07-27T01:22:24.852Z
Updated	2024-07-27T21:31:46.209Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/22
Commit	478c07278ed9ed6afaf2f0e47364db75cac75be2

Summary

Author: Amar Takhar 2024-07-27T01:22:25.002Z

assigned to @amar

Author: Kinsey Moore 2024-07-27T21:31:34.509Z

approved this merge request

Author: Kinsey Moore 2024-07-27T21:31:39.516Z

added 2 commits

- 38a3e3a7 - 1 commit from branch `rtems/tools:main`
- 478c0727 - Update to GitLab URLs.

Compare with previous version

3.15.2.27 23 - Direct users to submit an MR

Id	23
State	merged
Merged by	Amar Takhar
Merged at	2024-07-27T21:29:45.616Z
Assignee(s)	Amar Takhar
Created	2024-07-27T20:15:20.341Z
Updated	2024-07-27T21:29:46.855Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/23
Commit	38a3e3a75d8568c9ce6a307f23d4cc041666e05a

Summary

Direct users to submit an MR

Using the devel list is no longer the preferred method.

Author: Amar Takhar 2024-07-27T20:15:20.492Z

assigned to @amar

Author: Joel Sherrill 2024-07-27T20:52:27.539Z

approved this merge request

Author: Amar Takhar 2024-07-27T21:28:44.994Z

huh it says 1 of 1 so I'm not sure why this is blocked.

Author: Amar Takhar 2024-07-27T21:29:43.175Z

I'll have to fix this later Joel wasn't in the docs group but it's not supposed to require the docs group if the general maintainer approved.

3.15.2.28 13 - Add API documentation using pdoc

Id	13
State	merged
Merged by	Gedare Bloom
Merged at	2024-07-10T05:22:17.775Z
Assignee(s)	Amar Takhar
Created	2024-06-20T21:06:17.065Z
Updated	2024-07-10T05:22:19.298Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/13
Commit	d46ab8375de5ded8de18dd56bc0776a0cbd43a8d

Summary

Add API documentation using pdoc

https://pdoc.dev/

A lot of documentation is missing but it's a start. If we need more complicated features in the future we can move to Sphinx but pdoc is great and a very small dependency.

Remove unused import

This also checks for the existence of a 'python' binary. It assumes it's Python 2.7 if found and uses it. If it's not found it skips building the documentation instead of erroring out.

Once we drop Python 2.7 support we can set this up properly using Wafs internal Python detection. It's non-trivial to pickup and support two versions at the same time.

Author: Amar Takhar 2024-06-20T21:06:17.219Z

assigned to @amar

Author: Amar Takhar 2024-06-21T23:41:39.776Z

requested review from @amar

Author: Amar Takhar 2024-06-21T23:44:58.830Z

Testing comments vs review

Author: Amar Takhar 2024-06-21T23:45:00.289Z

This is a test to see if the MR is blocked due to a review

Author: Amar Takhar 2024-06-21T23:43:36.893Z

Using the finish review section.

Author: Amar Takhar 2024-06-21T23:45:00.305Z

resolved all threads

Author: Amar Takhar 2024-06-21T23:45:15.264Z

removed review request for @amar

Author: Amar Takhar 2024-06-23T06:29:32.909Z

Testing MR comments.

Author: Gedare Bloom 2024-07-02T04:43:02.949Z

Please edit the commit message (and MR title) to make the scope more clear (What API? I think it is `rtemstoolkit:`)

Is this something for using with the 6.1 release?

Author: Amar Takhar 2024-07-02T04:43:02.949Z

It's not strictly limited to rtemstoolkit no but the only directory it scans right now is rtemstoolkit so I left it off. I wanted it in the repo first before I modified it to include other areas.

I don't see why it can't be in 6.1 it's an innocuous change it can also be useful for anyone wanting to use rtemstoolkit as it does make useful documentation even though it is sparse.

Author: Chris Johns 2024-07-02T04:43:02.949Z

I think @gedare is discussing this commit which is why it would be good to have in the history which part is being covers?

Is there an example of the generated docs I can look at? Yes I am being lazy not running the change :smile:

Author: Amar Takhar 2024-07-02T04:43:02.949Z

I can add it but do we really split hairs on things like this? This commit adds the framework which is in the docs/ directory which coincidentally adds rtemstoolkit first but it's mostly for the framework. I left it off because it's not really fully part of either.. I can add it but I'm starting to feel these rules are kind of fuzzy

There is no example pdoc is a single dependency just install it, `waf configure build`, that's it! If it finds it then it will install the docs are in `build/`

Author: Amar Takhar 2024-07-02T04:43:02.949Z

I added a `doc:` identifier.

Author: Amar Takhar 2024-07-02T04:43:02.949Z

You can look at some example docs online look under submodules on the left:

- https://pdoc.dev/docs/pdoc.html

Author: Chris Johns 2024-07-02T04:43:02.949Z

We are only attempting to understand what is happening and nothing more.

The commit and MR title say "Add API documentation using pdoc" and it is not actually adding any documentation it is allowing us to support API generation hence the confusion (for me that is).

What about `waf: Add pdoc support for generating API documentation`?

Author: Amar Takhar 2024-07-02T04:43:02.949Z

That is what my title says though.. Add API documentation using pdoc .. I can add the word generating for you.

Author: Amar Takhar 2024-07-02T04:43:02.949Z

I have changed the title to:

- `doc: Add API documentation generation using pdoc`

I did not add waf because it's in the ``doc/`` directory and relates to docs more than the build system.

Author: Chris Johns 2024-07-02T04:43:02.949Z

Yeah good point

Author: Amar Takhar 2024-07-02T02:01:38.529Z

added 1 commit

- 220de474 - doc: Add API documentation using pdoc

Compare with previous version

Author: Amar Takhar 2024-07-02T02:12:58.112Z

added 1 commit

- 9020d345 - doc: Add API documentation generation using pdoc

Compare with previous version

Author: Chris Johns 2024-07-02T04:43:02.971Z

resolved all threads

Author: Gedare Bloom 2024-07-10T05:21:52.427Z

approved this merge request

Author: Gedare Bloom 2024-07-10T05:21:59.251Z

added 6 commits

- 9020d345...71cf2428 - 5 commits from branch `rtems/tools:main`
- d46ab837 - doc: Add API documentation generation using pdoc

Compare with previous version

3.15.2.29 17 - linkers: Improve generation of symbol map file

Id	17
State	merged
Merged by	Chris Johns
Merged at	2024-07-09T21:01:42.787Z
Assignee(s)	Sebastian Huber
Created	2024-07-09T08:54:20.467Z
Updated	2024-07-09T21:01:44.450Z
Milestone	6.1
Labels	rtems::testing
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/17
Commit	71cf2428e0f61876a7ea84904cf151217b532e9a

Summary

Use the user-provided symbol map file name as is. This simplifies the use in build systems by having clearly defined input and output names without some magic inbetween (adding a suffix).

Update #rtems/rtos/rtems/4941.

Author: Sebastian Huber 2024-07-09T08:54:20.587Z

assigned to @sebhub

Author: Sebastian Huber 2024-07-09T08:59:07.719Z

mentioned in merge request rtems/rtos/rtems!111

Author: Sebastian Huber 2024-07-09T09:00:21.608Z

changed title from **{-tempfile: Make suffix append optional-}** to **{+linkers: Improve generation of symbol map file+}**

Author: Sebastian Huber 2024-07-09T09:00:21.635Z

changed the description

Author: Chris Johns 2024-07-09T21:01:37.795Z

approved this merge request

3.15.2.30 15 - elftoolchain/common/_elftc.h: Add Cygwin definition of ELFTC_VCSID

Id	15
State	merged
Merged by	Amar Takhar
Merged at	2024-06-27T19:15:22.153Z
Assignee(s)	Joel Sherrill
Created	2024-06-27T19:14:31.197Z
Updated	2024-06-27T19:17:36.975Z
Milestone	6.1
Labels	tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/15
Commit	103d03a950facb08661b91dedee68d656d831373

Summary

elftoolchain/common/_elftc.h: Add Cygwin definition of ELFTC_VCSID

This can be the same as on other hosts with GNU tools but Cygwin was not listed in the conditional logic.

Closes #9

Author: Joel Sherrill 2024-06-27T19:14:31.354Z

assigned to @joel

Author: Amar Takhar 2024-06-27T19:15:14.466Z

I was just looking at that file!

Author: Amar Takhar 2024-06-27T19:15:17.630Z

approved this merge request

Author: Amar Takhar 2024-06-27T19:17:36.951Z

I don't see an issue open for it:

- https://sourceforge.net/p/elftoolchain/tickets/

Author: Amar Takhar 2024-06-27T19:17:55.469Z

That was meant for the issue.

3.15.2.31 11 - Don't run Git tests in release version.

Id	11
State	merged
Merged by	Chris Johns
Merged at	2024-06-19T22:54:39.052Z
Assignee(s)	Amar Takhar
Created	2024-06-19T02:48:56.097Z
Updated	2024-06-19T22:54:40.442Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/11
Commit	d8ef79b9ed659b85aaa697457085ae10a191f98e

Summary

Don't run Git tests in release version.

This checks for the existence of a 'VERSION' file if it exists then it will not run the Git tests.

Also remove ALL variable that was unused.

Closes #8 Refs !7

Author: Amar Takhar 2024-06-19T02:48:56.252Z

assigned to @amar

Author: Chris Johns 2024-06-19T22:52:50.759Z

added 3 commits

- 8b75c404...28e56379 - 2 commits from branch `rtems/tools:main`
- d8ef79b9 - Don't run Git tests in release version.

Compare with previous version

Author: Chris Johns 2024-06-19T22:54:35.041Z

approved this merge request

3.15.2.32 7 - Remove old tests that have been moved to pytest

Id	7
State	merged
Merged by	Chris Johns
Merged at	2024-06-19T22:51:52.566Z
Assignee(s)	Amar Takhar
Created	2024-06-17T17:42:31.331Z
Updated	2024-06-19T22:51:53.750Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/7
Commit	28e5637984885932c11dcc1cadf66e82384a21ca

Summary

Solaris and Darwin are covered under 'unix'. I don't currently have access to either to test but it should work.

If we need to add custom tests for these we can in the future.

Author: Amar Takhar 2024-06-17T17:43:28.949Z

This also has the changes in !6 .. however those changes aren't merged yet I'm interested to see how GitLab handles this. I would assume it will automatically pick up the fact that !6 has been merged and remove the commit.

Author: Amar Takhar 2024-06-17T17:43:52.036Z

assigned to @amar

Author: Gedare Bloom 2024-06-18T03:06:33.120Z

Please rename this one or something, it's a bit confusing atm.

I will not review this one, until the other one is more complete. It is extra work to review the same code in two places. Maybe rebase this MR on top of the other, and link it as a dependency

Author: Amar Takhar 2024-06-18T03:06:33.120Z

One thing that is annoying about GitLab is it's easy to forget to edit the MR titles/description after fixing an incorrect initial push to the MR. It's fixed now.

It was decided to keep these two separate. One adds the new test suite this one deletes it.

Author: Amar Takhar 2024-06-17T20:16:56.352Z

changed title from **{-Add test suite for r-}te{-m-}st{-oolkit.-}** to **{+Remove old tests that have been moved to py+}test**

Author: Amar Takhar 2024-06-17T20:16:56.373Z

changed the description

Author: Amar Takhar 2024-06-18T01:33:21.052Z

added 2 commits

- 53383500 - Add test suite for rtemstoolkit.
- e7b8bd99 - Remove old tests that have been moved to pytest

Compare with previous version

Author: Amar Takhar 2024-06-18T03:06:33.137Z

resolved all threads

Author: Amar Takhar 2024-06-18T03:06:39.432Z

marked this merge request as **draft**

Author: Amar Takhar 2024-06-18T04:02:20.356Z

added 2 commits

- 3a639da1 - 1 commit from branch `rtems/tools:main`
- ec1260ef - Remove old tests that have been moved to pytest

Compare with previous version

Author: Amar Takhar 2024-06-18T04:02:33.424Z

marked this merge request as **ready**

Author: Gedare Bloom 2024-06-18T23:22:25.742Z

@chris would you like to establish any commit message rules for this repo?

To be consistent, at a minimum, I would put the `rtemstoolkit:` at the start of the commit message.

Author: Chris Johns 2024-06-18T23:22:25.742Z

Yes, I think prefixing on the first line is a good idea. The top level directory would be a good place to start.

Author: Amar Takhar 2024-06-18T23:20:55.264Z

added 6 commits

- ec1260ef...93908c08 - 5 commits from branch `rtems/tools:main`
- 5a5ebf2c - Remove old tests that have been moved to pytest

Compare with previous version

Author: Chris Johns 2024-06-18T23:24:22.032Z

Moving the test code into pytest is a fantastic improvement. Thank you.

The only thing we should discuss now is the moving of some modules between the RSB and `rtemstoolkit`. Some modules, not all, are manually kept in sync and removing the tests from here means updating is a little harder. I do not care for the tests at the end of the files if there are tests somewhere to fill that role. I am also happy if we establish this repo as the master copy and if a problem in for example `execute.py` is raised in the RSB we update this copy and run the tests before merging the commit into the RSB.

I have considered in the past unifying the code in a single repo however in the end I felt the work required, the overheads to keep updated verses the time it takes to sync the small number of common files was not worth it. An example of the work to unify is `config.py` in `rtemstoolkit` is a better version and an improvement on the RSB but it would need changes deep in the RSB that are stable.

Author: Amar Takhar 2024-06-18T23:24:22.032Z

Yes I agree moving as much of our Python code to rtemstoolkit as possible makes the most sense so we can have a central way to manage everything even if other

tools end up being mostly a frontend that's fine. There's certainly a lot of duplicated code.

Author: Chris Johns 2024-06-18T23:27:20.195Z

Should we have an issue to list the common files in the RSB and the ones we need to keep updated with `rtemstoolkit`. At this point in time I think manual managment is fine.

Author: Amar Takhar 2024-06-18T23:33:05.693Z

Yes that sounds like a good idea but we also have to figure out how we want it to work if the RSB will now require rtemstoolkit to be installed.

Author: Amar Takhar 2024-06-18T23:22:03.683Z

added 1 commit

- d8ae74b0 - rtemstoolkit: Remove old tests that have been moved to pytest

Compare with previous version

Author: Amar Takhar 2024-06-18T23:22:25.124Z

added 6 commits

- d8ae74b0...93908c08 - 5 commits from branch `rtems/tools:main`
- a958e40c - rtemstoolkit: Remove old tests that have been moved to pytest

Compare with previous version

Author: Chris Johns 2024-06-18T23:22:25.806Z

resolved all threads

Author: Amar Takhar 2024-06-18T23:22:59.536Z

I've updated the commit title.

Author: Amar Takhar 2024-06-18T23:24:22.048Z

resolved all threads

Author: Chris Johns 2024-06-19T00:49:38.522Z

I am seeing failures. Are there any expected failures? My host is FreeBSD 14.0 and python is 3.9.18

Author: Amar Takhar 2024-06-19T00:49:38.522Z

Hmm what's the error?

Author: Chris Johns 2024-06-19T00:49:38.522Z

The first is no `svn` installed. I suggest that check can be removed.

The second is the repo has an untracked and a change. I think having to have all files committed makes using the tests for development hard.

Author: Chris Johns 2024-06-19T00:49:38.522Z

Releases have a top level `VERSION` and no git repo. What would happen in a release?

Author: Amar Takhar 2024-06-19T00:49:38.522Z

Ohh yes I forgot about the svn error! We can remove that but this merge request is about deleting the old tests did the other one with the testsuite work?

I don't understand the second part.

Author: Amar Takhar 2024-06-19T00:49:38.522Z

I don't know but an issue may be a better place to talk about this since this ticket doesn't have anything to do with the new test suite.

Author: Chris Johns 2024-06-19T00:49:38.522Z

I am fine to see the `svn` test go.

Sure, is there an issue to use to following up with?

Author: Amar Takhar 2024-06-19T00:49:38.522Z

Can you open one? A release will break for sure since some tests use Git.

Author: Chris Johns 2024-06-19T00:49:38.522Z

Yes and thanks.

Author: Amar Takhar 2024-06-19T00:49:38.522Z

Also can you add the procedure to create a release in that issue?

Author: Chris Johns 2024-06-19T00:49:38.540Z

resolved all threads

Author: Chris Johns 2024-06-19T00:49:50.586Z

added 3 commits

- a958e40c...5c5d4927 - 2 commits from branch `rtems/tools:main`
- 02e58f7b - rtemstoolkit: Remove old tests that have been moved to pytest

Compare with previous version

Author: Amar Takhar 2024-06-19T02:48:59.536Z

mentioned in merge request !11

Author: Amar Takhar 2024-06-19T04:34:19.218Z

Is there anything left stopping this from being merged? Thanks.

Author: Chris Johns 2024-06-19T22:51:00.212Z

added 3 commits

- 02e58f7b...fa49a5e6 - 2 commits from branch `rtems/tools:main`
- 28e56379 - rtemstoolkit: Remove old tests that have been moved to pytest

Compare with previous version

Author: Chris Johns 2024-06-19T22:51:44.898Z

approved this merge request

3.15.2.33 12 - tests: Mark using xfail instead of skipping the file.

Id	12
State	merged
Merged by	Chris Johns
Merged at	2024-06-19T22:46:16.413Z
Assignee(s)	Amar Takhar
Created	2024-06-19T03:08:27.893Z
Updated	2024-06-19T22:46:17.464Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/12
Commit	fa49a5e67d692aa419b5ed33f33e66833d3a038b

Summary

xfail is used when a test is failing but may work. Easier for development when the issue is fixed these will start working again.

Run pytest with:

pytest –runxfail

To see the output of the failed tests.

Remove global skip

Remove an old comment that was left behind

Author: Amar Takhar 2024-06-19T03:08:28.035Z

assigned to @amar

Author: Amar Takhar 2024-06-19T16:54:35.515Z

added 1 commit

- fa49a5e6 - tests: Mark using xfail instead of skipping the file.

Compare with previous version

Author: Amar Takhar 2024-06-19T17:01:48.319Z

changed the description

Author: Chris Johns 2024-06-19T22:46:13.838Z

approved this merge request

3.15.2.34 8 - Simplify usage of patch_argv fixture.

Id	8
State	merged
Merged by	Chris Johns
Merged at	2024-06-18T22:59:52.357Z
Assignee(s)	Amar Takhar
Created	2024-06-18T22:46:17.287Z
Updated	2024-06-18T22:59:53.431Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/8
Commit	93908c08a2bcaf037e76720129874d73cfbf10c3

Summary

Simplify usage of patch_argv fixture.

This moves the fixture to conftest and adds it as an argument

Version tests are still broken but this cleanup is required.

Also some whitespace fix.

Author: Amar Takhar 2024-06-18T22:46:17.806Z

assigned to @amar

Author: Chris Johns 2024-06-18T22:59:28.864Z

added 5 commits

- 8bc67d40...8138b87f - 4 commits from branch `rtems/tools:main`
- 93908c08 - Simplify usage of patch_argv fixture.

Compare with previous version

Author: Chris Johns 2024-06-18T22:59:48.373Z

approved this merge request

3.15.2.35 5 - rtemstoolkit/elftoolchain: Update to the latest version

Id	5
State	merged
Merged by	Amar Takhar
Merged at	2024-06-15T02:00:09.959Z
Assignee(s)	Chris Johns
Created	2024-06-14T08:32:05.824Z
Updated	2024-06-15T02:04:40.518Z
Milestone	6.1
Labels	tool::rtems-tools
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/5
Commit	9cd5599e468eaf847b690a4608906ca9bece10c7

Update to the latest `elftoolchain` version in ELF Sourceforge SVN Head.

The SVN ref is r4040-trunk

Close #6

Author: Chris Johns 2024-06-14T08:32:05.991Z

assigned to @chris

Author: Kinsey Moore 2024-06-15T01:46:26.519Z

This builds fine, but when run against the aarch64/xilinx_zynq_lp64_qemu hello.exe I get this error:

error: dwarf:debug_info_entry:attribute(string): Invalid attribute form [dwarf_attrval_string(107)]

Author: Chris Johns 2024-06-15T01:46:26.519Z

Thanks.

```
$ rtems-exeinfo `find build -name hello.exe`
RTEMS Executable Info 6.ed300ed60617-modified
/opt/work/chris/rtems/rt/rtems-tools.git/build/linkers/rtems-exeinfo␣
↪build/x86_64/amd64efi/testsuites/samples/hello.exe
exe: build/x86_64/amd64efi/testsuites/samples/hello.exe

Compilation:
Producers: 2
|  GNU AS 2.41: 5 objects
|  GNU C17 13.2.0 20230727 (RTEMS 6, RSB␣
↪f1a36b851161480ff0a0a1addb22fb44e102d339, Newlib 3cacedb): 282 objects
Common flags: 2
| -ftls-model=local-exec -march=x86-64
```

```
$ rtems-exeinfo build/aarch64/xilinx_zynqmp_lp64_zu3eg/testsuites/
↪samples/hello.exe
RTEMS Executable Info 6.ed300ed60617-modified
/opt/work/chris/rtems/rt/rtems-tools.git/build/linkers/rtems-exeinfo␣
↪build/aarch64/xilinx_zynqmp_lp64_zu3eg/testsuites/samples/hello.exe
exe: build/aarch64/xilinx_zynqmp_lp64_zu3eg/testsuites/samples/hello.exe

Compilation:
Producers: 2
|  GNU AS 2.42: 11 objects
|  GNU C17 13.3.0 20240521 (RTEMS 6, RSB␣
↪423d98d2058a7dac0921f9a13113b024696236b9, Newlib 730703b): 266 objects
Common flags: 7
| -ftls-model=local-exec -mno-outline-atomics -mcpu=cortex-a53 -mfix-
↪cortex-a53-835769 -mfix-cortex-a53-843419 -mlittle-endian -mabi=lp64
```

```
$ rtems-exeinfo `find build -name hello.exe`
RTEMS Executable Info 6.ed300ed60617-modified
/opt/work/chris/rtems/rt/rtems-tools.git/build/linkers/rtems-exeinfo␣
↪build/powerpc/mvme2700/testsuites/samples/hello.exe
exe: build/powerpc/mvme2700/testsuites/samples/hello.exe

Compilation:
Producers: 3
|  GNU AS 2.42: 6 objects
|  GNU C17 13.3.0 20240521 (RTEMS 6, RSB␣
↪423d98d2058a7dac0921f9a13113b024696236b9, Newlib 730703b): 354 objects
|  GNU AS 2.41: 1 objects
Common flags: 2
| -ftls-model=local-exec -mcpu=604
```

```
$ rtems-exeinfo `find build -name hello.exe`
RTEMS Executable Info 6.ed300ed60617-modified
/opt/work/chris/rtems/rt/rtems-tools.git/build/linkers/rtems-exeinfo␣
↪build/sparc/erc32/testsuites/samples/hello.exe
exe: build/sparc/erc32/testsuites/samples/hello.exe

Compilation:
Producers: 3
|  GNU AS 2.42: 5 objects
|  GNU C17 13.3.0 20240521 (RTEMS 6, RSB␣
↪8037d9ad83d74b5d5eee6ac13ead3580772609cd, Newlib 1ed1516): 272 objects
|  GNU AS 2.41: 3 objects
Common flags: 1
| -ftls-model=local-exec
```

```
$ rtems-exeinfo `find build -name hello.exe`
RTEMS Executable Info 6.ed300ed60617-modified
/opt/work/chris/rtems/rt/rtems-tools.git/build/linkers/rtems-exeinfo␣
```

(continues on next page)

(continued from previous page)

```
↪build/riscv/rv32imac/testsuites/samples/hello.exe
exe: build/riscv/rv32imac/testsuites/samples/hello.exe

Compilation:
Producers: 2
|  GNU AS 2.42: 5 objects
|  GNU C17 13.3.0 20240521 (RTEMS 6, RSB␣
↪8037d9ad83d74b5d5eee6ac13ead3580772609cd, Newlib 1ed1516): 291 objects
Common flags: 4
| -ftls-model=local-exec -mabi=ilp32 -misa-spec=20191213 -march=rv32imac
```

```
$ rtems-exeinfo `find build -name hello.exe`
RTEMS Executable Info 6.ed300ed60617-modified
/opt/work/chris/rtems/rt/rtems-tools.git/build/linkers/rtems-exeinfo␣
↪build/riscv/rv64imac/testsuites/samples/hello.exe
exe: build/riscv/rv64imac/testsuites/samples/hello.exe

Compilation:
Producers: 2
|  GNU AS 2.42: 5 objects
|  GNU C17 13.3.0 20240521 (RTEMS 6, RSB␣
↪8037d9ad83d74b5d5eee6ac13ead3580772609cd, Newlib 1ed1516): 287 objects
Common flags: 5
| -ftls-model=local-exec -mabi=lp64 -mcmodel=medany -misa-spec=20191213␣
↪-march=rv64imac
```

Author: Chris Johns 2024-06-15T01:46:26.538Z

resolved all threads

Author: Chris Johns 2024-06-15T01:47:23.655Z

added 1 commit

- 9cd5599e - rtemstoolkit/elftoolchain: Update to the latest

Compare with previous version

Author: Amar Takhar 2024-06-15T02:00:00.839Z

approved this merge request

Author: Chris Johns 2024-06-15T02:03:22.681Z

changed the description

Author: Chris Johns 2024-06-15T02:04:40.568Z

changed the description

3.15.2.36 4 - Fix Python 3.12 PEP-701

Id	4
State	merged
Merged by	Chris Johns
Merged at	2024-06-08T04:06:22.890Z
Assignee(s)	Amar Takhar
Created	2024-06-08T04:05:19.115Z
Updated	2024-06-08T04:06:24.627Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/4
Commit	ed300ed6061779ca6802b183e09d86e99649407d

Summary

Fix Python 3.12 PEP-701

Escapes are no longer allowed in strings.

Fixes #3

Author: Amar Takhar 2024-06-08T04:05:27.287Z

assigned to @amar

Author: Chris Johns 2024-06-08T04:06:04.500Z

approved this merge request

Author: Chris Johns 2024-06-08T04:06:15.797Z

added 2 commits

- 779d9312 - 1 commit from branch `rtems/tools:main`
- ed300ed6 - Fix Python 3.12 PEP-701

Compare with previous version

3.15.2.37 1 - Revert “linker/rap: Ignore relocation records with no section” (closed)

Id	1
State	closed
Closed by	xiaojun zheng
Created	2024-05-03T12:06:02.470Z
Closed	2024-05-09T01:32:43.171Z
Updated	2025-09-19T02:39:35.364Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/1
Commit	38bbbe52bf2a2636aa6c0c4efba40ec896c30a4a

Summary

Revert “linker/rap: Ignore relocation records with no section”

This reverts commit 0ad4aaafc20afcb5aacb7a82b0b3a8150b638975

The latest rtems-tools generated wrong RAP file, the object file become too small(elf,2184bytes==>rap,736bytes) and the RAP file loaded failed, error message like this:

```
load app.out error:offset past end of file: offset=736 size=736 error.
```

I reverted the rtl-rap.cpp commit (rtems-tools@0ad4aaafc20afcb5aacb7a82b0b3a8150b638975), the rap file can be loaded. At Chris’s suggestion, I found get_relocations(s) return all the count of relocation and write to rap file, but actual count is less, because the reloc with section=0 is ignored.

I tried to make the length fit the relocs write to rap file, but the file can not be loaded, it crashed. So the relocs(reloc.symsect == 0) can not be ignored.

The command line I used to create RAP file is:

```
rtems-ld -n -e appmain -s -O rap --base rtems.elf app.elf -o app.out
```

Close #4952 https://gitlab.rtems.org/rtems/rtos/rtems/-/issues/4952

Author: Chris Johns 2024-05-06T05:12:42.122Z

changed the description

Author: Chris Johns 2024-05-08T08:07:29.648Z

I think the change is right but I think there is a spot somewhere else in the RAP code that is not adjusting things and so the size is out.

Author: xiaojun zheng 2024-05-08T08:07:29.617Z

Is there a document about the RAP file format?

Author: Chris Johns 2024-05-08T08:09:18.077Z

Sorry there is not. It would be good to have.

Author: xiaojun zheng 2024-05-08T08:55:28.357Z

added 1 commit

- 2f7354df - rld: Recognize aarch64

Compare with previous version

3.15.2.38 14 - Draft: arm: added stdcxx.py to gdb/python to register C++ pretty-printers (closed)

Id	14
State	closed
Closed by	Chris Johns
Created	2024-06-27T16:40:06.928Z
Closed	2024-07-02T23:45:13.135Z
Updated	2025-09-19T02:39:16.710Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/14
Commit	0514213bb398cb7e14197dcc9ef60376f38150b5

Summary

Adds `stdcxx.py` as mentioned in rtems/tools/rtems-tools#5

Author: Suraj Kumar 2024-06-27T16:41:51.005Z

Note: The version number for GCC is still hardcoded until I figure out a way to use the RSB to get the version number. It is on my to-do for this week.

Author: Suraj Kumar 2024-06-27T19:48:22.234Z

Author: Chris Johns 2024-07-02T23:45:33.702Z

I am closing this MR because the script needs to be generated and installed when GCC is built as discussed in #5. This is part of GCC and not GDB.

3.15.2.39 44 - Update waf to 2.1.4 (closed)

Id	44
State	closed
Assignee(s)	Amar Takhar
Closed by	Gedare Bloom
Created	2024-11-20T23:39:41.396Z
Closed	2024-11-21T00:11:17.931Z
Updated	2024-11-21T00:11:17.917Z
Milestone	6.1
Labels	tool::waf
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/44
Commit	12a94b63506ad84ec1c4feed56d3ce2e85475d85

Summary

Update waf to 2.1.4

This syncs every waf binary together.

Fixes issues with building on Windows see

- https://gitlab.com/ita1024/waf/-/issues/2452

Updates rtems/rtos/rtems#5153

> **Author:** Amar Takhar 2024-11-20T23:39:41.625Z
>
> assigned to @amar
>
> **Author:** Gedare Bloom 2024-11-21T00:11:52.779Z
>
> Completed in !43

3.15.2.40 18 - Add pprinter.py for pretty-printer support (closed)

Id	18
State	closed
Closed by	Suraj Kumar
Created	2024-07-17T00:51:07.987Z
Closed	2024-08-18T07:18:36.227Z
Updated	2024-08-18T07:18:36.209Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems-tools/-/merge_requests/18
Commit	3228f15579e3e98e534ba7a112edb01e97d735fb

Summary

This MR adds a new file, `pprinter.py` to act as a layer that we can modify to add RTEMS pretty-printers as well as load the existing GCC printers. The `stdcxx.py` script it references is installed by the RSB at build time.

Author: Suraj Kumar 2024-08-18T06:41:03.587Z

marked this merge request as **ready**

Author: Chris Johns 2024-08-18T06:42:55.866Z

added 7 commits

- 56798c1e...478c0727 - 6 commits from branch `rtems/tools:main`
- 3228f155 - gdb/python: add new file pprinter.py to support RTEMS pretty-printers and load the GCC printers

Compare with previous version

Author: Chris Johns 2024-08-18T06:44:33.361Z

Please a license and a comment header about the file and the role it plays in loading GCC pretty printers.

3.16 RTEMS / Tools / RTEMS Waf

Go to *Issues* (page 3648) or *Merge Requests* (page 3651)

Issues Summary

6 - VERSION loading references bad code (page 3650)
3 - Spelling of network configuration wrong (page 3648)

Merge Requests Summary

12 - version: Fix the broken path code when reading VERSION (page 3651)
8 - python: Fix escapes reported by python 3.12 (page 3651)
7 - bsd: Fix spelling of configuration (page 3652)
6 - Application fixes for compiler flag handling (page 3652)
5 - Update URL to GitLab (page 3659)
4 - Update URL to GitLab (page 3658)
3 - Add syntax highlighting for shell (page 3658)
2 - Spellcheck. (page 3653)
1 - Convert README to Markdown (page 3657)

11 - version: Fix the broken path code when reading VERSION (closed) (page 3660)

3.16.1 Issues

3.16.1.1 3 - Spelling of network configuration wrong

Id	3
State	closed
Type	ISSUE
Author	Cedric Berger
Closed by	Kinsey Moore
Created	2024-08-13T15:13:10.806Z
Closed	2024-08-15T22:49:42.681Z
Updated	2025-09-19T01:02:12.481Z
Milestone	6.1
Labels	spellcheck
Link	https://gitlab.rtems.org/rtems/tools/rtems_waf/-/work_items/3
Merges	1

Configuration is spelt `configuraiton`

```
Cedrics-MBP:wks cedric$ cd rtems-libbsd/
Cedrics-MBP:rtems-libbsd cedric$ grep -R configuraiton .
Binary file ./__pycache__/waf_libbsd.cpython-312.pyc matches
./rtems_waf/rtems_bsd.py:            conf.fatal('network configuraiton \\'%s\\'␣
```

(continues on next page)

(continued from previous page)

```
↪not found' % (net_config))
./rtems_waf/rtems_bsd.py:            conf.fatal('network configuraiton \\'%s\\'␣
↪read failed' % (net_config))
./rtems_waf/rtems_bsd.py:                    conf.fatal('network configuraiton \\'
↪%s\\' ' + \\
./waf_libbsd.py:            bld.fatal('network configuraiton \\'%s\\' not found' %
./waf_libbsd.py:            bld.fatal('network configuraiton \\'%s\\' read failed
↪' %
./waf_libbsd.py:                    bld.fatal('network configuraiton \\'%s\\' ' +␣
↪\\
```

Author: Chris Johns 2024-08-15T22:35:04.616Z

changed title from **network configura{-iton-}** to **{+Spelling of +}network configura{+tion wrong+}**

Author: Chris Johns 2024-08-15T22:35:04.645Z

changed the description

Author: Chris Johns 2024-08-15T22:35:17.809Z

moved from rtems/rtos/rtems#5117

Author: Chris Johns 2024-08-15T22:42:37.529Z

mentioned in merge request !7

Author: Chris Johns 2024-08-15T22:50:10.059Z

cloned to rtems/pkg/rtems-libbsd#3

3.16.1.2 6 - VERSION loading references bad code

Id	6
State	closed
Type	ISSUE
Author	Chris Johns
Assignee(s)	Chris Johns
Closed by	Kinsey Moore
Created	2025-01-08T03:55:14.140Z
Closed	2025-01-14T03:05:56.212Z
Updated	2025-01-14T03:05:56.234Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems_waf/-/work_items/6
Merges	0

Loading the `VERSION` file in a release references bad path code. It looks like the code from taken from the RSB which has special host management.

Author: Chris Johns 2025-01-08T03:55:14.280Z

cloned from #5

Author: Chris Johns 2025-01-08T03:55:14.195Z

assigned to @chris

Author: Chris Johns 2025-01-08T03:55:42.580Z

Author: Chris Johns 2025-01-08T04:08:34.559Z

mentioned in merge request !11

Author: Chris Johns 2025-01-08T04:20:52.418Z

mentioned in merge request !12

Author: Kinsey Moore 2025-01-14T03:05:55.868Z

The associated MR has been merged.

3.16.2 Merge Requests

3.16.2.1 8 - python: Fix escapes reported by python 3.12

Id	8
State	merged
Merged by	Kinsey Moore
Merged at	2024-10-03T15:16:52.419Z
Assignee(s)	Chris Johns
Created	2024-10-03T09:51:44.513Z
Updated	2025-07-30T18:34:29.426Z
Milestone	6.1
Labels	tool::waf
Link	https://gitlab.rtems.org/rtems/tools/rtems_waf/-/merge_requests/8
Commit	3901b13722ca8291269e9ead48bc81b61fbbd21b

This cleans up the escapes reported by python 3.12

Author: Chris Johns 2024-10-03T09:51:44.761Z

assigned to @chris

Author: Kinsey Moore 2024-10-03T15:16:46.401Z

approved this merge request

Author: Kinsey Moore 2025-07-30T18:34:29.325Z

mentioned in issue #1

3.16.2.2 12 - version: Fix the broken path code when reading VERSION

Id	12
State	merged
Merged by	Kinsey Moore
Merged at	2025-01-08T04:21:54.715Z
Assignee(s)	Chris Johns
Created	2025-01-08T04:20:43.018Z
Updated	2025-01-08T04:21:56.005Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems_waf/-/merge_requests/12
Commit	a7e4feb1eb5c6e8c109e073cc440a32d0bf9ea39

Fix the broken path code when reading VERSION

Closes #6

Author: Chris Johns 2025-01-08T04:20:43.317Z

assigned to @chris

Author: Kinsey Moore 2025-01-08T04:21:45.776Z

approved this merge request

3.16.2.3 7 - bsd: Fix spelling of configuration

Id	7
State	merged
Merged by	Kinsey Moore
Merged at	2024-08-15T22:49:42.432Z
Assignee(s)	Chris Johns
Created	2024-08-15T22:42:34.684Z
Updated	2024-08-15T22:49:44.700Z
Milestone	6.1
Labels	spellcheck
Link	https://gitlab.rtems.org/rtems/tools/rtems_waf/-/merge_requests/7
Commit	bc81dc160b2a8fe18b01f9f94d269374b7d0514c

Fix spelling of configuration

Closes #3

Author: Chris Johns 2024-08-15T22:42:34.893Z

assigned to @chris

Author: Kinsey Moore 2024-08-15T22:49:37.861Z

approved this merge request

3.16.2.4 6 - Application fixes for compiler flag handling

Id	6
State	merged
Merged by	Amar Takhar
Merged at	2024-08-15T06:26:03.085Z
Assignee(s)	Chris Johns
Reviewer(s)	Amar Takhar
Created	2024-08-15T06:12:56.799Z
Updated	2024-08-15T06:26:04.756Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems_waf/-/merge_requests/6
Commit	2adf6e3476f77168c71673e46491c71ebaba9721

1. Copy CFLAGS into separate CXXFLAGS and ASFLAGS
2. Python was sharing the same flags which meant any C++ flags were seen in the CFLAGS
3. Add a configure option group incase there is not one.
4. Do not force a `config.inc` when configuring libbsd
5. Do not overwrite the compiler flags in BSD's configure

Author: Chris Johns 2024-08-15T06:12:56.932Z

requested review from @amar

Author: Chris Johns 2024-08-15T06:12:56.952Z

assigned to @chris

Author: Amar Takhar 2024-08-15T06:25:53.989Z

approved this merge request

3.16.2.5 2 - Spellcheck.

Id	2
State	merged
Merged by	Chris Johns
Merged at	2024-07-06T23:55:14.126Z
Assignee(s)	Amar Takhar
Created	2024-07-05T19:21:37.259Z
Updated	2024-08-10T00:40:16.880Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/tools/rtems_waf/-/merge_requests/2
Commit	d85551e1d1e575bd722a2a0654b8f358fbbf392c

Summary

Spellcheck.

Fix some spelling.

Author: Amar Takhar 2024-07-05T19:24:40.655Z

I know this includes the commit from !1 GitLab should resolve it after that is merged and the rebase happens as they are the same commit. I wonder if it'll resolve automatically it might.

Author: Amar Takhar 2024-07-05T19:24:45.931Z

assigned to @amar

Author: Joel Sherrill 2024-07-07T00:22:14.427Z

I think executables is still plural. You can build multiple.

Author: Amar Takhar 2024-07-07T00:22:14.427Z

This was a spellcheck MR when the others are in we can re-address it.

Author: Amar Takhar 2024-07-07T00:22:14.670Z

created #2 to continue this discussion

Author: Joel Sherrill 2024-07-07T00:22:14.873Z

We used the erc32 as the example for over two decades but the erc32 is now out of production and we switched to the leon3 for the Getting Started and GSoC Hello World. Perhaps it is time to switch to the leon3 here also.

Author: Amar Takhar 2024-07-07T00:22:14.873Z

This was a spellcheck MR when the others are in we can re-address it.

Author: Amar Takhar 2024-07-07T00:22:14.898Z

created #2 to continue this discussion

Author: Joel Sherrill 2024-07-07T00:22:15.065Z

Interesting that this references rtems 5 but 5 is still autoconf. Should this all be switched to 6? This change is directed at main which makes that seem like the right answer.

Author: Amar Takhar 2024-07-07T00:22:15.065Z

This was a spellcheck MR when the others are in we can re-address it.

Author: Amar Takhar 2024-07-07T00:22:15.089Z

created #2 to continue this discussion

Author: Joel Sherrill 2024-07-07T00:22:15.256Z

Again with rtems5.

Author: Amar Takhar 2024-07-07T00:22:15.256Z

This was a spellcheck MR when the others are in we can re-address it.

Author: Amar Takhar 2024-07-07T00:22:15.272Z

created #2 to continue this discussion

Author: Joel Sherrill 2024-07-07T00:22:15.430Z

More 5

Author: Amar Takhar 2024-07-07T00:22:15.430Z

This was a spellcheck MR when the others are in we can re-address it.

Author: Amar Takhar 2024-07-07T00:22:15.447Z

created #2 to continue this discussion

Author: Joel Sherrill 2024-07-07T00:22:15.614Z

rtems-examples has more waf application examples. Probably worth a reference. For more examples, . . .

Author: Amar Takhar 2024-07-07T00:22:15.614Z

This was a spellcheck MR when the others are in we can re-address it.

Author: Amar Takhar 2024-07-07T00:22:15.636Z

created #2 to continue this discussion

Author: Joel Sherrill 2024-07-06T23:07:50.273Z

That's a lot of changes for a "Spellcheck". :)

Author: Amar Takhar 2024-07-06T23:07:50.273Z

You missed my comment in the MR this is a sequential set of MRs. Look at !1 this MR includes the changes from !1 which will go away from this MR when that is merged.

Author: Amar Takhar 2024-07-06T23:07:50.273Z

If you go into the list of commits you'll see the changes in this MR:

- https://gitlab.rtems.org/rtems/tools/rtems_waf/-/merge_requests/2/diffs?commit_id=d85551e1d1e575bd722a2a0654b8f358fbbf392c

Author: Amar Takhar 2024-07-06T23:07:50.273Z

It's not possible for me to create this MR without that commit in it but it should go away I did this as a test to see if it would on it's own or if a 'rebase' would need to be done.

Author: Amar Takhar 2024-07-05T21:36:47.461Z

mentioned in merge request !1

Author: Amar Takhar 2024-07-06T23:07:59.173Z

resolved all threads

Author: Chris Johns 2024-07-06T23:55:06.824Z

approved this merge request

Author: Amar Takhar 2024-07-07T00:22:14.628Z

mentioned in issue #2

3.16.2.6 1 - Convert README to Markdown

Id	1
State	merged
Merged by	Chris Johns
Merged at	2024-07-06T23:54:25.671Z
Assignee(s)	Amar Takhar
Created	2024-07-04T22:10:35.547Z
Updated	2024-08-10T00:40:16.689Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/tools/rtems_waf/-/merge_requests/1
Commit	3e35a87cb2da66bdacd49c6aca5aa7e2aa56b2fb

Summary

I didn't do any formatting or changing this is just a conversion.

Author: Amar Takhar 2024-07-04T22:10:35.733Z

assigned to @amar

Author: Chris Johns 2024-07-06T23:08:26.463Z

Should the content be updated to gitlab in this MR?

Author: Amar Takhar 2024-07-06T23:08:26.463Z

No not in this I don't use `rtems_waf` I was just trying to convert it to MarkDown Im not comfortable making those changes.

Author: Amar Takhar 2024-07-05T19:24:40.873Z

mentioned in merge request !2

Author: Amar Takhar 2024-07-06T23:08:26.482Z

resolved all threads

Author: Chris Johns 2024-07-06T23:54:21.242Z

approved this merge request

3.16.2.7 4 - Update URL to GitLab

Id	4
State	merged
Merged by	Gedare Bloom
Merged at	2024-07-10T06:10:39.981Z
Assignee(s)	Amar Takhar
Created	2024-07-07T06:01:01.734Z
Updated	2024-08-10T00:40:04.095Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/tools/rtems_waf/-/merge_requests/4
Commit	ed428c849adfd599ee3322caecc0eac5169d1ef8

Summary

Update URL to GitLAb

Author: Amar Takhar 2024-07-07T06:01:01.890Z

assigned to @amar

Author: Amar Takhar 2024-07-10T05:41:50.739Z

added 3 commits

- 09f241d8...62e3fcee - 2 commits from branch `rtems/tools:main`
- ed428c84 - Update URL to GitLab.

Compare with previous version

Author: Gedare Bloom 2024-07-10T06:10:34.281Z

approved this merge request

3.16.2.8 3 - Add syntax highlighting for shell

Id	3
State	merged
Merged by	Amar Takhar
Merged at	2024-07-10T05:41:33.121Z
Assignee(s)	Amar Takhar
Created	2024-07-07T05:54:38.854Z
Updated	2024-08-10T00:40:03.922Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/tools/rtems_waf/-/merge_requests/3
Commit	62e3fcee5c13922ac43ff8c418cb64275a5c387d

Summary

Add syntax highlighting for shell

Also add some missed Python ones.

Author: Amar Takhar 2024-07-07T05:54:38.997Z

assigned to @amar

Author: Amar Takhar 2024-07-07T05:57:42.400Z

added 1 commit

- eccc95e1 - Add syntax highlighting for shell

Compare with previous version

Author: Gedare Bloom 2024-07-10T05:32:42.654Z

approved this merge request

Author: Amar Takhar 2024-07-10T05:41:15.855Z

added 2 commits

- d3ef287d - 1 commit from branch `rtems/tools:main`
- 62e3fcee - Add syntax highlighting for shell

Compare with previous version

3.16.2.9 5 - Update URL to GitLab

Id	5
State	merged
Merged by	Kinsey Moore
Merged at	2024-07-26T19:28:41.945Z
Assignee(s)	Amar Takhar
Created	2024-07-26T18:06:02.572Z
Updated	2024-07-26T19:28:42.945Z
Milestone	6.1
Labels	doc
Link	https://gitlab.rtems.org/rtems/tools/rtems_waf/-/merge_requests/5
Commit	26c6b74cbb7e25ab0cd1585e0545a301fd9cdf4f

Summary

Author: Amar Takhar 2024-07-26T18:06:03.086Z

assigned to @amar

Author: Kinsey Moore 2024-07-26T19:28:37.605Z

approved this merge request

3.16.2.10 11 - version: Fix the broken path code when reading VERSION (closed)

Id	11
State	closed
Assignee(s)	Chris Johns
Closed by	Chris Johns
Created	2025-01-08T04:08:24.193Z
Closed	2025-01-08T04:19:23.584Z
Updated	2025-01-08T04:19:23.512Z
Milestone	6.1
Link	https://gitlab.rtems.org/rtems/tools/rtems_waf/-/merge_requests/11
Commit	a7e4feb1eb5c6e8c109e073cc440a32d0bf9ea39

Fix the broken path code when reading VERSION

Closes #6

Author: Chris Johns 2025-01-08T04:08:24.540Z

assigned to @chris

Author: Chris Johns 2025-01-08T04:17:54.236Z

changed target branch from `main` to `6`

- genindex
- search