



## RTEMS - 4.11.2-rc3 Release Notes

05 April 2017

### RTEMS 4.11 Series Release Notes

These notes cover the dot releases:

4.11.2

4.11.1

4.11.0

## 4.11.2 (open)

### Statistics

Total	33
Fixed	25
Invalid	1
Works for me	0
Duplicate	0
Won't fix	5

### Distribution



### Summary

- #1523 gethostbyname is not reentrant.
- #2002 ioctl recursive perimeter lock driver deadlock vulnerability
- #2324 Documentation and quick start for the RSB
- #2388 [PATCH] [NFS client] Remove old CVS keywords
- #2401 ARMv7M: Default exception handler doesn't support FPU
- #2479 RTEMS Source Builder gets wrong version of rtems-tools for rtems4-11.
- #2499 RSB 4.11 broken on FreeBSD 10 with default prefix.
- #2622 FAT file corruption when pre-empted while appending to a file
- #2670 epiphany tools fail to build on 4.11
- #2708 □rtems-bsp shell script does not list the available BSPS□
- #2755 FAT mkdir() broken
- #2758 SDCard driver for QoriQ
- #2815 Add Preferred waf to top of various repositories
- #2827 rtems-bsps broken on 4.11 branch
- #2886 RTEMS version is wrong on 4.11 branch
- #2908 FAT filename comparison is broken
- #2913 RTEMS FAT32 formatter does not set the not dirty and no IO error bits
- #2914 termios: Race condition in raw input buffer handling
- #2915 termios: Potential infinite loop in canonical mode
- #2928 FAT filename comparison is broken while using the UTF-8 support
- #2929 FAT long file names across cluster boundaries may be broken
- #2934 FAT long file name padding is broken
- #2936 Deadlock in filesystem location management
- #2937 FAT race condition msdos\_dir\_read()
- #2939 FAT file name search may not consider long file names
- #2940 rtems-docs output and catalogue.xml version numbering is wrong.
- #2947 FreeBSD 11.0 check warnings for makeinfo and install-info
- #2948 ARM: Optimize IEEE-754 sqrt implementation
- #2950 doxygen does not install on sync.rtems.org
- #2952 Support a release candidates residing in an `rc` directory.
- #2953 Change Trac time format to absolute.
- #2955 Backport libdl fixes to the 4.11 branch.
- #2956 Backport rtems-tester qemu console fix.

### Details

Ticket	Resolution	Component	Reporter	Owner
#1523	wontfix	networking	Chris Johns	Chris Johns
Summary	gethostbyname is not reentrant.			
Description	The gethostbyname call uses global static data and therefore is not reentrant.			
#2002	wontfix	networking	Jeffrey Hill	Joel Sherrill
Summary	ioctl recursive perimeter lock driver deadlock vulnerability			
Description	<p>In summary, a generalized deadlock potential exists any time rtems_bsdnet_ioctl calls rtems_bsdnet_ifconfig which calls the driver, and the driver tries to release the bsd networking semaphore, but the lock count doesn't decrement to zero, so the lock is never released.</p> <p>What happened to me (when writing an Altera Triple Speed Ethernet Driver for NIOS2) was as follows (names here are slightly different than reality). Of course other scenarios are possible.</p> <p>user calls rtems_bsdnet_ioctl which takes bsd stack lock, it calls rtems_bsdnet_ifconfig which locks bsd stack recursively, it calls driver_ioctl function when setting IF_UP flag to true, it calls driver_begin_communicating and it discovers it is already communicating, it calls driver_stop_communicating which discovers that tx/rx threads are running, it calls bsd_locking_semaphore_release while waiting for the tx/rx threads to shutdown rip</p> <p>I fixed this of by changing to a noop if they set IF_UP flag and the driver is already up and running, but sometimes that might be less than robust because we are not forcing a restart of the auxiliary threads. Furthermore, if the user sets the UP flag to false then we cant avoid this issue; we will definitely need to release the lock when the driver threads are forced to exit?</p> <p>POTENTIAL FIX: Usually what is done is to make a rtems_bsdnet_ifconfig_nolock_private function and then call it form both rtems_bsdnet_ioctl and rtems_bsdnet_ifconfig; presumably the perimeter functions must lock only once on the way in, or in any case</p>			

thats a common convention with multi-threaded code.

On Jan 30, 2012, at 12:30 PM, Hill, Jeffrey O wrote:

From: Eric Norum Sent: Monday, January 30, 2012 11:21 AM To: Hill, Jeffrey O Cc: Till Straumann Subject: Re: rtems bsd network deadlock potential

The network mutex is to be taken whenever making the transition from 'user' code from 'kernel' code. I did this because the BSD kernel from which the networking code was lifted was, like many (all?) old UNIXes, non-reentrant. It's possible that over the years some code has been added to the IOCTL support that ends up calling a 'user' level routine from 'kernel' level which then calls some 'kernel' code again. This should be fixed. kernel code should never call user code -- just to avoid the nested mutex problem that Jeff is reporting. Perhaps some IOCTL routine need to be split up with a user-level wrapper that takes the mutex then calls the kernel level routine -- and that kernel level routine should be what any other kernel level code invokes.

I'm afraid that I don't have time to look at this now.

On Jan 30, 2012, at 9:30 AM, Hill, Jeffrey O wrote:

It could well be that the intention is that `rtems_bsdnet_ioctl()`

executes

atomically w/o the driver temporarily releasing the lock and doing communication. That could alter internal state in unintended ways.

Ok, maybe this is just part of the design, but I am left with some

doubts if this type of (taking the lock twice to prevent the state from changing while in the driver) enforcement policy is applied uniformly. It might even be that this is in place purely because of accidental inconsistencies in the way the lock is acquired on the way in.

Considering this further, isn't it quite routine and normal for the

driver to shutdown auxiliary threads (which take the lock) when inside the driver `ioctl` function if the user sets the UP flag to false? Presumably this can't be done reliably w/o releasing the lock in the driver?

Of course the RTEMS designers, who know all of the consequences will

need to decide. I am only identifying what appear to be issues when I see them.

Jeff

From: Till Straumann Sent: Monday, January 30, 2012 10:07 AM To: Hill, Jeffrey O Cc: Eric Norum Subject: Re: rtems bsd network deadlock potential

I see. However, I'm not sure if that is not a programming error in the driver. It could well be that the intention is that `rtems_bsdnet_ioctl()`

executes

atomically w/o the driver temporarily releasing the lock and doing communication. That could alter internal state in unintended ways.

T.

On 01/30/2012 10:58 AM, Hill, Jeffrey O wrote:

Hi Till,

What happened to me was as follows (names are slightly different than

reality), but of course other scenarios are possible.

`rtems_bsdnet_ioctl` calls (it locks), it calls `rtems_bsdnet_ifconfig` calls (it locks recursively), it calls `driver_ioctl` function (because IF\_UP flag is being set to true), it

calls

`driver_begin_communicating` (which discovers that it is already

communicating), it calls

`driver_stop_communicating` (which discovers that tx/rx threads are

running), it calls

`bsd_locking_semaphore_release` (while waiting for the tx/rx threads to

shutdown)

rip

I fixed this of course by changing to a noop if they set IF\_UP flag

and

the driver is already up and running, but sometimes that might be less robust because we are not forcing a restart of the auxiliary threads.

In summary, a generalized deadlock potential exists any time

`rtems_bsdnet_ioctl` calls `rtems_bsdnet_ifconfig` which calls the driver,

and

the driver tries to release the semaphore, but the lock count doesn't decrement to zero, so the lock is never released.

Usually what is done is to make a `rtems_bsdnet_ifconfig_nolock_private`

and then call it from both `rtems_bsdnet_ioctl` and

`rtems_bsdnet_ifconfig`;

the perimeter functions must lock only once on the way in.

Jeff

From: Till Straumann Sent: Friday, January 27, 2012 3:36 PM To: Hill, Jeffrey O Cc: Eric Norum Subject: Re: rtems bsd network deadlock potential

Maybe I'm missing something but AFAIK the networking semaphore is basically a mutex which you can take multiple times from the same thread.

Could you please explain in more detail?

on

```

T.
On 01/27/2012 04:28 PM, Hill, Jeffrey O wrote:
Hi Eric, Till,
FWIW, I noticed today that there is a situation where
rtems_bsdnet_ioctl
calls rtems_bsdnet_ifconfig, but both functions take the BSD
networking
semaphore resulting in a recursive reference counted lock. Therefore
if
the driver's implementation of ioctl calls rtems_bsdnet_event_receive there will be a deadlock (because the internal attempt to
unlock is silently unsuccessful). I will no-doubt try to come up with a
workaround
but perhaps the situation is somewhat precarious.
Is this serious enough that I should report a bug to the RTEMS bug
tracking system?
#0 ( rtems_bsdnet_event_receive(event_in=8, option_set=0, ticks=0,
event_out=0xa7a9f4) (/home/hill/nios2-rtems/rtems/rtems-4.11.0- /cpukit/libnetworking/rtems/rtems_glue.c:687)
#1 0x5f34 alt_tse_soft_tx_stop(pSoftSgdmaTx=0xb24084)
(/home/hill/nios2-
rtems/rtems/rtems-4.11.0- /c/src/lib/libbsp/nios2/neek/network/if_alttse.c:206)
#2 0x5fa8 alt_tse_soft_tx_destroy(pSoftSgdmaTx=0xb24084)
(/home/hill/nios2-rtems/rtems/rtems-4.11.0- /c/src/lib/libbsp/nios2/neek/network/if_alttse.c:216)
#3 0x8808 alt_tse_stop_comm(ifp=0xb23c3c) (/home/hill/nios2-
rtems/rtems/rtems-4.11.0- /c/src/lib/libbsp/nios2/neek/network/if_alttse.c:1554)
#4 0x88a8 alt_tse_start_comm(pParm=0xb23c3c) (/home/hill/nios2-
rtems/rtems/rtems-4.11.0- /c/src/lib/libbsp/nios2/neek/network/if_alttse.c:1576)
#5 0x8a90 alt_tse_start_comm_no_status(pParm=0xb23c3c)
(/home/hill/nios2-rtems/rtems/rtems-4.11.0- /c/src/lib/libbsp/nios2/neek/network/if_alttse.c:1651)
#6 0xe5a8 ether_ioctl(ifp=0xb23c3c, command=1, data=<value
optimized
out>) (/home/hill/nios2-rtems/rtems/rtems-4.11.0- /cpukit/libnetworking/net/if_ethersubr.c:838)
#7 0x8bc0 alt_tse_ioctl(ifp=0xb23c3c, cmmnd=2149607692,
data=0xb24648
"\210F\262") (/home/hill/nios2-rtems/rtems/rtems-4.11.0- /c/src/lib/libbsp/nios2/neek/network/if_alttse.c:1680)
#8 0x3272c in_ifinit(ifp=0xb23c3c, ia=0xb24648, sin=<value
optimized
out>, scrub=1) (/home/hill/nios2-rtems/rtems/rtems-4.11.0- /cpukit/libnetworking/netinet/in.c:480)
#9 0x331a0 in_control(so=<value optimized out>, cmd=2149607692,
data=0xa7aba0 "tse0", ifp=0xb23c3c) (/home/hill/nios2-
rtems/rtems/rtems-
4.11.0-/cpukit/libnetworking/netinet/in.c:312)
#10 0x2632c old_control(so=0x0, cmd=10987900, data=0xa7a9f4
"\034\252\247", ifp=<value optimized out>) (/home/hill/nios2- rtems/rtems/rtems-4.11.0-
/cpukit/libnetworking/kern/uipc_socket2.c:801)
#11 0xfcc8 ifioctl(so=0xb23e08, cmd=1, data=0xa7aba0 "tse0",
p=<value
optimized out>) (/home/hill/nios2-rtems/rtems/rtems-4.11.0- /cpukit/libnetworking/net/if.c:605)
#12 0x1c3e8 so_ioctl(iop=0xaf2544, command=1, buffer=<value
optimized out>) (/home/hill/nios2-rtems/rtems/rtems-4.11.0- /cpukit/libnetworking/rtems/rtems_syscall.c:713)
#13 ( rtems_bsdnet_ioctl(iop=0xaf2544, command=1, buffer=<value
optimized out>) (/home/hill/nios2-rtems/rtems/rtems-4.11.0- /cpukit/libnetworking/rtems/rtems_syscall.c:731)
#14 0x3093c ioctl(fd=<value optimized out>, command=1)
(/home/hill/nios2-rtems/rtems/rtems-4.11.0- /cpukit/libcsupport/src/ioctl.c:50)
#15 0x194b8 rtems_bsdnet_ifconfig(ifname=0x4afb4 "tse0",
cmd=2149607692, param=0xa7abe0) (/home/hill/nios2-rtems/rtems/rtems- 4.11.0-
/cpukit/libnetworking/rtems/rtems_glue.c:1114)
#16 0x19718 rtems_bsdnet_setup_interface(name=0x4afb4 "tse0",
ip_address=0x4afbc "128.165.34.102", ip_netmask=0x4afcc
"255.255.255.0")
(/home/hill/nios2-rtems/rtems/rtems-4.11.0- /cpukit/libnetworking/rtems/rtems_glue.c:879)
#17 0x19d88 rtems_bsdnet_setup() (/home/hill/nios2-
rtems/rtems/rtems-4.11.0-
/cpukit/libnetworking/rtems/rtems_glue.c:959)

```

```

#18 ( rtems_bsdnet_initialize_network() (/home/hill/nios2-
rtems/rtems/rtems-4.11.0-
/cpukit/libnetworking/rtems/rtems_glue.c:1018)
#19 0x360 Init(ignored=336840) (init.c:51) #20 0x3a268 _Thread_Handler() (/home/hill/nios2-rtems/rtems/rtems-
4.11.0-/cpukit/score/src/threadhandler.c:157)
#21 0x132c boot_card(cmdline=0xa74338 "DD\247") (/home/hill/nios2-
rtems/rtems/rtems-4.11.0- /c/src/lib/libbsp/nios2/nek/../../shared/bootcard.c:268)
#22 ( 0x00000000 in ??() (??:??)
Jeff
-- Eric Norum

```

-- Eric Norum

<b>#2324</b>	fixed	Documentation	punitvara	Chris Johns
Summary	Documentation and quick start for the RSB			
Description	<p><a href="https://ftp.rtems.org/pub/rtems/people/chrisj/source-builder/source-builder.html">https://ftp.rtems.org/pub/rtems/people/chrisj/source-builder/source-builder.html</a> In this guide 2.5. Distributing and Archiving A Build</p> <p>It would be better if</p> <p><b>\$ cd \$ cd development/rtems/src/rtems-source-builder/rtems/tar \$ tar --strip-components=3 -xjf rtems-4.11-sparc-rtems4.11-1.tar.bz2 instead of \$ cd \$ tar --strip-components=3 -xjf rtems-4.11-sparc-rtems4.11-1.tar.bz2</b></p> <p><b>because cd leads to home directory and no tar file actually will be created at home directory .Every time it will be created at development/rtems/src/rtems-source-builder/rtems/tar and for extract the file ,user need migrate to this directory.</b></p>			
<b>#2388</b>	fixed	filesystem	Nick Withers	Nick Withers <nick.withers@...>
Summary	[PATCH] [NFS client] Remove old CVS keywords			
Description	The NFS client code in 4.11 and master at least contains CVS keywords that are printed to screen and no longer expanded in the post-CVS world			
<b>#2401</b>	fixed	cpukit	Martin Galvan	Sudarshan Rajagopalan <sudarshan.rajagopalan@...>
Summary	ARMv7M: Default exception handler doesn't support FPU			
Description	<p>On exception entry, <code>_ARMV7M_Exception_default</code> stores the previous Stack Pointer in a <code>CPU_Exception_frame</code>. The SP can be MSP or PSP, depending on the mode in which the exception was taken. To know this, we must check the value of LR.</p> <p>Right now the code checks whether it should store MSP or PSP by comparing LR to -3 (0xFFFFFDD). However, this doesn't work if we're using an FPU since the error code would be either 0xFFFFFEE9 or 0xFFFFFED. The result is that we always end up selecting MSP.</p> <p>This bug was found by Sudarshan Rajagopalan in the RTEMS git master.</p>			
<b>#2479</b>	fixed	tools	Mike Westfall	
Summary	RTEMS Source Builder gets wrong version of rtems-tools for rtems4-11.			
Description	When building the tool chain for RTEMS 4.11, RSB gets the 4.12 version of rtems-tools.			
<b>#2499</b>	invalid	GDB	Chris Johns	
Summary	RSB 4.11 broken on FreeBSD 10 with default prefix.			
Description	Building gdb-7.9 with the default prefix on FreeBSD results in iconv not being found and used when linking.			
<b>#2622</b>	fixed	filesystem	Stella Laurenzo	Sebastian Huber
Summary	FAT file corruption when pre-empted while appending to a file			
Description	<p>We've been circling around some odd problems for a while where some of our files end up with garbage sequences in them. I'll save you the hand-wringing diagnostic steps, and jump to the conclusion: when opening and appending to an existing file, sometimes a cluster gets written that contains data from another concurrent write operation (to a different file). An isolated repro is hard to get, but we wedged our code into a state where we can repro it 100% of the time.</p> <p>I traced the problem down to this sequence (introduced in commit <a href="https://github.com/rtems/rtems/commit/42a22f0824c4618b864582804ce1440b548a462f">42a22f0824c4618b864582804ce1440b548a462f</a> - 2012):</p> <p>In <code>fat_file_write_fat32_or_non_root_dir</code>:</p> <pre> if (file_cln_initial &lt; file_cln_cnt)     overwrite_cluster = true; </pre> <p>Triggers (in <code>fat_block_write</code>):</p> <pre> if ( overwrite_block        (bytes_to_write == fs_info-&gt;vol.bytes_per_block)) {     rc = fat_buf_access(fs_info, sec_num, FAT_OP_TYPE_GET, &amp;blk_buf); } else {     rc = fat_buf_access(fs_info, sec_num, FAT_OP_TYPE_READ, &amp;blk_buf); } </pre> <p>I have a task that wakes up every 5s, opens the file for append, and writes some hundreds of bytes. With a little bit of logging, we find that each operation that does not extend past the first cluster (4KiB) takes the <code>FAT_OP_TYPE_READ</code> branch. Then as soon as the first write to the second file cluster is made (which is usually an overflow from a user-level write that spanned the 4K boundary), all future writes take the <code>FAT_OP_TYPE_GET</code> branch.</p> <p>I was convinced for a while that perhaps some proximate code of ours was corrupting some bit of accounting, but upon reading through what this is doing, I cannot wrap my head around how the intention was correct. The "if (<code>file_cln_initial &lt; file_cln_cnt</code>)" condition could be unpacked to:</p>			

```
if (fat_fd->map.file_cln < (seek_disk_cln - start_disk_cln))
```

I don't see how this arithmetic is correct. We are comparing a file cln to the delta between two disk clns, which unless if I am missing something, is meaningless. Also, we are getting the file cln from the cache, the interpretation of which depends entirely on the operation that took place when it was queried (which is in fat\_file\_write).

I think the only way this makes sense is if this check were instead passing if we are writing to the last cluster of the file at offset 0 within the cluster. At any other time, this needs to be a read-modify-write because we can't just overwrite the cluster. I'm not sure how to express this, though.

It turns out that for many operations without considering pre-emption, the buffer you get back with fat\_buf\_access(FAT\_OP\_TYPE\_GET) is populated with the cluster data. When writing sequentially to a file from a single task, this seems to hold together. However, being pre-empted by a higher priority writer may cause some buffer churn and will result in writing a cluster that has the beginning corrupted. We see this as periodic corruption, the beginning of which is always aligned to a 4KiB file offset boundary.

If we hard-code overwrite\_cluster to always be false, we do not experience corruption (assuming some performance penalty in these corner cases).

Can someone either confirm or explain what this code is (supposed to be) doing? I'm not ruling out that we are causing a problem here, but right now I am leaning to a defect in the filesystem.

<b>#2670</b>	wontfix	RSB	Joel Sherrill	Chris Johns
Summary	epiphany tools fail to build on 4.11			
Description	<p>Looks like an incorrect hash but could be something more subtle.</p> <pre>script: 80: build_top=\$(pwd) script: 81: gcc_source=epiphany-gcc-f7051762470c42ce7f01baa7edeb113d51c7dd72 script: 82: source_dir_gcc=\${gcc_source} source setup: epiphany-rtems4.11-gcc-4.9.1-newlib-ef23a12ff8f840cc571e47870cd5f4ad6bca4553-x86_64-linux-gnu-1: source gcc -q -n \${gcc_source} making dir: /home/joel/rtems-4.11-work/rtems-source-builder/rtems/sources download: <a href="https://github.com/adapteva/epiphany-gcc/archive/f7051762470c42ce7f01baa7edeb113d51c7dd72.zip">https://github.com/adapteva/epiphany-gcc/archive/f7051762470c42ce7f01baa7edeb113d51c7dd72.zip</a> -&gt; sources/f7051762470c42ce7f01baa7edeb113d51c7dd72.zip download: <a href="https://github.com/adapteva/epiphany-gcc/archive/f7051762470c42ce7f01baa7edeb113d51c7dd72.zip">https://github.com/adapteva/epiphany-gcc/archive/f7051762470c42ce7f01baa7edeb113d51c7dd72.zip</a> -&gt; sources/f7051762470c42ce7f01baa7edeb113d51c7dd72.zip</pre> <p>redirect: <a href="https://codeload.github.com/adapteva/epiphany-gcc/zip/f7051762470c42ce7f01baa7edeb113d51c7dd72">https://codeload.github.com/adapteva/epiphany-gcc/zip/f7051762470c42ce7f01baa7edeb113d51c7dd72</a>  redirect: <a href="https://codeload.github.com/adapteva/epiphany-gcc/zip/f7051762470c42ce7f01baa7edeb113d51c7dd72">https://codeload.github.com/adapteva/epiphany-gcc/zip/f7051762470c42ce7f01baa7edeb113d51c7dd72</a></p> <p>checksums: f7051762470c42ce7f01baa7edeb113d51c7dd72.zip: e089e67261c96c746e685bba018581f0 =&gt; c43c2e631418e932e2048607b694e99a warning: checksum error: f7051762470c42ce7f01baa7edeb113d51c7dd72.zip error: checksum failure file: sources/f7051762470c42ce7f01baa7edeb113d51c7dd72.zip</p> <p>See error report: <a href="#">rsb-report-epiphany-rtems4.11-gcc-4.9.1-newlib-ef23a12ff8f840cc571e47870cd5f4ad6bca4553-x86_64-linux-gnu-1.txt</a></p> <p>Build Set: Time 0:08:36.503865</p>			

<b>#2708</b>	fixed	General	koreny	Chris Johns
Summary	rtems-bsp shell script does not list the available BSPS			
Description	<p>It seems rtems-bsps does not work properly</p> <pre>loadrun@debian:~/code/rtems/rtems/4.11.0-rc3/rtems-4.11.0-rc3\$ sh rtems-bsps find: paths must precede expression: 5 Usage: find [-H] [-L] [-P] [-Olevel] [-D help tree search stat rates opt exec] [path...] [expression]</pre> <p>RTEMS 4.11</p> <p>Architectures: 0 BSP Count: 0</p> <pre>loadrun@debian:~/code/rtems/rtems/4.11.0-rc3/rtems-4.11.0-rc3\$ uname -a Linux debian 3.16.0-4-686-pae #1 SMP Debian 3.16.7-ckt25-1 (2016-03-06) i686 GNU/Linux</pre>			

<b>#2755</b>	fixed	filesystem	snob-wolpike	Sebastian Huber
Summary	FAT mkdir() broken			
Description	<p>FAT implementation in RTEMS incorrectly create directories. Reproducing is extremely simple:</p> <ul style="list-style-type: none"> <li>Run any application using 'mkdir()' on mounted FAT partition.</li> <li>Run fsck under any operating system (Linux, MacOSX, Windows)</li> <li>You will get smth like this:</li> </ul> <pre>sudo fsck_msdos /dev/rdisk3s1 ** /dev/rdisk3s1 ** Phase 1 - Preparing FAT ** Phase 2 - Checking Directories Directory /0 has size != 0 Correct? [yn]</pre> <p>Both 4.11 and 4.12 have this bug.</p>			

<b>#2758</b>	wontfix	bsps	snob-wolpike	
Summary	SDCard driver for QoriQ			
Description	<p>SDCard driver for QoriQ CPU family. Tested on P2020, Kontron COMe-cP2020 board.</p> <p>Usage example:</p> <pre>bsp_register_esdhc_memcard(); rc = rtems_bdpartment_register_from_disk("/dev/memcard");</pre>			

<b>#2815</b>	fixed	Code	Joel Sherrill	Chris Johns
Summary	Add Preferred waf to top of various repositories			
Description	The proper version of waf needs to be placed at the top of each repo. This is missing from at least rtems-libbsd.			

<b>#2827</b>	fixed	General	Joel Sherrill	Chris Johns
Summary	rtems-bsps broken on 4.11 branch			
Description	Looks like at least this patch was not backported:			

Descripci on	commit <a href="#">8aa75d0cb18c25fab2078a7641bd823bf0e93999</a> Author: Chris Johns <chrisj@...> Date: Wed Jul 6 13:01:39 2016 +1000 Config (.cfg) files are only valid if deeper than 5.			
<b>#2886</b>	won't fix	General	Sebastian Huber	Sebastian Huber
Summar y	Probably worth a double check to ensure that the patch from Pavel to remove GNU find dependencies is also on the 4.11 branch. RTEMS version is wrong on 4.11 branch			
Descripci on	<pre>cat <code>find -name version.m4</code> AC_DEFUN([RTEMS_VERSIONING], m4_define([_RTEMS_VERSION],[4.10.99.0])) m4_define([_RTEMS_API],[4.11]) AC_DEFUN([RTEMS_VERSIONING], m4_define([_RTEMS_VERSION],[4.10.99.0])) m4_define([_RTEMS_API],[4.11]) AC_DEFUN([RTEMS_VERSIONING], m4_define([_RTEMS_VERSION],[4.10.99.0])) m4_define([_RTEMS_API],[4.11]) AC_DEFUN([RTEMS_VERSIONING], m4_define([_RTEMS_VERSION],[4.10.99.0])) m4_define([_RTEMS_API],[4.11])</pre>			
<b>#2908</b>	fixed	filesystem	Sebastian Huber	Sebastian Huber
Summar y	FAT filename comparison is broken			
Descripci on	For a filename match the entry must match without anything remaining.			
<b>#2913</b>	fixed	filesystem	Sebastian Huber	Sebastian Huber
Summar y	RTEMS FAT32 formatter does not set the not dirty and no IO error bits			
Descripci on	On FAT12 and FAT32 the FAT table entry 1 contains one bit to indicate that the filesystem is not dirty and one bit that no IO error occurred. Set these bits in the formatter to prevent a warning if mounted on Windows.			
<b>#2914</b>	fixed	cpukit	Sebastian Huber	Sebastian Huber
Summar y	termios: Race condition in raw input buffer handling			
Descripci on	Use the device lock to protect the raw input buffer management, e.g. tail, head and buffer content updates.			
<b>#2915</b>	fixed	cpukit	Sebastian Huber	Sebastian Huber
Summar y	termios: Potential infinite loop in canonical mode			
Descripci on	In canonical mode, the raw input buffer or the canonical buffer may overflow without an end of line. Avoid an infinite loop in this case.			
<b>#2928</b>	fixed	filesystem	Sebastian Huber	Sebastian Huber
Summar y	FAT filename comparison is broken while using the UTF-8 support			
Descripci on	The handling of a maximum 8.3 short file name is broken while using the UTF-8 support. A simple "touch txtvsbin.txt" doesn't work.			
<b>#2929</b>	fixed	filesystem	Sebastian Huber	Sebastian Huber
Summar y	FAT long file names accross cluster boundaries may be broken			
Descripci on	The procedure to create a long file name directory entry may not work correctly in case a cluster boundary is crossed. Simplify <code>msdos_add_file()</code> to avoid a potential issue.			
<b>#2934</b>	fixed	filesystem	Sebastian Huber	Sebastian Huber
Summar y	FAT long file name padding is broken			
Descripci on	In <code>msdos_add_file()</code> the padding of long file names with <code>0xff</code> is broken. This leads to problems on some Windows systems.			
<b>#2936</b>	fixed	filesystem	Sebastian Huber	Sebastian Huber
Summar y	Deadlock in filesystem location management			
Descripci on	Always perform a deferred location release to avoid a deadlock on the file system instance locks, for example during a <code>chdir()</code> .			
<b>#2937</b>	fixed	filesystem	Sebastian Huber	Sebastian Huber
Summar y	FAT race condition <code>msdos_dir_read()</code>			
Descripci on	Obtain file system instance lock before member access.			
<b>#2939</b>	fixed	filesystem	Sebastian Huber	Sebastian Huber
Summar y	FAT file name search may not consider long file names			
Descripci on	Do not use our long file name entry count to optimize the file name search. The Unicode comparison must be taken into account.			
<b>#2940</b>	fixed	Documentation	Chris Johns	Chris Johns
Summar y	rtems-docs output and catalogue.xml verison numbering is wrong. The version number management in <code>rtems-docs.git</code> is mixed up and it is not possible to embed a suitable release number in the release build of the documentation.			
Descripci on	Remove the version and release from each doc's <code>conf.py</code> and move it into the <code>common/waf.py</code> support. Provide a command line option <code>--release</code> to specify the release string. Default the version to the branch number, eg <code>4.11 (branch)</code> .			
<b>#2947</b>	fixed	RSB	Chris Johns	Chris Johns
Summar y	FreeBSD 11.0 check warnings for <code>makeinfo</code> and <code>install-info</code>			

Description	These have moved and the check needs to know.			
#2948	fixed	tools	Sebastian Huber	Sebastian Huber
Summary	ARM: Optimize IEEE-754 sqrt implementation			
Description	Use the vsqrt.f64 and vsqrt.f32 instructions if available. <a href="https://sourceware.org/git/gitweb.cgi?p=newlib-cygwin.git;a=commit;h=baf32fb85fd6ef5e3e5975a357a40de72dc92e15">https://sourceware.org/git/gitweb.cgi?p=newlib-cygwin.git;a=commit;h=baf32fb85fd6ef5e3e5975a357a40de72dc92e15</a>			
#2952	fixed	RSB	Chris Johns	Chris Johns
Summary	Support a release candidates residing in an <code>rc</code> directory.			
Description	Update the RSB to look for release candidate packages in an <code>rc</code> directory. This removes these packages from the main release directory and stops them cluttering the main release directory keeping the focus on the releases.			
#2955	fixed	libdl	Chris Johns	chrisj@...
Summary	Backport libdl fixes to the 4.11 branch.			
Description	Back port the patches from tickets <a href="#">#2754</a> and <a href="#">#2767</a> to the 4.11 branch.			
#2956	fixed	testing	Chris Johns	Chris Johns
Summary	Backport rtems-tester qemu console fix.			
Description	Backport Ric's fix to the qemu console: <a href="https://git.rtems.org/rtems-tools/commit/tester/rtems/testing/qemu.cfg?id=92935ed1a3b5cefa37d7ee5701276cd8383e170e">https://git.rtems.org/rtems-tools/commit/tester/rtems/testing/qemu.cfg?id=92935ed1a3b5cefa37d7ee5701276cd8383e170e</a>			

Last modified on Mar 23, 2017, 4:14:07 AM

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4.11 4.11.2 release



## 4.11.1 (17 November 2017)

### Statistics

Total	59
Fixed	55
Invalid	1
Works for me	0
Duplicate	1
Won't fix	2

### Distribution

defect		51 / 51
enhancement		5 / 5
task		3 / 3

### Summary

- #2119 Could the software be downloaded at the beginning?
- #2121 CVS command failure clean up.
- #2124 Strict order mutex introduces unbounded priority inversion
- #2243 c/src/lib/libbsp/arm/nds/libfat/source/directory.c:768: possible bad compare ?
- #2274 Enable libgomp build in GCC
- #2286 cpustdatomic.h on 16 and 64 bit architectures
- #2287 RTEMS printf warnings - newlib's inttypes.h and gcc's newlib-stdint.h
- #2298 sptls01 fails on sis
- #2309 RSB get stuck building: expat-2.1.0-x86\_64-w64-mingw32-1
- #2312 rtems-tools built in RSB on Linux fails to install
- #2317 fsseeko01 invalid on some architectures
- #2318 Wrong alignment of ARM exception frame
- #2326 Or1k bsp not supported for c++ usage
- #2328 \_CORE\_message\_queue\_Insert\_message() not ISR proof
- #2329 or1k Linking error on C++ tests
- #2332 rtemstools cannot be built by RSB under MinGW32
- #2345 BSP spec file error.
- #2358 Interrupt latency problem in \_POSIX\_Timer\_Insert\_helper()
- #2364 pc386 build fails
- #2369 [PowerPC Book E] Invalid mftb instruction in \_CPU\_Counter\_read()
- #2373 PowerPC BSPs that do not build
- #2374 RSB builds 3rd party packages as Canadian Cross (Cxc) packages
- #2378 ampolish3 script can't always find perl
- #2379 Ensure ada-tests build
- #2380 Incorrect title for C User's Guide in info output
- #2384 [PATCH] [NFS client] Respect 2^32 - 1 B NFSv2 maximum file size
- #2402 pthread\_cancel() invalidates the thread identifier
- #2405 CppCheck errors being reported throughout the code
- #2410 rtems\_dhcp.c fails to compile ("free" requires an extra argument)
- #2411 dumpbuf.c compiles with warnings
- #2416 Beaglebone: bsp.h missing clobber in inline assembly.
- #2418 rtems\_waf: SMP support is broken
- #2435 gpio functions in bsp name improvement
- #2437 if pax is not found by configure, the tests fail to build un-gracefully.
- #2438 ARM cache problem after libdl load
- #2440 rtems\_waf: Install is broken for version != 4.11
- #2465 Update Hello World Instructions to include MSYS2
- #2495 RSB 4.11 tool build broken
- #2497 Beaglebone Black: rtems\_gpio\_bsp\_disable\_interrupt disables all the GPIO interrupts
- #2505 beagle sdcard.sh has hard-coded rtems arm-rtems4.11-objcopy
- #2508 Remove LICENSE.WEBSERVER
- #2511 WorkSpace wiki page
- #2512 RTEMSReferences automatically deleting content
- #2525 RSB Python scripts may refer to Python3
- #2535 Shell: printf() format specifiers do not match parameter types
- #2579 Add per-section compilation and linking support to powerpc/motorola\_powerpc
- #2589 Update Applications Ada User's Guide
- #2594 Update POSIX 1003.1 Compliance Guide
- #2595 Update Filesystem Design Guide
- #2645 RSB qemu bset issues and failure
- #2646 glib cfg file is missing hash. Fails in release mode
- #2721 sem\_init() does not honour SEM\_VALUE\_MAX
- #2731 rtems/c/src/lib/libbsp/arm/raspberrypi/console/console\_select.c:98]: (warning) Found calculation inside sizeof().
- #2756 MSDOS\_MAX\_DIR\_LENGTH typo
- #2772 Enhancement for more general real-time model
- #2785 ioctl extension for termios
- #2801 Invalid configuration option used in virtex bsp headers
- #2812 Remove Texinfo Documentation
- #2813 4.11.0 has incorrect version information

### Details

Ticket	Resolution	Component	Reporter	Owner
<b>#2119</b>	fixed	Code	cynt6007	Chris Johns
Summary	Could the software be downloaded at the beginning?			
Description	I really appreciate having the RTEMS Source Builder! Could we change the software to download first, then build? If we did that, then we would not be tied to the internet for the rest of the build... Thanks!			
<b>#2121</b>	wontfix	Code	Chris Johns	Chris Johns
Summary	CVS command failure clean up.			
Description	If a CVS checkout command fails it is best to clean up the directory or at least determine the state of the directory before a checkout. Better error report to the user could also help.			
<b>#2124</b>	fixed	cpukit	Gedare	Gedare
Summary	Strict order mutex introduces unbounded priority inversion			
Description	The option to ENABLE_STRICT_ORDER_MUTEX is not implemented correctly. It can introduce an unbounded priority inversion in certain circumstances. See <a href="http://www.rtems.com/ml/rtems-users/2009/may/msg00093.html">http://www.rtems.com/ml/rtems-users/2009/may/msg00093.html</a> and the spsem02 test case <a href="http://www.rtems.org/pipermail/rtems-devel/2013-May/003154.html">http://www.rtems.org/pipermail/rtems-devel/2013-May/003154.html</a>			
<b>#2243</b>	fixed	General	David Binderman	
Summary	c/src/lib/libbsp/arm/nds/libfat/source/directory.c:768: possible bad compare ?			
Description	[rtems/c/src/lib/libbsp/arm/nds/libfat/source/directory.c:768]: (warning) Char literal compared with pointer 'tmpCharPtr'. Did you intend to dereference it? <pre>while ((tmpCharPtr != '\0') &amp;&amp; (j &lt; 12)) {</pre>			
<b>#2274</b>	fixed	GCC	Sebastian Huber	Sebastian Huber
Summary	Enable libgomp build in GCC			
Description	libgomp is the support library for OpenMP code emitted by GCC. Adding support for RTEMS needs roughly the following steps: <ul style="list-style-type: none"> <li>• Move &lt;semaphore.h&gt; header file from RTEMS to Newlib. Due to license issue use the one provided by FreeBSD and modify it accordingly.</li> <li>• Add Autoconf code to detect presence of Newlib &lt;semaphore.h&gt;.</li> <li>• Add RTEMS tweaks to libgomp configure script.</li> <li>• Add RTEMS specific link-time configuration to select a special memory allocator for libgomp.</li> <li>• Add ability to control thread scheduler, priority, stack size, etc. via application configuration options/handler.</li> <li>• Add standard OpenMP tests to RTEMS testsuite.</li> <li>• Add documentation to user manual.</li> <li>• Do performance tests.</li> <li>• Add dedicated low-overhead barriers.</li> </ul>			
<b>#2286</b>	fixed	General	Joel Sherrill	Gedare
Summary	cpustdatomic.h on 16 and 64 bit architectures			
Description	Gedare.. sending this one to you since I think you will have a quick solution to this based on your sparc64 porting experience. This warning occurs 1908 times in the build of the two sparc64 BSPs: <pre>../cpukit/../../../../usiii/lib/include/rtems/score/cpustdatomic.h: In function '_CPU_atomic_Fetch_sub_ptr': ../cpukit/../../../../usiii/lib/include/rtems/score/cpustdatomic.h:374:10: warning: cast to pointer from integer of different size [-Wint-to-pointer-cast] return (void *) val;</pre> It also occurs on the m32c/m32csim and h8300/h8sxsim but not h8300/h8sim. It would clean up the build logs a lot to get rid of it.			
<b>#2287</b>	fixed	Newlib	Joel Sherrill	Joel Sherrill
Summary	RTEMS printf warnings - newlib's inttypes.h and gcc's newlib-stdint.h			
Description	This is a ticket to track the thread and proposed patch here: <a href="https://sourceware.org/ml/newlib/2014/msg00804.html">https://sourceware.org/ml/newlib/2014/msg00804.html</a> There is an inconsistency between newlib's inttypes.h and gcc's newlib-stdint.h which makes it impossible to resolve some printf() warnings across all targets. The solution is to make newlib-stdint.h use the same logic as glibc-stdint.h (which the patch does) or use per-architecture conditionals in newlib's inttypes.h to detect the inconsistencies and define the correct PRIxxx types. I would like to see this resolved before 4.11 but will let it slide until 4.11.1.			
<b>#2298</b>	fixed	General	Joel Sherrill	Sebastian Huber
Summary	sptls01 fails on sis			
Description	This fails on sis. Marking for milestone 4.11 until Sebastian gets a chance to look at it and decide if this should work. Starting program: /users/joel/rtems-4.11-work/b-sis/sparc-rtems4.11/c/sis/testsuites/sptestests/sptls01/sptls01.exe * BEGIN OF TEST SPTLS 1 * TLS item = 0 ..../rtems/c/src/../../../../testsuites/sptestests/sptls01/init.c: 36 tls_item == expected [Inferior 1 (process 42000) exited normally]			
<b>#2309</b>	fixed	RSB	Cesar Perez	
Summary	RSB get stuck building: expat-2.1.0-x86_64-w64-mingw32-1			
Description	When running: "\$ ./source-builder/sb-set-builder --log=1-sparc.txt --prefix=\$HOME/development/rtems/4.11 4.11/rtems-sparc" the			

execution get stuck building: expat-2.1.0-x86\_64-w64-mingw32-1 The following errors are indicated in config.log: gcc: error: unrecognized command line option '-V' gcc: fatal error: no input files compilation terminated. gcc: error: unrecognized command line option '-qversion' gcc: fatal error: no input files compilation terminated.

**#2312** fixed General Chris Johns Chris Johns

Summary rtems-tools built in RSB on Linux fails to install

Recently I have received reports of RTEMS Tools not installing when built inside the RSB. SO far I have only received these reports on Linux. The logs show waf fails to install with an error message similar to:

```
+ install /users/joel/rtems-4.11-work/rtems-source-builder/rtems/build/tmp/rtems-tools-HEAD-1-root-joel/users/joel/rtems-4.11-work/tools/bin/rtems-test (from tester/rtems-test)
+ install /users/joel/rtems-4.11-work/rtems-source-builder/rtems/build/tmp/rtems-tools-HEAD-1-root-joel/users/joel/rtems-4.11-work/tools/share/rtems/tester/config/base.cfg (from tester/config/base.cfg)
+ install /users/joel/rtems-4.11-work/rtems-source-builder/rtems/build/tmp/rtems-tools-HEAD-1-root-joel/users/joel/rtems-4.11-work/tools/share/rtems/tester/config/checks.cfg (from tester/config/checks.cfg)
Waf: Leaving directory `./users/joel/rtems-4.11-work/rtems-source-builder/rtems/sources/git/rtems-tools.git/build'
Build failed
Traceback (most recent call last):
  File "/users/joel/rtems-4.11-work/rtems-source-builder/rtems/sources/git/rtems-tools.git/.waf-1.7.16-9ca17eb492c97b689870b4ff9db75880/waflib/Task.py", line 123, in process
    ret=self.run()
  File "/users/joel/rtems-4.11-work/rtems-source-builder/rtems/sources/git/rtems-tools.git/.waf-1.7.16-9ca17eb492c97b689870b4ff9db75880/waflib/Task.py", line 47, in run
    return m1(self)
  File "/users/joel/rtems-4.11-work/rtems-source-builder/rtems/sources/git/rtems-tools.git/.waf-1.7.16-9ca17eb492c97b689870b4ff9db75880/waflib/Build.py", line 460, in run
    return self.generator.exec_task()
  File "/users/joel/rtems-4.11-work/rtems-source-builder/rtems/sources/git/rtems-tools.git/.waf-1.7.16-9ca17eb492c97b689870b4ff9db75880/waflib/Build.py", line 476, in exec_install_files
    self.generator.bld.do_install(y.abspath(),destfile,self.chmod)
  File "/users/joel/rtems-4.11-work/rtems-source-builder/rtems/sources/git/rtems-tools.git/.waf-1.7.16-9ca17eb492c97b689870b4ff9db75880/waflib/Build.py", line 517, in do_install
    shutil.copy2(src,tgt)
  File "/usr/lib64/python2.7/shutil.py", line 131, in copy2
    copystat(src, dst)
  File "/usr/lib64/python2.7/shutil.py", line 98, in copystat
    os.utime(dst, (st.st_atime, st.st_mtime))
OSError: [Errno 2] No such file or directory: '/users/joel/rtems-4.11-work/rtems-source-builder/rtems/build/tmp/rtems-tools-HEAD-1-root-joel/users/joel/rtems-4.11-work/tools/bin/rtems-test'

shell cmd failed: /bin/sh -ex /users/joel/rtems-4.11-work/rtems-source-builder/rtems/build/rtems-tools-HEAD-1/doit
error: building rtems-tools-HEAD-1
See error report: rsb-report-rtems-tools-HEAD-1.txt
Build Set: Time 0:17:12.968852
```

Description

**#2317** fixed General Joel Sherrill Sebastian Huber

Summary fsfseeko01 invalid on some architectures

There is a target dependent issue with fsfseeko01. The value it seeks to does not necessarily overflow. On some targets, it remains a valid value. I haven't checked every target but I recall seeing this test fail during my earlier test runs. So far I can confirm this test is not valid on the lm32 and or1k.

Works: sparc, psim, jmr3904 Fails: lm32, or1k, simsh

I am not sure how the logic fails but give instructions, we can probe the gcc's and see what is reported and slipping through. The test attempts to pass in an invalid seek value based on the size of some types and this logic must not be right on all targets.

Description

**\* BEGIN OF TEST FSFSEEKO 1 \***

Breakpoint 3, test ()

at ../../../../../../rtems/c/src/../../../../testsuites/fstests/fsfseeko01/init.c:61

61 rv = fseeko(file, off, SEEK\_SET); (gdb) n 62 rtems\_test\_assert(rv == 0); (gdb) 63 rtems\_test\_assert(errno == 0); (gdb) 65 errno = 0; (gdb) 66 actual\_long\_off = ftell(file); (gdb) p off \$1 = 2147483647 (gdb) n 67 rtems\_test\_assert(actual\_long\_off == -1L); (gdb) p actual\_long\_off \$2 = 2147483647 (gdb)

**#2318** fixed cpukit Daniel Krüger Sebastian Huber

Summary Wrong alignment of ARM exception frame

The stack pointer must be aligned on 8 byte boundary on ARM, so the size of the exception frame must be a multiple of 8 bytes. Otherwise we might/will get an alignment fault, when executing code in the data abort handler for example.

See the attached patch.

**#2326** fixed bsp Alexander Krutwig

Summary Or1k bsp not supported for c++ usage

When ENABLE RTEMS\_CXX=yes, or1k build does not work properly.

In file included from ../../../../../../rtems/c/src/librtems++/src/rtemsInterrupt.cc:19:0:

../../../../or1ksim/lib/include/rtems++/rtemsInterrupt.h:96:1: error: expected '}' at end of input

}

gmake[3]: \* [src/librtems\_a-rtemsInterrupt.o] Error 1 gmake[3]: \* Waiting for unfinished jobs....

../../../../rtems/c/src/librtems++/src/rtemsStatusCode.cc:74:1: error: expected '}' at end of input

}

../../../../rtems/c/src/librtems++/src/rtemsEvent.cc:73:1: error: expected '}' at end of input

```

}
.../.../.../rtems/c/src/librtems++/src/rtemsTimer.cc:99:1: error: expected '}' at end of input
}
gmake[3]: * [src/librtems_a-rtemsStatusCode.o] Error 1 gmake[3]: * [src/librtems_a-rtemsEvent.o] Error 1 gmake[3]: *
[src/librtems_a-rtemsTimer.o] Error 1 .../.../.../rtems/c/src/librtems++/src/rtemsSemaphore.cc:173:1: error:
expected '}' at end of input
}
.../.../.../rtems/c/src/librtems++/src/rtemsMessageQueue.cc:163:1: error: expected '}' at end of input
}
gmake[3]: * [src/librtems_a-rtemsSemaphore.o] Error 1 gmake[3]: * [src/librtems_a-rtemsMessageQueue.o] Error 1
.../.../.../rtems/c/src/librtems++/src/rtemsTask.cc: In member function 'const rtems_status_code
rtemsTask::get_note(uint32_t, uint32_t&): .../.../.../rtems/c/src/librtems++/src/rtemsTask.cc:269:26: warning:
'rtems_status_code rtems_task_get_note(rtems_id, uint32_t, uint32_t*)' is deprecated (declared at
.../.../.../or1ksim/lib/include/rtems/rtems/tasks.h:286) [-Wdeprecated-declarations]
    return set_status_code(rtems_task_get_note(id, notepad, &note));
.../.../.../rtems/c/src/librtems++/src/rtemsTask.cc:269:64: warning: 'rtems_status_code
rtems_task_get_note(rtems_id, uint32_t, uint32_t*)' is deprecated (declared at
.../.../.../or1ksim/lib/include/rtems/rtems/tasks.h:286) [-Wdeprecated-declarations]
    return set_status_code(rtems_task_get_note(id, notepad, &note));
.../.../.../rtems/c/src/librtems++/src/rtemsTask.cc: In member function 'const rtems_status_code
rtemsTask::set_note(uint32_t, uint32_t): .../.../.../rtems/c/src/librtems++/src/rtemsTask.cc:275:26: warning:
'rtems_status_code rtems_task_set_note(rtems_id, uint32_t, uint32_t)' is deprecated (declared at
.../.../.../or1ksim/lib/include/rtems/rtems/tasks.h:309) [-Wdeprecated-declarations]
    return set_status_code(rtems_task_set_note(id, notepad, note));
.../.../.../rtems/c/src/librtems++/src/rtemsTask.cc:275:63: warning: 'rtems_status_code
rtems_task_set_note(rtems_id, uint32_t, uint32_t)' is deprecated (declared at
.../.../.../or1ksim/lib/include/rtems/rtems/tasks.h:309) [-Wdeprecated-declarations]
    return set_status_code(rtems_task_set_note(id, notepad, note));
.../.../.../rtems/c/src/librtems++/src/rtemsTask.cc: At global scope:
.../.../.../rtems/c/src/librtems++/src/rtemsTask.cc:286:1: error: expected '}' at end of input
}
gmake[3]: * [src/librtems_a-rtemsTask.o] Error 1 gmake[3]: Leaving directory `./scratch/git-rtems-testing/rtems/build-
or1k-or1ksim-rtems/or1k-rtems4.11/c/or1ksim/librtems++' gmake[2]: * [all-recursive] Error 1 gmake[2]: Leaving
directory `./scratch/git-rtems-testing/rtems/build-or1k-or1ksim-rtems/or1k-rtems4.11/c/or1ksim' gmake[1]: * [all-
recursive] Error 1 gmake[1]: Leaving directory `./scratch/git-rtems-testing/rtems/build-or1k-or1ksim-rtems/or1k-
rtems4.11/c' make: * [all-recursive] Error 1

```

Description

**#2328** fixed General Sebastian Huber

Summary: \_CORE\_message\_queue\_Insert\_message() not ISR proof

Description: In case the submit type is not CORE\_MESSAGE\_QUEUE\_SEND\_REQUEST or CORE\_MESSAGE\_QUEUE\_URGENT\_REQUEST, then we insert the message in priority order. The linear search is not atomic, thus message insertions by higher priority interrupts will corrupt it.

**#2329** fixed General Joel Sherrill Hesham ALMatary <heshamelmatary@...>

Summary: or1k Linking error on C++ tests

I fixed the header file issue in 2326. This is a new issue which is either a linker script or tools issue not having everything right for C++.

```

gmake[6]: Entering directory `./users/joel/rtems-4.11-work/rtems-testing/rtems/build-or1k-or1ksim-rtems/or1k-
rtems4.11/c/or1ksim/testsuites/samples/iostream' or1k-rtems4.11-g++ -B./.../.../or1ksim/lib/ -specs bsp_specs -qrtems -O2 -O0 -
g -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -O2 -o cxx_iostream.exe init.o
init.o: In function `static_initialization_and_destruction_0': ./users/joel/rtems-4.11-work/tools/lib/gcc/or1k-
rtems4.11/4.8.3/include/c++/iostream:74: undefined reference to `dso_handle' /users/joel/rtems-4.11-work/tools/lib/gcc/or1k-
rtems4.11/4.8.3/include/c++/iostream:74: undefined reference to `dso_handle' /users/joel/rtems-4.11-work/tools/lib/gcc/or1k-
rtems4.11/4.8.3/libstdc++.a(atomicity.o): In function `get_atomic_mutex': ./users/joel/rtems-4.11-work/rtems-source-
builder/rtems/build/or1k-rtems4.11-gcc-4.8.3-newlib-ef23a12ff8f840cc571e47870cd5f4ad6bca4553-x86_64-linux-gnu-1/build/or1k-
rtems4.11/libstdc++.v3/src/c++98/atomicity.cc:33: undefined reference to `dso_handle' /users/joel/rtems-4.11-work/rtems-source-
builder/rtems/build/or1k-rtems4.11-gcc-4.8.3-newlib-ef23a12ff8f840cc571e47870cd5f4ad6bca4553-x86_64-linux-gnu-1/build/or1k-
rtems4.11/libstdc++.v3/src/c++98/atomicity.cc:33: undefined reference to `dso_handle' /users/joel/rtems-4.11-
work/tools/lib/gcc/or1k-rtems4.11/4.8.3/libstdc++.a(eh_alloc.o): In function `static_initialization_and_destruction_0':
./users/joel/rtems-4.11-work/rtems-source-builder/rtems/build/or1k-rtems4.11-gcc-4.8.3-
newlib-ef23a12ff8f840cc571e47870cd5f4ad6bca4553-x86_64-linux-gnu-1/build/or1k-rtems4.11/libstdc++.v3/libsupc++.a(../.../gcc-
4.8.3/libstdc++.v3/libsupc++.eh_alloc.cc:96: undefined reference to `dso_handle' /users/joel/rtems-4.11-work/tools/lib/gcc/or1k-
rtems4.11/4.8.3/libstdc++.a(eh_alloc.o):./users/joel/rtems-4.11-work/rtems-source-builder/rtems/build/or1k-rtems4.11-gcc-4.8.3-
newlib-ef23a12ff8f840cc571e47870cd5f4ad6bca4553-x86_64-linux-gnu-1/build/or1k-rtems4.11/libstdc++.v3/libsupc++.a(../.../gcc-
4.8.3/libstdc++.v3/libsupc++.eh_alloc.cc:96: more undefined references to `dso_handle' follow /users/joel/rtems-4.11-
work/tools/lib/gcc/or1k-rtems4.11/4.8.3/.../.../or1k-rtems4.11/bin/ld: cxx_iostream.exe: hidden symbol `dso_handle' isn't defined
./users/joel/rtems-4.11-work/tools/lib/gcc/or1k-rtems4.11/4.8.3/.../.../or1k-rtems4.11/bin/ld: final link failed: Bad value collect2:
error: ld returned 1 exit status gmake[6]: * [cxx_iostream.exe] Error 1

```

Description

**#2332** fixed tools Daniel Krüger

Summary: rtemstools cannot be built by RSB under MinGW32

I want to build the Toolchain for RTEMS on Windows 7 SP1 (32 bit with MinGW32/MSYS2), but that fails during build of the RTEMS tools. The build environment has been setup as the documentation of the RTEMS Source Builder suggests.

rsb-report-autoconf-2.69-i686-w32-mingw32-1.txt:

```

RTEMS Tools Project - Source Builder Error Report
Build: error: building rtH1
Command Line: ./source-builder/sb-set-builder --log=1-arm.txt --prefix=C:/msys32/opt/rtems-4.11
4.11/rtems-arm

```

```

Python: 2.7.9 (default, Dec 10 2014, 12:24:55) [MSC v.1500 32 bit (Intel)]
P:\SW\gitrepo\rtms-source-builder.git/origin/b65c131f2e11e352fde6efa0ec2fe500dad3a4a-modified
Windows
Tail of the build log:
script: 56:
script: 57: export CFLAGS_FOR_TARGET
script: 58: export CXXFLAGS_FOR_TARGET
script: 59: # Set up the path. Put the CXC path first.
script: 60: if test -n "${SB_TMPBINDIR}" ; then
script: 61:   PATH="${SB_TMPBINDIR}:%PATH"
script: 62: fi
script: 63: if test -n "${SB_TMPCXCBINDIR}" ; then
script: 64:   PATH="${SB_TMPCXCBINDIR}:%PATH"
script: 65: fi
script: 66: if test -n "${SB_EXTRAPATH}" ; then
script: 67:   PATH="${SB_EXTRAPATH}:%PATH"
script: 68: fi
script: 69:
script: 70:
script: 71: export PATH
script: 72: # Default environment set up.
script: 73: LANG=C
script: 74: export LANG
script: 75: unset DISPLAY || :
script: 76: umask 022
script: 77: cd "/C/Projekte/rtms-source-builder/rtms/build/rth1"
script: 78: echo "=> rtms-tools-HEAD-1:"
script: 79: echo "==> %prep:"
script: 80: build_top=$(pwd)
script: 81: source_dir_rtms_tools="rtms-tools-HEAD-1"
source setup: rtms-tools-HEAD-1: source rtms-tools -q -D -n rtms-tools-HEAD-1
Creating source directory: sources\git
making dir: C:\Projekte\rtms-source-builder\rtms\sources\git
git: clone: git://git.rtems.org/rtms-tools.git -> sources\git\rtms-tools.git
git: reset: git://git.rtems.org/rtms-tools.git
git: checkout: git://git.rtems.org/rtms-tools.git => master
git: pull: git://git.rtems.org/rtms-tools.git
script: 82: cd /C/Projekte/rtms-source-builder/rtms/build/rth1
script: 83: ln -s /C/Projekte/rtms-source-builder/rtms/sources/git/rtms-tools.git
${source_dir_rtms_tools}
script: 84: cd rtms-tools-HEAD-1
script: 85: chmod -R a+rX,g-w,o-w .
script: 86: cd ${build_top}
script: 87: SB_CXC="no"
script: 88: echo "==> clean ${buildroot}: ${SB_BUILD_ROOT}"
script: 89: rm -rf ${SB_BUILD_ROOT}
script: 90: /bin/mkdir -p ${SB_BUILD_ROOT}
script: 91: echo "==> %build:"
script: 92: build_top=$(pwd)
script: 93: if test "i686-w32-mingw32" != "i686-w32-mingw32" ; then
script: 94:   RT_HOST="-host=i686-w32-mingw32"
script: 95: else
script: 96:   RT_HOST=
script: 97: fi
script: 98: cd ${source_dir_rtms_tools}
script: 99: ./waf configure ${RT_HOST} --prefix=/C/msys32/opt/rtms-4.11
script:100: ./waf
script:101: cd ${build_top}
script:102: echo "==> %install:"
script:103: build_top=$(pwd)
script:104: rm -rf $SB_BUILD_ROOT
script:105: cd ${source_dir_rtms_tools}
script:106: ./waf --destdir=$SB_BUILD_ROOT install
script:107: cd ${build_top}
script:108: echo "==> %clean:"
removing: C:\Projekte\rtms-source-builder\rtms\build\rth1
making dir: C:\Projekte\rtms-source-builder\rtms\build\rth1
write script: /C/Projekte/rtms-source-builder/rtms/build/rth1/doing
building: rtms-tools-HEAD-1
run: sh -ex /C/Projekte/rtms-source-builder/rtms/build/rth1/doing
+ export
+ SB_ORIG_PATH=/mingw32/bin:/usr/local/bin:/usr/bin:/usr/bin:/c/Python27:/c/Windows/system32:/c/Windows:/c/Win
tem32/Wbem:/c/Windows/System32/WindowsPowerShell/v1.0:/c/opt/rtms-4.11/bin:/c/opt/gdc/bin:/c/opt/arm-
gdcproject-linux-gnueabi/bin:/c/Program Files/Microsoft SQL Server/100/Tools/Binn:/c/Program Files/Microsoft
SQL Server/100/DTS/Binn:/c/Program
Files/TortoiseGit/bin:/usr/bin/site_perl:/usr/bin/vendor_perl:/usr/bin/core_perl'
+
+ SB_ORIG_PATH='/mingw32/bin:/usr/local/bin:/usr/bin:/usr/bin:/c/Python27:/c/Windows/system32:/c/Windows:/c/Win
tem32/Wbem:/c/Windows/System32/WindowsPowerShell/v1.0:/c/opt/rtms-4.11/bin:/c/opt/gdc/bin:/c/opt/arm-
gdcproject-linux-gnueabi/bin:/c/Program Files/Microsoft SQL Server/100/Tools/Binn:/c/Program Files/Microsoft
SQL Server/100/DTS/Binn:/c/Program
Files/TortoiseGit/bin:/usr/bin/site_perl:/usr/bin/vendor_perl:/usr/bin/core_perl'
+ SB_PREFIX=/C/msys32/opt/rtms-4.11
++ echo /C/msys32/opt/rtms-4.11
++ sed -e 's/^\\/'
+ SB_PREFIX_CLEAN=C/msys32/opt/rtms-4.11
+ SB_SOURCE_DIR=/C/Projekte/rtms-source-builder/rtms/sources
+ SB_BUILD_DIR=/C/Projekte/rtms-source-builder/rtms/build/rth1
+ SB_HOST_CFLAGS='-O2 -pipe '
+ SB_HOST_CXXFLAGS='-O2 -pipe '
+ SB_HOST_LDFLAGS=-L/C/Projekte/rtms-source-builder/rtms/build/tmp/sp-produktion/4.11/rtms-
arm/C/msys32/opt/rtms-4.11/lib
+ SB_BUILD_CFLAGS='-O2 -pipe -T/C/Projekte/rtms-source-builder/rtms/build/tmp/sp-produktion/4.11/rtms-

```

Descripti  
on

```

+ SB_BUILD_CXXFLAGS=-O2 -pipe -I/C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion/4.11/rtems-
arm/C/msys32/opt/rtems-4.11/include'
+ SB_BUILD_CXXFLAGS='-O2 -pipe -I/C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion/4.11/rtems-
arm/C/msys32/opt/rtems-4.11/include'
+ SB_BUILD_LDFLAGS=-L/C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion/4.11/rtems-
arm/C/msys32/opt/rtems-4.11/lib
+ SB_CFLAGS='-O2 -pipe -I/C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion/4.11/rtems-
arm/C/msys32/opt/rtems-4.11/include '
+ SB_CXXFLAGS='-O2 -pipe -I/C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion/4.11/rtems-
arm/C/msys32/opt/rtems-4.11/include '
+ SB_ARCH=i686
+ SB_OS=win32
+ export SB_SOURCE_DIR SB_BUILD_DIR SB_ARCH SB_OS
+ export SB_HOST_CFLAGS SB_HOST_CXXFLAGS SB_HOST_LDFLAGS
+ export SB_BUILD_CFLAGS SB_BUILD_CXXFLAGS SB_BUILD_LDFLAGS
+ export SB_CFLAGS SB_CXXFLAGS
+ SB_DOC_DIR=/C/msys32/opt/rtems-4.11/share/doc
+ export SB_DOC_DIR
+ SB_PACKAGE_NAME=rtems-tools-HEAD-1
+ SB_PACKAGE_BUILDNAME=rth1
+ SB_PACKAGE_VERSION=HEAD
+ SB_PACKAGE_RELEASE=1
+ export SB_PACKAGE_NAME SB_PACKAGE_VERSION SB_PACKAGE_RELEASE
+ export SB_PREFIX
+ SB_BUILD_DIR=/C/Projekte/rtems-source-builder/rtems/build/rth1
+ SB_BUILD_ROOT=/C/Projekte/rtems-source-builder/rtems/build/tmp/rtems-tools-HEAD-1-root-produktion
+ SB_BUILD_ROOT_BINDIR=/C/Projekte/rtems-source-builder/rtems/build/tmp/rtems-tools-HEAD-1-root-
produktion/C/msys32/opt/rtems-4.11/bin
+ export SB_BUILD_ROOT SB_BUILD_DIR SB_BUILD_ROOT_BINDIR
+ SB_BUILD_CXC_DIR=/C/Projekte/rtems-source-builder/rtems/build/rth1-cxc
+ SB_BUILD_CXC_ROOT=/C/Projekte/rtems-source-builder/rtems/build/tmp/rth1-produktion-cxc
+ SB_BUILD_CXC_ROOT_BINDIR=/C/Projekte/rtems-source-builder/rtems/build/tmp/rth1-produktion-
cxc/C/msys32/opt/rtems-4.11/bin
+ export SB_BUILD_CXC_ROOT SB_BUILD_CXC_DIR SB_BUILD_CXC_ROOT_BINDIR
+ SB_TMPROOT=/C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion/4.11/rtems-arm
+ SB_TMPPREFIX=/C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion/4.11/rtems-
arm/C/msys32/opt/rtems-4.11
+ SB_TMPBINDIR=/C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion/4.11/rtems-
arm/C/msys32/opt/rtems-4.11/bin
+ export SB_TMPROOT SB_TMPPREFIX SB_TMPBINDIR
+ SB_TMPXCXCROOT=/C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion/4.11/rtems-arm
+ SB_TMPXCXCPREFIX=/C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion-cxc/4.11/rtems-
arm/C/msys32/opt/rtems-4.11
+ SB_TMPXCXCBINDIR=/C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion-cxc/4.11/rtems-
arm/C/msys32/opt/rtems-4.11/bin
+ export SB_TMPXCXCROOT SB_TMPXCXCPREFIX SB_TMPXCXCBINDIR
+ SB_EXTRAPATH=/C/Projekte/rtems-source-builder/source-builder
+ export CFLAGS_FOR_TARGET
+ export CXXFLAGS_FOR_TARGET
+ test -n /C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion/4.11/rtems-arm/C/msys32/opt/rtems-
4.11/bin
+ PATH='/C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion/4.11/rtems-arm/C/msys32/opt/rtems-
4.11/bin:/mingw32/bin:/usr/local/bin:/usr/bin:/usr/bin:/c/Python27:/c/Windows/system32:/c/Windows:/c/Windows/
/Wbem:/c/Windows/System32/WindowsPowerShell/v1.0:/c/opt/rtems-4.11/bin:/c/opt/gdc/bin:/c/opt/arm-gdcproject-
linux-gnueabi/bin:/c/Program Files/Microsoft SQL Server/100/Tools/Binn:/c/Program Files/Microsoft SQL
Server/100/DTS/Binn:/c/Program
Files/TortoiseGit/bin:/usr/bin/site_perl:/usr/bin/vendor_perl:/usr/bin/core_perl'
+ test -n /C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion-cxc/4.11/rtems-
arm/C/msys32/opt/rtems-4.11/bin
+ PATH='/C/Projekte/rtems-source-builder/rtems/build/tmp/sb-produktion-cxc/4.11/rtems-
arm/C/msys32/opt/rtems-
arm/C/msys32/opt/rtems-
4.11/bin:/mingw32/bin:/usr/local/bin:/usr/bin:/usr/bin:/c/Python27:/c/Windows/system32:/c/Windows:/c/Windows/
/Wbem:/c/Windows/System32/WindowsPowerShell/v1.0:/c/opt/rtems-4.11/bin:/c/opt/gdc/bin:/c/opt/arm-gdcproject-
linux-gnueabi/bin:/c/Program Files/Microsoft SQL Server/100/Tools/Binn:/c/Program Files/Microsoft SQL
Server/100/DTS/Binn:/c/Program
Files/TortoiseGit/bin:/usr/bin/site_perl:/usr/bin/vendor_perl:/usr/bin/core_perl'
+ test -n /C/Projekte/rtems-source-builder/source-builder
+ PATH='/C/Projekte/rtems-source-builder/source-builder:/C/Projekte/rtems-source-builder/rtems/build/tmp/sb-
produktion-cxc/4.11/rtems-arm/C/msys32/opt/rtems-4.11/bin:/C/Projekte/rtems-source-
builder/rtems/build/tmp/sb-produktion/4.11/rtems-arm/C/msys32/opt/rtems-
4.11/bin:/mingw32/bin:/usr/local/bin:/usr/bin:/usr/bin:/c/Python27:/c/Windows/system32:/c/Windows:/c/Windows/
/Wbem:/c/Windows/System32/WindowsPowerShell/v1.0:/c/opt/rtems-4.11/bin:/c/opt/gdc/bin:/c/opt/arm-gdcproject-
linux-gnueabi/bin:/c/Program Files/Microsoft SQL Server/100/Tools/Binn:/c/Program Files/Microsoft SQL
Server/100/DTS/Binn:/c/Program
Files/TortoiseGit/bin:/usr/bin/site_perl:/usr/bin/vendor_perl:/usr/bin/core_perl'
+ export PATH
+ LANG=C
+ export LANG
+ unset DISPLAY
+ umask 022
+ cd /C/Projekte/rtems-source-builder/rtems/build/rth1
+ echo '=> rtems-tools-HEAD-1:'
+ echo '==> %prep:'
=> rtems-tools-HEAD-1:
==> %prep:
++ pwd
+ build_top=/C/Projekte/rtems-source-builder/rtems/build/rth1
+ source_dir_rtems_tools=rtems-tools-HEAD-1
+ cd /C/Projekte/rtems-source-builder/rtems/build/rth1
+ ln -s /C/Projekte/rtems-source-builder/rtems/sources/git/rtems-tools.git rtems-tools-HEAD-1
+ cd rtems-tools-HEAD-1
+ chmod -R a+rX,g-w,o-w
+ cd /C/Projekte/rtems-source-builder/rtems/build/rth1

```

```

+ cd /C/Projekte/rtems-source-builder/rtems/build/rth1
+ SB_CXC=no
+ echo '==> clean %{buildroot}: /C/Projekte/rtems-source-builder/rtems/build/tmp/rtems-tools-HEAD-1-root-
produktion'
==> clean %{buildroot}: /C/Projekte/rtems-source-builder/rtems/build/tmp/rtems-tools-HEAD-1-root-produktion
+ rm -rf /C/Projekte/rtems-source-builder/rtems/build/tmp/rtems-tools-HEAD-1-root-produktion
+ /bin/mkdir -p /C/Projekte/rtems-source-builder/rtems/build/tmp/rtems-tools-HEAD-1-root-produktion
+ echo '==> %build:'
==> %build:
++ pwd
+ build_top=/C/Projekte/rtems-source-builder/rtems/build/rth1
+ test i686-w32-mingw32 != i686-w32-mingw32
+ RT_HOST=
+ cd rtems-tools-HEAD-1
+ ./waf configure --prefix=/C/msys32/opt/rtems-4.11
Setting top to : C:\Projekte\rtems-source-builder\rtems\build\rth1\rtems-tools-HEAD
1
Setting out to : C:\Projekte\rtems-source-builder\rtems\build\rth1\rtems-tools-HEAD
1\build
Checking for 'msvc' (C compiler) : c:\Program Files\Microsoft Visual Studio 10.0\VC\BIN\CL.exe
Checking for 'msvc' (C++ compiler) : c:\Program Files\Microsoft Visual Studio 10.0\VC\BIN\CL.exe
Checking for header alloca.h : not found
Checking for header fcntl.h : yes
Checking for header process.h : yes
Checking for header stdlib.h : yes
Checking for header string.h : yes
Checking for header strings.h : not found
Checking for header sys/file.h : not found
Checking for header sys/stat.h : yes
Checking for header sys/time.h : not found
Checking for header sys/types.h : yes
Checking for header sys/wait.h : not found
Checking for header unistd.h : not found
Checking for header vfork.h : not found
Checking for function getrusage : not found
Checking for header sys/wait.h : not found
Checking for function kill : not found
Checking for function open64 : not found
Checking for function stat64 : not found
Checking for program 'python' : C:\Python27\python.exe
Checking for python version : (2, 7, 9, 'final', 0)
Checking for python version : (2, 7, 9, 'final', 0)
'configure' finished successfully (2.803s)
+ ./waf
Waf: Entering directory `C:\Projekte\rtems-source-builder\rtems\build\rth1\rtems-tools-HEAD-1\build'
[ 1/236] Compiling rtemstoolkit\elftoolchain\libelf\libelf_convert.m4
[ 2/236] Compiling rtemstoolkit\elftoolchain\libelf\libelf_fsize.m4
[ 3/236] Compiling rtemstoolkit\elftoolchain\libelf\libelf_msize.m4
[ 4/236] Compiling rtemstoolkit\elftoolchain\libelf\elf.c
elf.c

c:\projekte\rtems-source-builder\rtems\build\rth1\rtems-tools-head-
1\rtemstoolkit\elftoolchain\libelf\libelf.h(32) : fatal error C1083: Datei (Include) kann nicht ge"ffnet
werden: "sys/param.h": No such file or directory

cl : Befehlszeile warning D9002 : Unbekannte Option "-pipe" wird ignoriert.

cl : Befehlszeile warning D9002 : Unbekannte Option "-g" wird ignoriert.

Waf: Leaving directory `C:\Projekte\rtems-source-builder\rtems\build\rth1\rtems-tools-HEAD-1\build'
Build failed
-> task in 'elf' failed (exit status 2):
{task 26199408: c elf.c -> elf.c.4.o}
['c:\\Program Files\\Microsoft Visual Studio 10.0\\VC\\BIN\\CL.exe', '/nologo', '-pipe', '-g', '-O2',
'/IC:\\Projekte\\rtems-source-builder\\rtems\\build\\rth1\\rtems-tools-HEAD-1\\build',
'/IC:\\Projekte\\rtems-source-builder\\rtems\\build\\rth1\\rtems-tools-HEAD-
1\\build\\rtemstoolkit\\elftoolchain\\libelf', '/IC:\\Projekte\\rtems-source-
builder\\rtems\\build\\rth1\\rtems-tools-HEAD-1\\rtemstoolkit\\elftoolchain\\libelf',
'/IC:\\Projekte\\rtems-source-builder\\rtems\\build\\rth1\\rtems-tools-HEAD-
1\\build\\rtemstoolkit\\elftoolchain\\common', '/IC:\\Projekte\\rtems-source-
builder\\rtems\\build\\rth1\\rtems-tools-HEAD-1\\rtemstoolkit\\elftoolchain\\common',
'/IC:\\Projekte\\rtems-source-builder\\rtems\\build\\rth1\\rtems-tools-HEAD-1\\build\\rtemstoolkit\\win32',
'/IC:\\Projekte\\rtems-source-builder\\rtems\\build\\rth1\\rtems-tools-HEAD-1\\rtemstoolkit\\win32',
'/IC:\\Program Files\\Microsoft Visual Studio 10.0\\VC\\INCLUDE', '/IC:\\Program Files\\Microsoft Visual
Studio 10.0\\VC\\ATLMFC\\INCLUDE', '/IC:\\Program Files\\Microsoft SDKs\\Windows\\v7.0A\\include',
'/DPYTHONDIR="C:\\Python27\\Lib\\site-packages"', '/DPYTHONARCHDIR="C:\\Python27\\Lib\\site-packages"', '',
'..\\rtemstoolkit\\elftoolchain\\libelf\\elf.c', '/FC', '/c', '/Fo', 'C:\\Projekte\\rtems-source-
builder\\rtems\\build\\rth1\\rtems-tools-HEAD-1\\build\\rtemstoolkit\\elftoolchain\\libelf\\elf.c.4.o']
shell cmd failed: sh -ex /C/Projekte/rtems-source-builder/rtems/build/rth1/doit
error: building rth1

```

**#2345** fixed bspbs Chris Johns

Summary BSP spec file error.

Y

Description The BSP specs files have an error. See the devel list thread <https://lists.rtems.org/pipermail/devel/2015-May/011256.html> for details.

**#2358** fixed cpukit Sebastian Huber

Summary Interrupt latency problem in \_POSIX\_Timer\_Insert\_helper()



Description Interrupts are disabled around a `_Watchdog_Insert()` in `_POSIX_Timer_Insert_helper()`.

#2364 fixed General hermann19829 Joel Sherrill <joel.sherrill@...>

Summary pc386 build fails

When building RTEMS for pc386 *make all* fails after executing bootstrap and configure by

```
../rtems/configure --target=i386-rtems4.11 --enable-rtemsbsp=pc386 --enable-tests=samples --disable-posix
```

at entering `.../samples/hello` with *undefined reference to pthread\_mutex\_trylock* and *undefined reference to pthread\_mutex\_unlock*

When commenting lines 869-874, 891-892, 899-901 in `development/rtems/src/rtems/c/src/lib/libbsp/i386/pc386/console/fb_vesa_rm.c` the build succeeds.

```
860 rtems_device_driver
861 frame_buffer_open(
862     rtems_device_major_number major,
863     rtems_device_minor_number minor,
864     void *arg
865 )
866 {
867     printk( FB_VESA_NAME " open device\n" );
868
869     //if (pthread_mutex_trylock(&vesa_mutex) != 0)
870     //{
871     //    printk( FB_VESA_NAME " could not lock vesa_mutex\n" );
872
873     //    return RTEMS_UNSATISFIED;
874     //}
875
876     return RTEMS_SUCCESSFUL;
877 }
878
879
880 /*
881 * fb_vesa device driver CLOSE entry point
882 */
883 rtems_device_driver
884 frame_buffer_close(
885     rtems_device_major_number major,
886     rtems_device_minor_number minor,
887     void *arg
888 )
889 {
890     printk( FB_VESA_NAME " close device\n" );
891     //if (pthread_mutex_unlock(&vesa_mutex) == 0)
892     //{
893     //    /* restore previous state. for VGA this means return to text mode.
894     //     * leave out if graphics hardware has been initialized in
895     //     * frame_buffer_initialize() */
896
897     //    printk(FB_VESA_NAME ": close called.\n" );
898     //    return RTEMS_SUCCESSFUL;
899     //}
900
901     //return RTEMS_UNSATISFIED;
902 }
```

Description

#2369 fixed General Nick Withers Nick Withers <nick.withers@...>

Summary [PowerPC Book E] Invalid mftb instruction in `_CPU_Counter_read()`

`_CPU_Counter_read()`, called e.g., when RTEMS profiling is enabled, attempts to use the *mftb* instruction to access the time base. This instruction does not exist on Book E processors (such as the e500 used in the MVME3100) and causes an exception on those architectures.

At least RTEMS profiling therefore does not work at least with the *mvme3100* BSP.

This...:

```
diff --git a/cpukit/score/cpu/powerpc/rtems/score/cpu.h b/cpukit/score/cpu/powerpc/rtems/score/cpu.h
index 06cab2c..45298a4 100644
--- a/cpukit/score/cpu/powerpc/rtems/score/cpu.h
+++ b/cpukit/score/cpu/powerpc/rtems/score/cpu.h
@@ -842,7 +842,7 @@ static inline CPU_Counter_ticks _CPU_Counter_read( void )
/* Use Alternate Time Base */
__asm__ volatile( "mfspr %0, 526" : "=r" (value) );
#else
- __asm__ volatile( "mftb %0" : "=r" (value) );
+ __asm__ volatile( "mfspr %0, 268" : "=r" (value) );
#endif

return value;
```

Description

...sorts it out on the *mvme3100* and I don't \*think\* will break anything for other BSPs (I believe SPR 268 is always valid).

I wonder if we wouldn't be better off using `PPC_Get_timebase_register()`, though, which also checks the upper 32-bits of the timebase? Maybe that doesn't matter for the cases where `_CPU_Counter_read()` is called?

#2373 fixed bsp Joel Sherrill Sebastian Huber



Summary	PowerPC BSPs that do not build			
Description	This is a 4.11 branching blocker! powerpc-br_uid powerpc-hsc_cm01 powerpc-mpc8309som powerpc-mpc8313erdb powerpc-mpc8349eamds See <a href="https://lists.rtems.org/pipermail/users/2015-July/029230.html">https://lists.rtems.org/pipermail/users/2015-July/029230.html</a>			
#2374	fixed	RSB	Chris Johns	Chris Johns
Summary	RSB builds 3rd party packages as Canadian Cross (Cxc) packages			
Description	The RSB builds the NetSMP package as Canadian Cross (Cxc) so does not install the built package. Cxc packages are not installed because they have prefix paths that may not exist on a build machine plus what is built is not for the build machine so installing is disabled. Fixing the Cxc logic in the RSB results in the Cxc of ming32 built on FreeBSD to fail.			
#2378	fixed	General	Joel Sherrill	Joel Sherrill
Summary	ampolish3 script can't always find perl			
Description	Posted to devel@ <a href="https://lists.rtems.org/pipermail/devel/2015-July/011984.html">https://lists.rtems.org/pipermail/devel/2015-July/011984.html</a> diff --git a/ampolish3 b/ampolish3 index aaa9757..23c2855 100755 --- a/ampolish3 +++ b/ampolish3 @@ -1,4 +1,4 @@ -#!/usr/bin/perl -w +#!/usr/bin/env perl # # Copyright (C) 2005, 2006 Ralf Cors<C3><A9>pius, Ulm, Germany #			
#2379	fixed	General	Joel Sherrill	Joel Sherrill
Summary	Ensure ada-tests build			
Description	There is a compile error in ada-tests/support/init.c.			
#2380	fixed	Documentation	Joel Sherrill	Joel Sherrill
Summary	Incorrect title for C User's Guide in info output			
Description	I usually read RTEMS document in Info file format, and I found that C Users' Guide is not correctly set for its dir entry, and hence couldn't be found after 'make install'. This is just a one line fix as follows: In doc/user/c_user.texi: -* RTEMS C User: (C Users Guide). The C User's Guide. +* RTEMS C User: (c_user). The C User's Guide. After this fix, configure with --enable-docs and make install, C Users' Guide can be found by Emacs Info reader without modifying dir entry. Thanks.			
#2384	fixed	filesystem	Nick Withers	Nick Withers <nick.withers@...>
Summary	[PATCH] [NFS client] Respect 2 <sup>32</sup> - 1 B NFSv2 maximum file size			
Description	The RTEMS NFS(v2) client in at least 4.11 and master does not range check <i>off_t</i> values before assigning them into NFSv2's on-the-wire 32-bit unsigned file offset field. Reads from and writes to an offset at or above 4 GiB will currently silently be remapped to the mod 2 <sup>32</sup> location (on two's complement machines at least). The attached patch checks for negative offsets [1] and out of [0 - UINT32_MAX)-range access in <i>nfs_file_read()</i> , <i>nfs_file_write()</i> and <i>nfs_file_ftruncate()</i> . It doesn't touch the <i>lseek()</i> implementation, so an <i>lseek()</i> past NFSv2 range will still "succeed" - a subsequent read or write there won't. I think this is POSIX-compliant [2], however. [1] Perhaps unnecessary if it's impossible for a negative offset to be obtained without e.g., an application user twiddling things they shouldn't? <i>lseek()</i> at least does correctly error on obtaining negative offsets [2] e.g., <a href="http://pubs.opengroup.org/onlinepubs/009695399/functions/lseek.html">http://pubs.opengroup.org/onlinepubs/009695399/functions/lseek.html</a> doesn't explicitly seem to require <i>lseek()</i> to fail for out-of range offsets that aren't negative, and it mustn't do a resize itself			
#2402	fixed	General	Sebastian Huber	Sebastian Huber <sebastian.huber@...>
Summary	pthread_cancel() invalidates the thread identifier			
Description	A thread that calls <i>pthread_cancel()</i> is no longer able to do a <i>pthread_join()</i> afterwards. This problem appears in a least one GCC test case ( <i>libstdc++-v3/testsuite/30_threads/thread/native_handle/cancel.cc</i> ).			
#2405	fixed	General	Martin Galvan	Martin Galvan <martin.galvan@...>
Summary	CppCheck? errors being reported throughout the code			
Description	I performed a run of <code>cppcheck --enable-all</code> on the git master and the following items were reported as 'error': <pre>[c/src/lib/libbsp/shared/umon/umon.h:21]: (error) Invalid number of character ({} when these macros are defined: '__cplusplus'. [cpukit/libmisc/dumpbuf/dumpbuf.c:69]: (error) Undefined behavior: Variable 'line_buffer' is used as parameter and destination in s[n]printf(). [cpukit/libmisc/dumpbuf/dumpbuf.c:76]: (error) Undefined behavior: Variable 'line_buffer' is used as parameter and destination in s[n]printf(). [cpukit/libnetworking/rtems/rtems_dhcp.c:401]: (error) Common realloc mistake: 'dhcp_hostname' nulled but not freed upon failure [cpukit/posix/include/rtems/posix/ptimer.h:33]: (error) Invalid number of character ({} when these macros are defined: '__cplusplus'. [cpukit/rtems/include/rtems/rtems/dpmmemimpl.h:104]: (error) Invalid number of character ({} when these macros are defined: '__cplusplus'. [tools/cpu/nios2/memory.c:99]: (error) Uninitialized variable: memory [tools/cpu/nios2/ptf.c:582]: (error) Memory leak: new_prefix</pre> Notice I ran <i>cppcheck</i> mostly on the modules I'm currently using (that means most BSPs weren't checked). Some other errors may show up when running it on the entire source.			

<b>#2410</b>	fixed	General	Martin Galvan	Martin Galvan <martin.galvan@...>
Summary	rtems_dhcp.c fails to compile ("free" requires an extra argument)			
Description	<p>When trying to compile rtems_dhcp.c, compilation will fail with the following error:</p> <pre>../././././././trunk/c/src/./././cpukit/libnetworking/rtems/rtems_dhcp.c:408:32: error: macro "free" requires 2 arguments, but only 1 given         free (dhcp_hostname);</pre>			
<b>#2411</b>	fixed	General	Martin Galvan	Martin Galvan <martin.galvan@...>
Summary	dumplib.c compiles with warnings			
Description	<p>Compiling dumplib.c causes the following warning to be issued multiple times:</p> <pre>warning: pointer targets in passing argument 1 of 'sprintf' differ in signedness [-Wpointer-sign]</pre> <p>This seems to happen because <code>line_buffer</code> is declared as <code>unsigned</code>.</p>			
<b>#2416</b>	fixed	General	Marcos Diaz	Marcos Diaz <marcos.diaz@...>
Summary	Beaglebone: bsp.h missing clobber in inline assembly.			
Description	flush_data_cache uses R0 directly but doesn't list it as a clobbered register. Compiling with -O3 made this code break, since the function that calls flush_data_cache already uses r0.			
<b>#2418</b>	fixed	General	Sebastian Huber	Chris Johns
Summary	rtems_waf: SMP support is broken			
Description	<p>waf configure --prefix=/opt/rtems-4.12 --rtems=/opt/rtems-4.12 --rtems-tools=/opt/rtems-4.12 --rtems-bsps=arm/altcycv_devkit_smp --rtems-version=4.12</p> <p>leads to</p> <p>Checking for RTEMS headers : no One of the tests has failed, see the config.log for more information (complete log in /scratch/git-rtems-libbsd/build/config.log)</p> <p>due to Checking for RTEMS headers ==&gt; #include &lt;rtems.h&gt;</p> <pre>int main() {     return 0; }</pre> <p>&lt;== [1/2] [32mcxx: build/.conf_check_43c32d88444a1ba1e9b68cfe1006373a/test.cpp -&gt; build/.conf_check_43c32d88444a1ba1e9b68cfe1006373a/testbuild/test.cpp.1.o [0m ['/opt/rtems-4.12/bin/arm-rtems4.12-g++', '-qrtems', '-B/opt/rtems-4.12/arm-rtems4.12/lib/', '-B/opt/rtems-4.12/arm-rtems4.12/altcycv_devkit_smp/lib/', '--specs', 'bsp_specs', '-march=armv7-a', '-march=armv7-a', '-mthumb', '-mthumb', '-mfpu=neon', '-mfpu=neon', '-mfloat-abi=hard', '-mfloat-abi=hard', '-mtune=cortex-a9', '-mtune=cortex-a9', './test.cpp', '-c', '-o', 'test.cpp.1.o'] err: In file included from /opt/rtems-4.12/lib64/gcc/arm-rtems4.12/5.2.1/include/c++/atomic:38:0,</p> <p>from /opt/rtems-4.12/arm-rtems4.12/altcycv_devkit_smp/lib/include/rtems/score/cpustdatatomic.h:32, from /opt/rtems-4.12/arm-rtems4.12/altcycv_devkit_smp/lib/include/rtems/score/cpuatomic.h:12, from /opt/rtems-4.12/arm-rtems4.12/altcycv_devkit_smp/lib/include/rtems/score/atomic.h:20, from /opt/rtems-4.12/arm-rtems4.12/altcycv_devkit_smp/lib/include/rtems/score/thread.h:24, from /opt/rtems-4.12/arm-rtems4.12/altcycv_devkit_smp/lib/include/rtems/score/heap.h:22, from /opt/rtems-4.12/arm-rtems4.12/altcycv_devkit_smp/lib/include/rtems/rtems/types.h:26, from /opt/rtems-4.12/arm-rtems4.12/altcycv_devkit_smp/lib/include/rtems.h:31, from ../test.cpp:1:</p> <p>/opt/rtems-4.12/lib64/gcc/arm-rtems4.12/5.2.1/include/c++/bits/c++0x_warning.h:32:2: error: #error This file requires compiler and library support for the ISO C++ 2011 standard. This support is currently experimental, and must be enabled with the -std=c++11 or -std=gnu++11 compiler options.</p> <p>#error This file requires compiler and library support for the \</p>			
<b>#2435</b>	fixed	General	Ben Gras	Sudarshan Rajagopalan <sudarshan.rajagopalan@...>
Summary	gpio functions in bsp name improvement			
Description	<p>Fixes GPIO APIs Naming Convention and Comments.</p> <p>Thanks to Sudarshan Rajagopalan &lt;sudarshan.rajagopalan@...&gt; for reporting this and the patch. Slightly revised patch will follow that auto-closes this bug.</p> <p>This change renames these gpio-specific functions:</p> <pre>rtems_bsp_enable_interrupt rtems_bsp_disable_interrupt rtems_bsp_select_specific_io</pre> <p>to</p> <pre>rtems_gpio_bsp_enable_interrupt rtems_gpio_bsp_disable_interrupt rtems_gpio_bsp_select_specific_io</pre>			
<b>#2437</b>	fixed	General	Ben Gras	Ben Gras <beng@...>
Summary	if pax is not found by configure, the tests fail to build un-gracefully.			
Description	<p>If pax is not found by configure, the empty PAX variable is used in e.g. this line:</p> <pre>\$(PAX) -w -f \$@ \$&lt;</pre> <p>Causing the 'w' command to be invoked:</p> <pre>21:37:25 up 6 min, 3 users, load average: 1,90, 1,14, 0,49</pre> <p>USER TTY LOGIN@ IDLE JCPU PCPU WHAT ../././././././tools/build/rtems-bin2c -C dl.tar dl-tar.c ../././././././tools/build/rtems-bin2c -H dl.tar dl-tar.h cannot open dl.tar for reading cannot open dl.tar for reading make[6]: * [dl-tar.c] Error 1 make[6]: * Waiting for unfinished jobs.... make[6]: * [dl-tar.h] Error 1 make[6]: Leaving directory `~/home/beng/development/rtems/b-beagle/arm-rtems4.11/c/beagleboneblack/testsuites/libtests/dl01' make[5]: * [all-local] Error 1 make[5]: Leaving directory</p>			

on	<code>`/home/beng/development/rtems/b-beagle/arm-rtems4.11/c/beagleboneblack/testsuites/libtests' make[4]: * [all] Error 2 make[4]: Leaving directory `/home/beng/development/rtems/b-beagle/arm-rtems4.11/c/beagleboneblack/testsuites/libtests' make[3]: * [all-recursive] Error 1 make[3]: Leaving directory `/home/beng/development/rtems/b-beagle/arm-rtems4.11/c/beagleboneblack/testsuites' make[2]: * [all-recursive] Error 1 make[2]: Leaving directory `/home/beng/development/rtems/b-beagle/arm-rtems4.11/c/beagleboneblack' make[1]: * [all-recursive] Error 1 make[1]: Leaving directory `/home/beng/development/rtems/b-beagle/arm-rtems4.11/c' make: * [all-recursive] Error 1</code>			
	I am preparing a proposed fix that fails more gracefully in the configure phase.			
	Thanks to several reporters of this problem, most recently Debajyoti Majumdar and Claudio Scordino, while trying to build the tests with the Beagle BSP.			
<b>#2438</b>	fixed	libdl	Patrick Gauvin	Chris Johns
Summary	ARM cache problem after libdl load			
Description	<ul style="list-style-type: none"> <li>• <b>RTEMS Version:</b> Branch "4.11", commit <a href="#">edf77328c1813e15a293841dd33995fb11bd4bec</a></li> <li>• <b>System type:</b> ARM Cortex-A9, Xilinx Zynq 7020, xilinx_zynq_zedboard BSP</li> <li>• <b>Compiler toolchain version:</b> GCC 4.9.3, Newlib 2.2.0.20150423, Binutils 2.24</li> <li>• <b>RTEMS configure options:</b> <code>--target=arm-rtems4.11 --enable-rtemsbsp="xilinx_zynq_a9_qemu xilinx_zynq_zedboard" --enable-posix --prefix=\$HOME/development/rtems/4.11 --enable-tests</code></li> <li>• <b>Code used to reproduce:</b> <code>testsuites/libtests/dl01</code></li> </ul> <p><b>Expected Behavior</b></p> <p>Successful execution of the loaded function from dl-o1.o. Note that the dl01 example runs successfully in QEMU with the xilinx_zynq_a9_qemu BSP.</p> <p><b>Actual Behavior</b></p> <p>System crash on execution of loaded code. After the first branch is taken to loaded code (dl-load.c:54), GDB indicates that the processor is executing instructions at the correct address, but they do not behave as expected, eventually leading to the system rebooting.</p> <p>After discussion on the users mailing list, it was found that flushing the data cache and invalidating the instruction cache before calling the loaded function resulted in its successful execution. This was tested by adding the following at dl-load.c:54:</p> <pre>rtems_cache_flush_entire_data(); rtems_cache_invalidate_entire_instruction();</pre>			
<b>#2440</b>	fixed	build	Sebastian Huber	
Summary	rtems_waf: Install is broken for version != 4.11			
Description	"waf install" is broken for version != 4.11 due to use of hard-coded default_version = '4.11' in rtems.py.			
<b>#2465</b>	wontfix	Documentation	Joel Sherrill	Chris Johns
Summary	Update Hello World Instructions to include MSYS2			
Description	A ticket to prod Chris into adding to the ( <a href="#">GSOC Getting Started</a> ) MSYS2 instructions. This needs to be done in time for Google Code-In.			
<b>#2495</b>	fixed	RSB	Joel Sherrill	Chris Johns
Summary	RSB 4.11 tool build broken			
Description	Multiple targets: powerpc and i386 Multiple hosts: Ubuntu Wheezy, Debian Jessie, Fedora recent, and CentOS 6 <pre>+ cd /home/joel/rtems-hilo-work/rtems-source-builder/rtems/build/rtems-tools-4.11-1 + echo '=&gt; rtems-tools-4.11-1:' + echo '==&gt; %prep:' ++ pwd + build_top=/home/joel/rtems-hilo-work/rtems-source-builder/rtems/build/rtems-tools-4.11-1 + rtems_tools_source=rtems-tools-4.11 + cd /home/joel/rtems-hilo-work/rtems-source-builder/rtems/build/rtems-tools-4.11-1 + /bin/rm -rf rtems-tools-4.11 + ln -s /home/joel/rtems-hilo-work/rtems-source-builder/rtems/sources/git/rtems-tools.git + cd rtems-tools-4.11 /home/joel/rtems-hilo-work/rtems-source-builder/rtems/build/rtems-tools-4.11-1/doi: line 85: cd: rtems-tools-4.11: No such file or directory shell cmd failed: /bin/sh -ex /home/joel/rtems-hilo-work/rtems-source-builder/rtems/build/rtems-tools-4.11-1/doi error: building rtems-tools-4.11-1</pre>			
<b>#2497</b>	fixed	General	Martin Galvan	Ben Gras
Summary	Beaglebone Black: rtems_gpio_bsp_disable_interrupt disables all the GPIO interrupts			
Description	While testing the BBB GPIO code we noticed <code>rtems_gpio_bsp_disable_interrupt</code> seems to disable the interrupts for all the pins, not just the one that actually caused the interrupt.			
<b>#2505</b>	fixed	General	Ben Gras	Ben Gras
Summary	beagle sdcad.sh has hard-coded rtems arm-rtems4.11-objcopy			
Description	(This is the script that generates an SD card image ready to boot RTEMS.) switching to the rtems 4.12 toolchain requires this: <pre>+++ b/c/src/lib/libbsp/arm/beagle/simscripts/sdcad.sh @@ -59,7 +59,7 @@ \$PREFIX/bin/newfs_msdos -r 1 -m 0xf8 -c 4 -F16 -h 64 -u 32 -S 512 -s \$FATSIZE -  # Prepare the executable. base=`basename \$executable` -\$PREFIX/bin/arm-rtems4.11-objcopy \$executable -O binary \$TMPDIR/\$base.bin +\$PREFIX/bin/arm-rtems4.12-objcopy \$executable -O binary \$TMPDIR/\$base.bin gzip -9 \$TMPDIR/\$base.bin \$PREFIX/bin/mkimage -A arm -O rtems -T kernel -a 0x80000000 -e 0x80000000 -n RTEMS -d \$TMPDIR/\$base.bin.gz \$TMPDIR/\$ap echo "setenv bootdelay 5"</pre>			
	Of course I'm open to a cleaner fix.			
<b>#2508</b>	fixed	General	Joel Sherrill	Joel Sherrill <joel@...>

Summary	Remove LICENSE.WEBSERVER			
Description	This file is for the GoAhead? webserver and no longer should be in the tree. Filing a ticket because I think this file is also on branches where the GoAhead? webserver is no longer present.			
Description	We also may want to add a note to the file on the rtems.org website to indicate that this webserver was removed as of 4.11? release series.			
Description	This just needs some homework and a doublecheck.			
#2511	fixed	Documentation	Ralph Holmes	
Summary	WorkSpace? wiki page			
Description	A page named 'WorkSpace?' is referenced from <a href="https://devel.rtems.org/wiki/Debugging/Start">https://devel.rtems.org/wiki/Debugging/Start</a> , although the links are dead. I'm not sure whether there is supposed to be an actual page on 'WorkSpace?', or if this is just caused by <a href="#">WikiFormatting</a> .			
#2512	fixed	Documentation	Tan Gemicioglu	
Summary	RTEMSReferences automatically deleting content			
Description	I've looked through the diff's for changes made to <a href="https://devel.rtems.org/wiki/TBR/Website/RTEMSReferences">https://devel.rtems.org/wiki/TBR/Website/RTEMSReferences</a> and the page is repeatedly deleting content from the bottom of the page as more references are added. This is most likely due to the page reaching maximum page size as different versions had around the same character count (64800~) as plain text. According to <a href="http://trac.edgewall.org/wiki/TracIni">http://trac.edgewall.org/wiki/TracIni</a> this size can be configured from the trac.ini file, with the [wiki] max_size variable. Another alternative is to create a separate page for each year so that it doesn't exceed the size limit.			
#2525	invalid	RSB	Darshit	
Summary	RSB Python scripts may refer to Python3			
Description	The RSB python scripts all have the same shebang line: <pre>#!/usr/bin/env python</pre>			
Description	However, on certain systems, most notably Arch Linux, the default python environment is Python3. This causes all the RSB scripts to fail. Instead, a simple approach would be to explicitly invoke the Python2 environment. All systems that ship only Python2 also have the python2 symlink.			
Description	I've attached patch I made by changing all the shebang lines to python2. With these changes, I am still unable to completely build the SPARC tools on my machine. Some more Python related issues it seems. I shall debug those and either ask for further help later, or provide a patch Do let me know if anything else is required.			
#2535	fixed	shell	Nick Withers	
Summary	Shell: printf() format specifiers do not match parameter types			
Description	e.g.: <pre>(void)snprintf(buf, sizeof(buf), "%llu", (long long)howmany(maxblock, blocksize));</pre>			
#2579	fixed	General	Ralph Holmes	
Summary	Add per-section compilation and linking support to powerpc/motorola_powerpc			
Description	As per #2577, per-section compilation and linking support should be added to this BSP. Since it uses the powerpc shared linker script, this only needs to have the necessary optimisations added.			
#2589	fixed	Documentation	Chris Johns	Joel Sherrill
Summary	Update Applications Ada User's Guide			
Description	Update the Applications Ada User's Guide to REST format.			
#2594	fixed	Documentation	Chris Johns	
Summary	Update POSIX 1003.1 Compliance Guide			
Description	Update the POSIX 1003.1 Compliance Guide to REST format.			
#2595	fixed	Documentation	Chris Johns	
Summary	Update Filesystem Design Guide			
Description	Update the Filesystem Design Guide to REST format.			
#2645	fixed	General	Joel Sherrill	Chris Johns
Summary	RSB qemu bset issues and failure			
Description	Trying to build qemu on RSB master, I got errors for qemu_version and rtems_version not being defined. I added the following lines to bare/config/devel/qemu.bset which may or may not be correct but seemed to work. <pre>%define qemu_version 42d58e7c6760cb9c55627c28ae538e27dcf2f144 %define rtems_version 4.12</pre>			
Description	May also be broken on 4.11 branch. Did not check. <pre>../source-builder/sb-set-builder --log=l-qemu.txt --prefix=/home/joel/rtems-class-201604/tools/4.12 devel/qemu</pre>			
#2646	fixed	RSB	Joel Sherrill	Chris Johns
Summary	glib cfg file is missing hash. Fails in release mode			
Description	glib is missing the hash. Following patch should fix it. Found on master, likely impacts all branches. <pre>diff --git a/bare/config/devel/glib-2.39.3-1.cfg b/bare/config/devel/glib-2.39.3-1.cfg index 405e511..ab289db 100644 --- a/bare/config/devel/glib-2.39.3-1.cfg +++ b/bare/config/devel/glib-2.39.3-1.cfg @@ -11,6 +11,7 @@</pre>			
Description	<pre>%define glib_version_major 2.39 %define glib_version_minor 3 %define glib_version %{glib_version_major}.%{glib_version_minor}</pre>			

```
on +%hash md5 glib-%{glib_version}.tar.xz c8ddc045e12cfafdea607c138f3f8429
```

```
# # The GLib build instructions. We use 2.x.x Release 1.
```

<b>#2721</b>	fixed	General	Sebastian Huber	Sebastian Huber <sebastian.huber@...>
Summary	sem_init() does not honour SEM_VALUE_MAX			
Description	sem_init() succeeds even if the initial value exceeds SEM_VALUE_MAX.			
<b>#2731</b>	fixed	General	David Binderman	Gedare Bloom <gedare@...>
Summary	rtems/c/src/lib/libbsp/arm/raspberrypi/console/console_select.c:98]: (warning) Found calculation inside sizeof().			
Description	<p>Source code is</p> <pre>if ( strcmp( opt, "fbcons", sizeof( "fbcons" - 1 ) ) == 0 ) { Maybe better code if ( strcmp( opt, "fbcons", sizeof( "fbcons" ) - 1 ) == 0 ) {</pre>			
<b>#2756</b>	fixed	filesystem	snob-wolpik	
Summary	MSDOS_MAX_DIR_LENHT typo			
Description	<p>MSDOS_MAX_DIR_LENHT -&gt; MSDOS_MAX_DIR_LENGTH</p> <pre>\$ ack LENGHT msdos.h 239:#define MSDOS_MAX_DIR_LENHT          0x200000 /* 2,097,152 bytes */  msdos_create.c 193:         fat_fd-&gt;size_limit = MSDOS_MAX_DIR_LENHT;  msdos_initsupp.c 100:         fat_fd-&gt;size_limit = MSDOS_MAX_DIR_LENHT;  msdos_misc.c 391:         fat_fd-&gt;size_limit = MSDOS_MAX_DIR_LENHT; 584:         fat_fd-&gt;size_limit = MSDOS_MAX_DIR_LENHT; 653:         fat_fd-&gt;size_limit = MSDOS_MAX_DIR_LENHT;</pre> <p>P.S. Goes unnoticed since original 2002 commit.</p>			
<b>#2772</b>	duplicate	cpukit	Kuan-Hsun Chen	
Summary	Enhancement for more general real-time model			
Description	<p>In the current implementation, if a task period is time out, the next call of <code>rtems_rate_monotonic_period()</code> will only release one following job and manipulate the task period with the calling moment + the next length of period. With the assumption that implicit/constraint deadline and hard real-time model, the above mechanism is okay.</p> <p>However, it is not applicable for more general task models, e.g., soft real-time task, arbitrary deadline, mixed-criticality system [1-4]. It is in fact changing the behaviour of periodic/sporadic tasks, where the task period becomes unpredictable and shifted . Also, there maybe more than one postponed instances due to the preemption.</p> <p>Although there is no standard requirement in reality for deadline misses, with this enhancement, the postponed jobs will be released with the correct number without shifting the periodicity of tasks. In fact, this way of handling is already widely considered in academia from 90s [2] until now [3] or even on multicores as well [4].</p> <p>I refine the following four files and handle this requirement individually. The overhead seems to me negligible.</p> <pre>cpukit/rtems/include/rtems/ratemon.h cpukit/rtems/include/rtems/rtems/ratemonimpl.h cpukit/rtems/src/ratemontimeout.c cpukit/rtems/src/ratemonperiod.c</pre> <p>I believe this patch is good for further use in more general real-time task models. This enhancement only affect those timeout cases without changing any behaviour in normal cases. To demonstrate the differences, a heuristic example is prepared in <code>testsuites/sptests/sprmsched01</code> to show the benefit of the enhancement:</p> <p>Given two tasks with implicit deadline that task deadline is equal to its period. Task 1 period is 10000 ticks, whereas task 2 is 2000 ticks. Task 1 has the execution time 6000 ticks, and task 2 has 1000 ticks. Assume Task 1 has a higher priority than task 2. Task 1 only executes 2 times. In the expected result, we can observe that the postponed jobs are continuously released till there is no postponed job left, and the task period will still keep as it is. (Job 3-7 in task 2 are postponed jobs)</p> <p>[1] Buttazzo et al., <i>Soft Real-Time Systems: Predictability vs. Efficiency</i>, Springer 2005, <a href="http://www.springer.com/gp/book/9780387237015">http://www.springer.com/gp/book/9780387237015</a> [2] Lehoczky et al., Fixed priority scheduling of periodic task sets with arbitrary deadlines, RTSS 1990, <a href="http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=128748">http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=128748</a> [3] Georg von der Brüggen et al., Systems with Dynamic Real-Time Guarantees in Uncertain and Faulty Execution Environments, RTSS'16, accepted. [4] Huang et al., Response time bounds for sporadic arbitrary-deadline tasks under global fixed-priority scheduling on multiprocessors, RTNS 2015, <a href="http://dl.acm.org/citation.cfm?doid=2597457.2597459">http://dl.acm.org/citation.cfm?doid=2597457.2597459</a></p>			
<b>#2785</b>	fixed	cpukit	Alexander Krutwig	Sebastian Huber
Summary	Ioctl extension for termios			
Description	The termios driver shall be extended that I/O control commands can be handled.			
<b>#2801</b>	fixed	General	Tim Cussins	Tim Cussins <timcussins@...>
Summary	Invalid configuration option used in virtex bsp headers			
Description	<p>virtex4 and virtex5 bsp headers (bsp.h) define <code>CONFIGURE_INTERRUPT_STACK_MEMORY</code>, which causes <code>confdefs.h</code> to choke.</p> <p>As discussed on mailing list, they should instead set <code>BSP_INTERRUPT_STACK_SIZE</code>.</p>			
<b>#2812</b>	fixed	Documentation	Joel Sherrill	Chris Johns
Summary	Remove Texinfo Documentation			

y	With the converted documentation now suitable for public distribution and the new Sphinx documentation being the official documentation source, the Texinfo documentation source in the development tree needs to be removed.				
Description	<p>The patch is against the master but should apply easily to 4.11. Patch is too large to attach. Placed it at:  <a href="ftp://ftp.rtems.org/pub/rtems/people/joel/patches/0001-Remove-texinfo-format-documentation.-Replaced-by-Sph.patch.xz">ftp://ftp.rtems.org/pub/rtems/people/joel/patches/0001-Remove-texinfo-format-documentation.-Replaced-by-Sph.patch.xz</a></p> <p>Chris, please apply and commit to 4.11 and master when it makes sense in the 4.11 release sequence. Then close this ticket.</p> <p>Thanks.</p>				
#2813	<table border="1"> <tr> <td data-bbox="199 280 359 324">fixed</td> <td data-bbox="359 280 582 324">General</td> <td data-bbox="582 280 821 324">Joel Sherrill</td> <td data-bbox="821 280 1516 324">Chris Johns</td> </tr> </table>	fixed	General	Joel Sherrill	Chris Johns
fixed	General	Joel Sherrill	Chris Johns		
Summary	4.11.0 has incorrect version information				
Description	The version info in the tarball is wrong. We need to review Makefile.maint and make sure we are doing similar actions. The version.m4 files definitely need to be updated.				

Last modified on Mar 23, 2017, 4:18:04 AM

t a g  
4.11 4.11.1 release

## 4.11.0 (16 November 2017)

### Statistics

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<b>Total</b>	0
Fixed	0
Invalid	0
Works for me	0
Duplicate	0
Won't fix	0

### Distribution

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### Summary

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No results

### Details

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<b>Ticket</b> 	<b>Resolution</b>	<b>Component</b>	<b>Reporter</b>	<b>Owner</b>
No tickets found				

*Last modified on Mar 23, 2017, 4:16:22 AM*

t a g  
4.11 4.11.0 release