



RTEMS - 5.0.0-m1911 Release Notes

01 November 2019

RTEMS 5 Series Release Notes

These notes cover the dot releases:

5.1

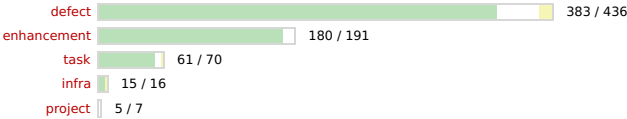
5.0

5.1 (open)

Statistics

Total	720
Fixed	590
Invalid	11
Works for me	6
Duplicate	10
Won't fix	27

Distribution



Summary

- #1247 RTEMS does not implement locks needed by multithreaded newlib
- #1394 scandir() fails due to MAXNAMELEN is incorrect
- #1662 termios.c: semaphore not deleted, consequently resulting in failure of rtems_termios_open
- #1747 Heap extend allows discontinuous memory regions.
- #1971 Memory leak in tmpfile()
- #2132 <rtems/score/basedefs.h> superfluously includes <limits.h>
- #2133 <rtems/score/basedefs.h> superfluously includes <string.h>
- #2135 times() and _times() are subject to integer overflows
- #2173 Potential integer overflow problem in EDF scheduler
- #2176 fishy behavior in termios tx task mode
- #2198 Automate doxygen build
- #2207 RTEMS tar does not overwrite.
- #2213 Decreased performance for whetstone benchmark using GCC >=4.5
- #2261 Add coverage report generation support to rtems-tools
- #2266 Move bsp_pretasking_hook() into files named bsppretaskinghook.c
- #2284 h8300 gets error linking dl0* tests
- #2289 rtems_ada_self is broken on SMP
- #2305 sp07 needs to be split into an user extensions and a notepad test
- #2306 powerpc/mvme5500/vectors/exceptionhandler.c uses task variables
- #2308 Change uniprocessor INIT task mode to preempt.
- #2325 Broken console driver infrastructure for SPARC
- #2344 Second argument of ualarm() is ignored
- #2350 One watchdog ticks header per scheduler instance
- #2354 Replace red-black tree implementation, change API
- #2355 SPARC: Several shared drivers are not SMP ready
- #2363 SPARC: Silent FP context corruption possible
- #2366 Create a Public API for the Atomic Operations
- #2367 Documentation of User Extensions needs more information
- #2377 rtems_waf: Tools without a version are not supported
- #2385 Warning from commit "bsps/arm: Do not use __ARM_ARCH_7A__"
- #2407 Enable function and data sections
- #2408 Linker set based initialization
- #2412 Improved priority inheritance implementation
- #2420 RSB %source file fails
- #2423 rtems_iterate_over_all_threads lacks user callback private pointer pass through
- #2428 Add 4.12 Tool Target Configurations to RSB
- #2441 lpc1768 variants fail to build with error in gpio.c
- #2442 Remove avrttest BSP
- #2443 Remove AVR Architectural Port
- #2444 Remove m68k/mvme136 BSP
- #2445 Remove m68k/sim68000 BSP
- #2446 Remove M32R Architectural Port
- #2447 Remove m32r/m32rsim
- #2448 Remove mips/mongoose BSP
- #2449 Remove arm/gba BSP
- #2450 Remove arm/nds
- #2451 Remove arm/gp32 BSP
- #2452 Remove H8300 Architectual Port
- #2453 Remove h8300/h8sim BSP
- #2454 Warning in threadqops.c
- #2455 Warning in spsimplsched02
- #2457 Remove powerpc/ep1a BSP
- #2458 Remove powerpc/score603e BSP
- #2459 Add rtems_chain_get_first_unprotected() to chain API
- #2464 RSB: Tool patches use the RTEMS version
- #2468 Add Thread Local Storage (TLS) support on x86
- #2477 Remove <rtems/debug.h>
- #2487 Should <https://devel.rtems.org/wiki/TBR/Delete/SpecBuilder> be Deleted?
- #2488 Vagrant Scripts
- #2490 RSB: Use SHA512 instead of MD5
- #2493 Remove notepads
- #2494 Remove task variables
- #2503 mvme5500 BSP: Exception Handler uses deprecated Notepads.
- #2509 Should "https://devel.rtems.org/wiki/TBR/Delete/BSP_Template" be replaced?
- #2513 Remove m68k/idp BSP
- #2514 Make POSIX API mandatory (except signals and the sporadic server)
- #2515 i386 score/libcpu API Layering Violation
- #2527 Move pc386/tools/bin2boot to rtems-tools
- #2529 BSP for the Atmel SAM V71/V70/E70/S70 chip platform
- #2536 RSB allows use of insecure hash algorithms like MD5 and SHA1
- #2537 Use Newlib exec*() variants and remove RTEMS versions
- #2542 Review cxx_iostream size change per function-section changes
- #2543 Obsolete gen68302 BSP
- #2544 Osolete m68k/ods68302
- #2545 Obsolete mbx8xx BSP

#2546 Obsolete idp BSP
#2553 [mvme3100] boot_card() broken by 37030e38
#2554 New watchdog handler implementation
#2555 Eliminate the Giant lock
#2556 Implement the O(m) Independence-Preserving Protocol (OMIP)
#2557 Add word splitting to print output
#2559 Delete the EXTERN pattern
#2560 smdk2410 is broken due to gp32 removal
#2562 RSB Docs Quick Start version number
#2576 arm/lpc176x: linker script update (add KEEP() sections)
#2606 alarm() uses seconds watchdog and thus is affected by clock changes
#2608 POSIX Condition Variables Clock Attribute Support
#2617 rtems_heap_allocate_aligned_with_boundary() body and prototype inconsistent
#2624 Fix the year 2038 problem
#2625 Use one lookup tree per-thread for the POSIX keys
#2626 Unify thread cancel/join and delete
#2627 Fix CPU time used for threads on SMP
#2628 Avoid home-grown condition variable implementation in the Classic Regions
#2631 Use an ISR lock to protect the state of Classic Rate Monotonic objects
#2632 rtems-tester failure
#2633 waf build failed for rtems-libbsd
#2634 New warning in pc386 VESA driver
#2638 pc386: ld -r issue with per function sections
#2641 configure: enable-rtemsbsp doesn't warn if bsp does not exist
#2644 sis does not run on gdb 7.11 but does on gdb 7.9
#2649 RSB remove 4.11, 4.10 and 4.9 from the master branch.
#2663 pc386 BSP has complex dependencies
#2664 spclock_err02
#2669 Update OpenRISC toolchain in 4.12
#2672 After latest patches with Objects_Get_by_name rtems-master not compiling without --enable-posix
#2674 CORE spinlock implementation is next to be useless
#2676 Obsolete clock_get() directive
#2680 Add pthread_setconcurrency() and pthread_getconcurrency()
#2684 rtems/c/src/lib/libbsp/sparc/leon3/clock/ckinit.c:122: duplicate if
#2685 c/src/lib/libbsp/arm/atsam/network/if_atsam.c:409: possible bad if statement
#2689 POSIX key destructors must be called during thread restart
#2692 User extensions execution order must be clarified
#2693 Update doc to reflect obsoleting rtems_clock_get()
#2694 linking issue for htonl, etc when using -std=c99
#2695 Add libatomic for RTEMS
#2696 Unpredictable errno value returned by sem_wait() in case of semaphore deletion
#2698 GCC 6.1 is broken for microblaze
#2700 cpukit/libfs/src/nfsclient/src/rpcio.c:524]: (style) Suspicious condition
#2701 Rename asm file with .S(upper case) ext. name
#2702 Remove descriptor objects for POSIX message queues
#2706 Buffer allocation of capture engine is broken on SMP configurations
#2707 Unsafe use of current processor index in capture engine
#2714 A pthread_detach() does not lead to a resource reclamation
#2718 Blocking _CORE_message_queue_Submit() may lead to unpredictable results
#2722 SEM_VALUE_MAX is unusually small on RTEMS
#2723 CPUINFO command to report per-processor information
#2725 Classic binary semaphores without a locking protocol can be released by everyone
#2726 grasc.c: Questionable use of binary semaphore
#2727 FAT file systems use wrong semaphore for mutual exclusion
#2728 Pipes use wrong semaphore for mutual exclusion
#2729 TFTP client uses wrong semaphore for mutual exclusion
#2732 Add clock_nanosleep()
#2734 pthread_setschedprio() is missing
#2735 pthread_setschedparam() sets the priority not according to POSIX
#2736 pthread_getschedparam() returns wrong priority values
#2737 Add CLOCK_DRIVER_USE_ONLY_BOOT_PROCESSOR
#2740 Suboptimal type for Timestamp_Control
#2741 New warning from printf plugin changes
#2742 New warning in SHM driver
#2745 Use clock from pthread_condattr in pthread_cond_timedwait
#2748 Move RTEMS-specific socket wake-up to RTEMS-specific <rtems/rtems_bsdnet.h>
#2749 rtems_task_set_scheduler() has insufficient parameters
#2750 Compile Error When Multiprocessing Enabled
#2751 Thread dispatch via interrupt is broken at least on ARM and PowerPC
#2752 Relax execution enviroment for thread begin extensions
#2754 no .strtab section
#2765 Application level deadlocks may lead to SMP lock level deadlocks
#2768 untar does not keep permissions correctly.
#2769 rtems-syms does not clean up temp files.
#2770 Missing documentation for RTEMS_LINKER_ROSET_CONTENT and RTEMS_LINKER_RWSET_CONTENT
#2771 Empty C++ file with just <rtems.h> does not compile with HEAD.
#2775 ARM CP15 arm_cp15_set_translation_table_entries fails if TTB in read-only memory
#2776 SPI Framework
#2777 Remove librtems+
#2784 Add function to get the current priority of a task by scheduler instance
#2788 RTEMS I2C API only defines Standard-mode (Sm) speed as a default.
#2790 Linker sets broken with GCC 7
#2795 Overrun Handling for general real-time models
#2797 Add ability to add/remove processors to/from a scheduler instance
#2798 Fix POSIX timer interval
#2800 qoriq variants failing to build
#2802 Test "libdl (RTL) 5" fails on SPARC targets
#2803 Get rid of CPU_BIG_ENDIAN and CPU_LITTLE_ENDIAN
#2805 Use SPRGO on PowerPC for current per-CPU control (SMP only)
#2807 rtems-docs repository is not known to trac
#2808 Conditionally provide rtems_interrupt_frame
#2809 Reduce interrupt latency on SMP configurations during thread dispatch
#2810 Remove sparc/sis BSP variant
#2811 More robust thread dispatching on SMP and ARM Cortex-M
#2816 Many ARM BSPs have Static Assert
#2817 All Blackfin BSPs do not Compile on Master
#2818 NIOS2 Does Not Compile on Master
#2819 powerpc-ss555 does not compile on master
#2820 All SPARC64 BSPs do not Build on master
#2821 No BSPs Build on Master

#2822 m32csim does not build on master
#2823 Nearly all m68k BSPs do not Build on Master
#2824 arm/lpc23xx_tti800 no longer links tar01
#2825 Improve the fatal error handling chapter of the user manual
#2826 arm_cp15_get_translation_table_base_control_register warning.
#2829 xz git URL in README is broken
#2835 Ada support is broken on SMP configurations
#2836 Add posix_devctl()
#2838 Termios task driven mode should use mutex for device operations
#2839 Add new interrupt server driven Termios mode
#2840 Use self-contained mutexes for Termios framework
#2841 Add NXP SC16IS752 serial device driver
#2843 Use self-contained objects instead of Classic API for drivers and support libraries
#2844 JFFS2: Add IO controls to get filesystem instance information and force a garbage collection
#2845 Add I2C framework documentation
#2849 ATA/IDE support in RTEMS is out-dated
#2850 Driver manual covers non-existent Analog Driver
#2851 Driver manual covers non-existent Discrete Driver
#2853 Driver manual covers non-existent Non-Volatile Memory Driver
#2858 Add user defined thread names
#2859 Implement POSIX Shared Memory Objects
#2862 docs.rtems.org Add support to ReST format releases.
#2863 Update POSIX 1003.1 Compliance Guide for ReST
#2864 docs.rtems.org Automatic update of branches content when a rtems-doc.git change is made.
#2865 Coverpage installed when building the docs repeats catalogue.xml entries
#2867 Fix exclude rule in rtems-test-check
#2868 src/c/src/lib/libbsp/arm/smdk2410/smc/smc.c: 3 * pointless local variables ?
#2873 src/c/src/lib/libbsp/arm/raspberrypi/i2c/i2c.c:320: defective error checking ?
#2874 src/c/src/lib/libbsp/powerpc/beatnik/marvell/gt_timer.c: 4 * pointless check ?
#2877 DHCP client fails on complex networks
#2878 src/c/src/lib/libbsp/sparc/shared/can/occan.c:1573: broken error checking ?
#2879 src/cpukit/libdebugger/rtems-debugger-server.c: four problems
#2880 src/cpukit/libfs/src/jffs2/src/readinode.c:189: faulty logic
#2883 src/c/src/lib/libbsp/arm/tms570/console/tms570-sci.c:248: strange expression ?
#2885 Fix rtems_rate_monotonic_postponed_job_count() prototype
#2889 RTEMS_STACK_CHECKER_EXTENSION has incomplete definition
#2890 _RBTree_Initialize_node generates warnings
#2893 Remove CONFIGURE_SMP_APPLICATION
#2894 Rename CONFIGURE_SMP_MAXIMUM_PROCESSORS to CONFIGURE_MAXIMUM_PROCESSORS
#2895 Prefix the confdefs.h internal defines with an underscore
#2896 RSB requirements are missing pax
#2897 Update termios.h to match the latest FREEBSD definitions
#2905 Merge LEON
#2906 rtems-doc waf configure does not detect sphinxcontrib.bibtex status
#2909 xz: Support for 64-bit CRC is build although XZ_USE_CRC64 is not defined
#2912 libdebugger: control reaches end of non-void function
#2916 termios: Change receive callback invocation to enable select() and poll() support
#2917 termios: Make write POSIX compatible
#2922 libdl unresolved externals that use more than one block or multiple entries corrupts.
#2923 Questionable Code in resource_snapshot.c
#2924 Warnings in SPARC BSPs
#2925 Warnings in rti-obj-cache.c on some targets
#2930 Coverity Reports Out of Bounds Read in drvmgr_print.c
#2933 Flexbleassignto is broken on new ticket page.
#2935 Termios task driven mode not compatible with SMP
#2941 building rsb freezes
#2942 rtems building error
#2943 rtems building error
#2945 Many failures on LEON3 with SMP disabled
#2946 Add a top level global testsuite configuration file (.tcfg) and a 'user-input' test state.
#2949 Questionable patch organization in RTEMS tools and RSB
#2951 Error path in rtems-gcc-6.3.0-newlib-2.5.0.20170228-1.cfg
#2954 ARM: Optimize context switch
#2957 Shared memory support internal locking is broken
#2958 Add some popular benchmark programs to the testsuite
#2959 arm/libdl: C++ exception index tables may not be ordered correctly
#2962 Set test configurations to reflect test results.
#2963 Add a testsuite top level configuration file that is common to all tests.
#2965 bootstrap sort inconsistent with sb-bootstrap for acinclude
#2967 ARM: Change ABI to not use short enums
#2968 newlib inttypes.h is missing some methods
#2969 qorIQ BSPs depend on mkimage which is not always available
#2976 warnings in rtems-debugger-server.c
#2977 warnings in Dhystone Benchmark
#2979 Load rap files failure with zeroed sections
#2980 pc586-sse does not compile fsjffs2gc01
#2981 testdata excludes on included tcfg files does not work
#2982 LibBSD broken with GCC+RTEMS changes
#2983 Create <rtems/inttypes.h> to consolidate extensions to <inttypes.h>
#2984 Changing Trac milestone page fails.
#2990 RTEMS Source Builder Fails on Windows Builds
#2992 Long path crashes the RSB when listing a directory.
#2993 SMP assert in _Thread_Executing in libdebugger
#2994 tar01 XZ error
#2995 Missing bsets
#2997 Monitor config command does not handle unlimited objects.
#2998 RTEMS User Manual Quick Start does not cover releases.
#2999 sb-check on Cygwin
#3000 Setting interrupt level in the mode arg on SMP returns RTEMS_UNSATISFIED
#3001 SMP build of RTEMS Testsuite does not set CONFIGURE_MAXIMUM_PROCESSORS
#3003 FAT does not support clusters bigger than 32K
#3006 SPARC LEON3 BSP SMP build is broken.
#3007 ARM caching issues
#3008 missing pax causes install failures
#3009 Provide invalid link handler for docs.rtems.org so old docs can be removed.
#3010 src/cpukit/posix/src/mmap.c:189]: (style) Suspicious condition
#3011 Error compiling xilinx_zynq_zedboard.
#3012 Global C++ IO streams are broken (cout, cin, cerr)
#3013 ProgrammingError: (1064, "You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'sid='nikolaykomashinskiy' AND authenticated=1 AND name='force_change_passwd' at line 1")

~~#3014~~ interrupt vector indexing is assuming BSP_INTERRUPT_VECTOR_MIN = 0 for this code.
~~#3015~~ Add support for IBM PPC 750 chip
~~#3016~~ missing a couple register names + a #ifndef __ASM__ around serial.h inclusion
~~#3017~~ improvement in pci.h
~~#3018~~ RSB cannot compile tool chain in CentOS 7.
~~#3023~~ Parameter of CPU_COPY() are in wrong order
~~#3025~~ m32c/m32csm does not build linpack-pc.c
~~#3027~~ RTEMS source builder fails when building gcc documentation with newer versions of gcc
~~#3032~~ CPU_NAND_S() implementation is not in line with FreeBSD
~~#3036~~ CPU_CMP() implementation is not in line with FreeBSD
~~#3040~~ Cannot use RTEMS mailing list archive for patches
~~#3043~~ 4.11/rtems-nios2 does not build on Windows.
~~#3046~~ 4.12/rtems-moxie missing release number.
~~#3047~~ Remove docs directory from the RSB
~~#3049~~ Warnings in libdebugger
~~#3052~~ RSB: powerpc GDB build broken on Apple Darwin
~~#3054~~ gdb 7.12.1 on RSB 4.12 branch fail to build on Archlinux
~~#3056~~ Add EDF SMP scheduler
~~#3057~~ Add a workaround for the LEON3FT store-store errata
~~#3059~~ Add a simple processor affinity support to the EDF SMP scheduler
~~#3061~~ including 'unistd.h' in C++ does not build.
~~#3063~~ Make the EDF scheduler the default SMP scheduler
~~#3069~~ Add rtems_scheduler_ident_by_processor()
~~#3070~~ Add rtems_scheduler_ident_by_processor_set()
~~#3071~~ Create an interrupt server for every processor in the system
~~#3072~~ Declaration of global functions in driver source files
~~#3076~~ Test suite failures due to floating point usage
~~#3077~~ SPARC: Add lazy floating point context switching
~~#3079~~ Ada tests do not build
~~#3080~~ Infinite loop in SPARC rtems_invalidate_multiple_instruction_lines()
~~#3082~~ Add 64-bit support for PowerPC
~~#3083~~ parallel make not working
~~#3084~~ Makefile recipe override warning has returned
~~#3085~~ Add hypervisor support for QorIQ BSPs
~~#3087~~ RSB rtems-gdb-7.12-1.cfg MD5 value is ERROR
~~#3088~~ shell test in testsuites\samples\fileio many COMMANDs is Lost
~~#3089~~ Inconsistent blocking addressing in RFS
~~#3090~~ Add BSP for i.MX 7
~~#3091~~ Core Dump in powerpc-rtems4.12-ld
~~#3096~~ Shell internal commands should be public.
~~#3098~~ Add new RTEMS repos to github.
~~#3099~~ Add RTEMS FDT wrapper and shell command to libmisc
~~#3100~~ Add Xilinx AXI I2C driver
~~#3101~~ Add I2C Drivers for LM25066A, TMP112, ADS1113 and ADS1115
~~#3102~~ rtems-exeinfo does not decode ARM static constructors.
~~#3103~~ rtems-tools on CentOS 7 Build Failure
~~#3109~~ Add RISC-V support
~~#3111~~ Newlib: Change time_t and clock_t integer types to 64-bit
~~#3112~~ POSIX: Make pthread_mutex_t self-contained
~~#3113~~ POSIX: Make pthread_cond_t self-contained
~~#3114~~ POSIX: Make pthread_barrier_t self-contained
~~#3115~~ POSIX: Make pthread_rwlock_t self-contained
~~#3116~~ POSIX: Make sem_t self-contained
~~#3117~~ score: Optimize _Thread_queue_Enqueue() timeout handling
~~#3121~~ clock() implementation in Newlib is broken
~~#3122~~ Simplify and unify BSP_output_char
~~#3123~~ GDB 8.0.1 is broken on FreeBSD 11
~~#3124~~ Ignore pshared attribute for POSIX semaphores
~~#3125~~ Accept PTHREAD_PROCESS_SHARED for POSIX mutexes
~~#3126~~ Accept PTHREAD_PROCESS_SHARED for POSIX barriers
~~#3127~~ MIPS tool build on Darwin (MacOS) fails.
~~#3128~~ RTEMS Tools corvar does not build on Windows.
~~#3129~~ RTEMS Tools covoar build fails on Windows
~~#3130~~ RTEMS Doxygen.in latex output does not build
~~#3132~~ Add reference counting to file descriptors
~~#3133~~ Remove rtems_libio_t::driver
~~#3134~~ Remove LIBIO_FLAGS_CREATE
~~#3135~~ Devel mailing list doesn't work and Git push impossible due to disk full
~~#3136~~ Use FIFO for file descriptor free list
~~#3137~~ Accept PTHREAD_PROCESS_SHARED for POSIX condition variables
~~#3139~~ Remove old ISR parameter from Clock_driver_support_install_isr() and make it optional
~~#3140~~ CPU Kit broken with --enable-rtems-debug
~~#3141~~ Change the BSP Howto's name to something smaller.
~~#3142~~ POSIX: Reduce size of pthread_once_t and make it zero-initialized
~~#3148~~ PSXRDWRV Test failure on Beaglebone Black
~~#3152~~ Beaglebone Black crashes on u-boot master build.
~~#3153~~ Accept PTHREAD_PROCESS_SHARED for POSIX rwlocks
~~#3157~~ PowerPC tools don't build on 32-bit hosts
~~#3158~~ Examples v2 does not build
~~#3159~~ Examples v2 trace linker ini files reference non-existing dump-on-error
~~#3160~~ Trace linker score support is broken
~~#3163~~ Add I2C device driver for temperature sensor LM75A
~~#3166~~ New default ticket assignee: NeedsReview
~~#3167~~ Internal status codes must not depend on RTEMS_POSIX_API
~~#3168~~ Simplify POSIX_API_Control
~~#3170~~ Use BSP_output_char via RTEMS printer or simple console driver for test output by default
~~#3171~~ RSB GCC does not build on High Sierra and APFS
~~#3172~~ i386 PC BSP does not reset when bsp_reset is called.
~~#3173~~ Xilinx AXI I2C driver IP race condition causes clock glitch.
~~#3174~~ Remove rtems_pthread_attribute_compare()
~~#3175~~ Merge FreeBSD timecounter changes from 2015-01-20 to now
~~#3176~~ _getreent in libc.a and generated by confdefs.h
~~#3177~~ Replace/update POSIX Compliance Guide
~~#3178~~ Update sh-rtems4.12 bset to use rtems-default (using old gcc)
~~#3179~~ New warnings from Time Changes
~~#3180~~ ar warning: `u' modifier ignored since `D' is the default (see `U')
~~#3181~~ Various cc1plus warnings for "valid for C/ObjC but not for C++"
~~#3182~~ CLOCK_REALTIME timeout implementation is not POSIX compliant
~~#3185~~ Change uptime seconds to int32_t
~~#3187~~ smptests/Makefile.am Issues

- ~~#3188~~ Add C11 Threading Examples
- ~~#3189~~ MUTEX_INITIALIZER missing braces warning
- ~~#3190~~ RTEMS Tester covoar does not link on MacOS
- ~~#3191~~ RTEMS Tester covoar dies with no arguments.
- ~~#3198~~ Add lazy update of line control and baud divisor to NS16550 serial driver
- ~~#3200~~ m32c tests don't build -- test_context too large
- ~~#3201~~ epiphany tools checksum error
- ~~#3202~~ or1k tools build error
- ~~#3203~~ Upgrade trac to fix numerous problems.
- ~~#3204~~ Exception in rtems-test
- ~~#3205~~ Relative timespec timeouts are subject to integer overflows
- ~~#3207~~ Supported Architectures Page is out of date
- ~~#3209~~ RSB should fail on this error
- ~~#3210~~ Improve the RSB build email message
- ~~#3211~~ Fix pthread_create() with user provided stack
- ~~#3212~~ Qemu Fails to Build, RSB Gives Odd Traceback
- ~~#3213~~ Move erc32, leon2, leon3, psim and jmr3904 to Tier 2
- ~~#3215~~ Configuring a System Still Includes Notepads and Has Wrong Heading
- ~~#3216~~ Replace vprintk() implementation
- ~~#3217~~ Add RTEMS version, build and tools details to tests
- ~~#3218~~ Termios canonical mode (ICANON) does not return input line by line
- ~~#3219~~ Zynq BSP missing linker option --gc-sections
- ~~#3220~~ Change RTEMS release number scheme from 4.12 to 5
- ~~#3221~~ RSB wiki page duplicates documentation
- ~~#3224~~ Upgrade or1k and m32c to Binutils 2.29
- ~~#3225~~ Upgrade m32c to GDB 8.0.1
- ~~#3226~~ gdb: pr 16827, fix sim on Mavrick
- ~~#3227~~ sb-check fails on Msys2 64-bit
- ~~#3228~~ aarch64 missing from 5/rtems-all build set
- ~~#3229~~ Add index to all documents.
- ~~#3230~~ RSB does not report --rsb-file for patches correctly.
- ~~#3231~~ RTEMS Top level README needs updating.
- ~~#3232~~ Use of `.. include::` in the User Manual should be changed.
- ~~#3234~~ Quick Start Instructions Inconsistent
- ~~#3235~~ Fix rtems_semaphore_flush() for priority inheritance semaphores
- ~~#3236~~ Fix thread queue owner priority update in _Thread_queue_Flush_critical()
- ~~#3237~~ Fix priority ceiling updates
- ~~#3238~~ Git push to Trac with more than one commit does not update tickets.
- ~~#3239~~ Add getentropy() implementation provided by each BSP
- ~~#3240~~ cpukit/libmisc/stackchk/check.c stack addresses formatted incorrectly.
- ~~#3242~~ Workarounds for UT699, UT700, and GR712RC errata
- ~~#3243~~ Simplify global construction
- ~~#3244~~ Change rtems_panic() implementation and document this function
- ~~#3245~~ Replace BSP_panic() with rtems_panic()
- ~~#3246~~ Remove _BSP_Fatal_error()
- ~~#3247~~ Remove BSP-specific defaults for RTEMS_BSP_CLEANUP_OPTIONS()
- ~~#3248~~ Add BSP_VERBOSE_FATAL_EXTENSION to RTEMS_BSP_CLEANUP_OPTIONS
- ~~#3249~~ imx7 does not link getentropy01 test on master
- ~~#3254~~ Reorganize header files to avoid "make preinstall"
- ~~#3255~~ Warnings on 64-bit targets
- ~~#3256~~ Ada run-time needs support for self-contained POSIX synchronization objects
- ~~#3260~~ libpci depends on BSP-specific header files
- ~~#3261~~ A couple of documentation typos
- ~~#3264~~ Add monotonic watchdog based on uptime
- ~~#3265~~ Use second one based uptime for CLOCK_MONOTONIC for FreeBSD compatibility
- ~~#3266~~ cpukit/libpci references BSP headers.
- ~~#3267~~ rtems/status-checks.h calls printk without including the needed header.
- ~~#3268~~ PowerPC BSP include naming mess.
- ~~#3269~~ Make the IRQ extensions API a standard API
- ~~#3270~~ Remove unused support for MPC505
- ~~#3273~~ RSB removed used tools configuration files.
- ~~#3277~~ QorIQ: Add MAC-less DPAA driver to libbsd
- ~~#3278~~ bsp-builder has incorrect print (%s in output)
- ~~#3281~~ Add epiphany support to GDB 8.0.0
- ~~#3283~~ Bad URL in OpenOCD/Xilinx_Zynq Wiki Page
- ~~#3284~~ RSB uses hard coded GCC binary paths
- ~~#3285~~ Reorganize BSP source directory
- ~~#3290~~ Add device tree support to Altera/Intel Cyclone V BSP
- ~~#3294~~ gcc version report for released tools is wrong.
- ~~#3298~~ dlerror non-conformance
- ~~#3305~~ Add paravirtualization support to ARM
- ~~#3306~~ Add paravirtualization support to PowerPC
- ~~#3307~~ PowerPC linkcmds.base missing wildcards on some sections
- ~~#3309~~ rtems_task_create's initial_mode SMP update
- ~~#3312~~ RSB macro calls such as define fail on unicode keys.
- ~~#3315~~ Move expat's home site to github from SF.
- ~~#3318~~ Improve INTERNAL_ERROR_THREAD_EXITTED to show the id and thread name
- ~~#3320~~ Add a simple task console driver
- ~~#3323~~ mhttpd's http etag can result in invalid caching in a browser.
- ~~#3325~~ Simplify clustered scheduler configuration
- ~~#3327~~ Eliminate score/cpu/*/*.../types.h
- ~~#3328~~ bootstrap uses non-POSIX compliant echo -e
- ~~#3329~~ Trac Login Failure (bad password) Causes Internal Error
- ~~#3334~~ deadlock in _once()
- ~~#3339~~ Several PowerPC linker commands do not support constructors/destructors with priority
- ~~#3340~~ gen83xx warning for macros redefined
- ~~#3341~~ sparc64: Macro Redefined
- ~~#3342~~ pthread_setschedparam() has incorrect prototype
- ~~#3343~~ pthread_mutex_getprioceiling() has incorrect prototype
- ~~#3344~~ mcf5272/mcf5272.h Timer3 Duplicate Definition
- ~~#3345~~ mvme3100 spaces needed around quote in macro definitions in bsp.h
- ~~#3346~~ bf533.h
- ~~#3348~~ beatnick:spaces needed around quote in macro definitions in bsp.h
- ~~#3349~~ pc386 edid.h invalid macro names
- ~~#3350~~ sptimecounter02 warning due to defining _KERNEL and disabling part of <sys/time.h>
- ~~#3352~~ Warning in all lpc176x variants
- ~~#3354~~ PowerPC BSPs duplicate PAGE_MASK, etc redefinition
- ~~#3358~~ Deprecate rtems_disk_create_phys(), etc.
- ~~#3374~~ rtems-test does not honor --mail-from argument
- ~~#3375~~ Remove command line pre-processor defines

#3376 Remove cklength program
#3377 Remove eolstrip program
#3378 Remove unhex program
#3379 Remove packhex program
#3380 Move rtems-bin2c program to rtems-tools
#3381 rtems-test command line documentation appears to be out of date
#3382 Testsuite Makefile merge to one per group of tests
#3383 Require --enable-rtemsbsp with --enable-smp or --enable-multiprocessor
#3384 Prefer int for int32_t
#3385 Generate an error if RTEMS's gcc is not found when the user runs configure
#3386 Trac's git changeset browsing is suspect.
#3387 Add subdir-objects to automake flags
#3388 rtems-tester: possible parsing error for qemu-prep-altivec on exclude SMP configuration
#3389 Warning flags have disappeared with recent autoconf changes
#3390 NFS: Remove support for cexp
#3392 infinite loop in RSB's path when a prefix path is not writable
#3395 rtems-ld does not remove executable when there is an output error
#3396 rtems-ld does not handle R_ARM_V4BX relocation records
#3397 The register keyword is deprecated in C++11
#3400 dl06 error for powerpc/qoriq_e6500 unknown machine type
#3401 dl06: tms570* Mixed LSB/MSB Error
#3402 dl06: mips hurricane Mixed Endian Error
#3403 RSB RTEMS tool set build is irreproducible
#3407 Move Gaisler.org and Gaisler.se hosted RSB patches to rtems.org
#3409 Strip down configure checks to the bare minimum
#3410 Remove bin2boot program used by i386 BSPs
#3411 qemu-ppc does not install linkcmds.base
#3413 examples-v2 both_hello and triple_period fail to build
#3415 Add examples and tests as components
#3416 Update Ubuntu RSB Instructions for 17.10
#3417 Add libdwf to elftoolchain and provide a C++ wrapper
#3418 Remove difftest and sorttimes test tools
#3419 Always build network services (tftps, ftps, ftpd, telnetd, libdebugger)
#3421 New Trac components for Coverage and Trace
#3423 examples-v2: m68k/powerpc BSPs undefined reference to _Thread_Life_action_handler
#3424 examples-v2: no MIPS BSPs pass configuration step
#3425 examples-v2: PowerPC fails to build fat_ramdisk
#3432 Remove Simple SMP Priority Scheduler
#3433 Add SMP support for RISC-V
#3434 Add CONFIGURE_MINIMUM_POSIX_THREAD_STACK_SIZE configuration option
#3435 Add test case for CONFIGURE_BSP_PREREQUISITE_DRIVERS configuration option
#3436 Remove clock driver Clock_driver_support_shutdown_hardware() hook
#3437 Replace use of printf() in free() with a fatal error
#3443 Remove shgen program
#3444 Remove nios2gen program
#3445 Remove multigen script
#3446 Remove cvsignore-add.sh script
#3447 Remove rtems-testsuite-autostuff script
#3448 Add GCC, Binutils+GDB, Newlib mirrors to RTEMS github
#3451 Remove size_rtems script
#3452 Update RISC-V tool chain to support standard 64-bit chips
#3453 Add RISC-V GDB
#3454 Tracing Framework Documentation in User Manual
#3455 Remove install-if-change script
#3456 Add support for CPU counter timestamps
#3458 rtems-test should not use the env PATH to find covoar
#3459 Rework initialization and interrupt stack support
#3460 GDB 8 SIS LEON2 LEON3 Patches
#3461 Canadian cross compilation of RTEMS tools not supported for x86_64-mingw32
#3463 Convert covoar to use DWARF function data
#3465 Integrate all changes from Linux v3.11 to v4.17 made in the JFFS2 sources
#3471 Update libfdt as of date 2018-07-09
#3472 Update of libbsd to a version close to the FreeBSD 12 release
#3475 Add RTEMS_PREDICT_TRUE() and RTEMS_PREDICT_FALSE() for static branch prediction hints
#3478 RISC-V BSP Tester Cleanup Needed
#3480 CONFIGURE_MINIMUM_TASK_STACK_SIZE may affect CONFIGURE_INTERRUPT_STACK_SIZE
#3482 Relax the buffer alignment required by rtems_partition_create()
#3484 RFS: Remove stray call of rtems_disk_release() in rtems_rfs_buffer_sync()
#3486 Use uintptr_t and size_t instead of uint32_t in rtems_partition_create()
#3488 Remove CONFIGURE_HAS_OWN_MOUNT_TABLE
#3489 Obsolete CONFIGURE_HAS_OWN_CONFIGURATION_TABLE
#3490 Remove CONFIGURE_HAS_OWN_CONFIGURATION_TABLE
#3491 Align mprotect() prototype with POSIX
#3496 Remove superfluous interrupt enable in _Thread_Dispatch_enable()
#3498 Command and Variable Index is empty
#3499 The "Index" chapter is empty
#3500 Change rtems_waf's RTEMS path check from `bin` to share/rtems<version>`
#3501 MSR_RI defined multiple places
#3502 PL111_LCD_CONTROL_LCD_BPP_16 Redefined
#3503 PDF Documentation is missing an index
#3504 Warning and formatting in bsps/powerpc/mpc55xxevb/dev/dspi.c
#3505 powerpc/virtex redefined warning
#3506 waf for building RTEMS applications needs updating
#3507 Add flexible per-CPU data
#3508 Add support for thread to processor pinning
#3510 ATA driver uses deprecated rtems_blkdev services
#3511 int/pointer size warnings in powerpc-qoriq_e6500_64
#3512 sb-check: No python command with Python 2 and Python 3 installed
#3513 Convert tqm8xx console driver to new Termios API
#3516 sb-set-builder should report disk usage of build
#3517 RSB Ubuntu Host Requirements Missing Some
#3518 RSB MacOS Nits
#3519 RSB does not strictly check args
#3520 Remove CONFIGURE_HAS_OWN_FILESYSTEM_TABLE
#3522 Update mDNSResponder to Apple version v878.30.4
#3523 Add FEC network interface driver for TQM8XX
#3524 Add a separate system initialization handler set for secondary processors
#3525 Add MMC/SDCard support for i.MX 7Dual BSP
#3526 Convert PTY driver to new Termios API
#3528 Remove undocumented and untested CONFIGURE_MAXIMUM_PTYS

- #3529 Fix issues raised by Coverity Scan for Telnet server
- #3530 Fix issues raised by Coverity Scan for FTP server
- #3531 Add POSIX Attribute Reports for More Than Scheduler (examples-v2)
- #3532 RSB source only download is host specific
- #3533 Add rtems_task_exit()
- #3534 Reduce uses of rtems_event_transient_send()
- #3535 Remove stdin, stdout, stderr convenience routines for CEXP
- #3536 Move RTEMS configuration data to a common `config` directory
- #3537 RSB and RTEMS Tools Support for python2 and python3
- #3538 Classic API Barrier Wait Section Title Has Wrong Name
- #3539 Remove CPU_PROVIDES_IDLE_THREAD_BODY
- #3542 Remove keep_stdio feature from Telnet service
- #3543 Change Telnet server to allocate most resources during initialization
- #3545 Support O_DIRECTORY open() flag
- #3546 Support O_NOFOLLOW open() flag
- #3547 Support O_CLOEXEC open() flag
- #3549 Obsolete powerpc/virtex BSP
- #3551 Move default configuration to separate library
- #3552 cpu usage error in SMP mode
- #3553 rtems-libbsd Missing waf in Top Directory
- #3554 rtems-libbsd README.waf Needs an Update Sweep
- #3555 IRC bots need to be registered to join #rtems
- #3557 Test ticket
- #3558 Update TracSpamFilter
- #3559 Fix NavAdd plugin.
- #3560 Fix FlexibleAssignTo
- #3561 Migrate to CommitTicketUpdater
- #3562 Use a short paths for the RSB temporary build path on Windows
- #3568 RSB: UnboundLocalError: local variable 'build_max_size_human' referenced before assignment
- #3569 waf version in various rtems-repositories incompatible with python 3.7
- #3576 gdb 8.0.1 sis does not build on Cygwin
- #3577 Avoid CLooG and ISL host dependencies for target GCC
- #3579 testsuite's rtems-test-check.py python version support
- #3582 Remove dedicated support for boundary constraint in heap allocator
- #3583 Add rtems_malloc() and rtems_calloc()
- #3585 Deprecate proc_ptr
- #3587 Deprecate rtems_context
- #3589 Deprecate rtems_context_fp
- #3591 Deprecate region_information_block
- #3593 Deprecate rtems_thread_cpu_usage_t
- #3595 Deprecate rtems_rate_monotonic_period_time_t
- #3598 Move internal types of API objects to separate header file
- #3599 Remove m32c architecture port
- #3600 Update or1k tools to use GCC master
- #3602 Update or1k tool chain to use the upstream GCC
- #3603 Remove support for 16-bit object identifiers
- #3604 RTL Unresolved Symbols from common section on i386/pc686 (cloned)
- #3605 RTL Allows Unloading a Module other Modules Depend Upon (cloned)
- #3609 Update Spike Version in RSB (RISC-V simulator)
- #3612 RTL unresolved compaction does not update string indexes after removing a string
- #3615 [Wiki]Update data on development tools and Find a new home for it.
- #3620 CommitTicketUpdater does not process commits in order
- #3621 Statically initialize object information structures
- #3622 Remove cache routines working with a processor set
- #3623 rtems-syms invoking m68k-rtemsundefined-gcc
- #3624 MSYS2 builds appear to ignore tcfg file
- #3625 RTL Allows Unloading a Module other Modules Depend Upon (cloned)
- #3626 sigtimedwait() needed when POSIX is disabled
- #3628 moxie/moxiesim rtems-syms unknown machine type
- #3629 Add RSB reporting section to the documentation.
- #3630 Build of rtems-tools fails with i686-w64-mingw32
- #3636 Add rtems_scheduler_get_maximum_priority()
- #3637 Fix rtems_task_restart() argument type
- #3649 Error with IRC anouncing in examples-v2 commits.
- #3651 Sphinx 1.8 PDF (latex) on FreeBSD does not build
- #3664 RSB config parsing slow on python3
- #3665 Add low level event recording infrastructure
- #3666 Add support for C++17 std::aligned_alloc
- #3667 Support data cache disable on ARMv7-AR
- #3669 rtems-docs.git does not build with Sphinx 1.8.2 and 1.8.3
- #3670 examples-v2 uses deprecated or obsolete RTEMS interfaces
- #3671 rtems-test needs a --version option or similar
- #3672 No i386 BSP can link all tests after cache manager changes
- #3673 xilinx_zynq_a9_qemu - fails to link psxconfig01
- #3674 Raspberry Pi Fails to Build
- #3675 RSB: Change default prefix to OS prefix + "rtems" + \$rtems_version
- #3677 ARM BSP contains ARM code in THUMB only build
- #3678 Add RISC-V BSP with support for the grlib
- #3682 Add BSP for Xilinx Zynq UltraScale+ MPSoC platform
- #3683 Git clone via HTTPS does not give much interactive feedback
- #3684 rtems_print_buffer is broken
- #3685 Add large memory support to libdl
- #3686 Add library searching and loading to libdl
- #3687 Add architecture section support to libdl and support PowerPC's small data.
- #3688 rtems-docs fails to build with python3
- #3689 bdbuf: Replace automatic read-ahead with rtems_bdbuf_peek()
- #3692 libdl does not honour write unlock/lock for sections
- #3693 libdl incorrectly handles MIPS16hi/lo relocs
- #3694 shm_open has logically unreachable code (Coverity ID: 1399706, 1399714)
- #3698 libdl failure on many PowerPC BSPs
- #3699 Wrong system register specified for ARM virtual timer value retrieval
- #3700 Add rtems_rate_monotonic_deadline()
- #3719 Update libcrypt to latest FreeBSD to address Coverity Scan Issues
- #3720 mfill shell command uses the wrong arguments for the memset()
- #3724 bsp/lpc24xx: Convert SSP driver to Linux API
- #3725 bsp/lpc24xx: Convert I2C driver to Linux API
- #3728 Set small data section to max size for mvme5500 and motorola_powerpc BSPs
- #3729 Add extra variables to bsp.pc.in
- #3731 Add rtems_scheduler_get_processor()
- #3732 Add rtems_scheduler_get_processor_maximum()

- #3733 Add general reg support to libdebugger
- #3734 Add RTEMS_CONST attribute
- #3735 Remove CONFIGURE_HAS_OWN_MULTIPROCESSING_TABLE
- #3736 PowerPC Beatnik BSP C++ exceptions broken
- #3740 Libld does not load incrementally linked object file
- #3741 libld loading ELF objects from libbsd NFS file system ends in a deadlock
- #3742 T_config conflicting type qualifiers for 'config'
- #3743 RSB os and arch config logic is broken
- #3745 RTL lacks support for `group` (17) type sections
- #3746 libld test dl05.exe failing
- #3747 Address Cortex-M3 Errata 602117
- #3748 libld uses a linear symbol search on object file symbols
- #3751 No documentation on Region Get Information Directives
- #3752 Strong APA Scheduler Undocumented
- #3753 Rename CONFIGURE_LIBIO_MAXIMUM_FILE_DESCRIPTOR
- #3754 Users Guide Ubuntu Instructions Have Typo
- #3756 Condition codes in PSR are destroyed by lazy FP context switch
- #3760 BBB MMU update crashes
- #3762 Return the current handler from ARM cp15 set exception call
- #3763 RSB SIS build fails on FreeBSD
- #3765 FreeBSD and Newlib qsort_r do not match
- #3767 Should all PPC BSPs build with -mstrict-align?
- #3768 Add staging support to Makefile.inc
- #3769 RSB BSP Buildsets
- #3770 RSB 3rd party packages failing to build
- #3773 RPi fails to boot
- #3774 RPi2 SMP does not build
- #3775 libld does not handle ARM mode reloc tramp parsing
- #3776 libld ARM does not support ARM mode trampolines.
- #3777 libld object unload debugger delete support is broken
- #3781 RSB crashes in case the host as an unreadable directory in "/"
- #3783 MSYS2 RSB build error
- #3785 Add RISC-V BSP with support for the Freedom E310 Arty A7 FPGA
- #3789 TMS570 appcication build error
- #3792 RSB fails to build on MSYS2
- #3793 trace record tool does not build on Windows
- #3794 Initial POSIX Signals Mask Incorrect
- #3796 docs/develenv directory structure bitrot
- #3797 Add LLVM as a package
- #3798 Add socketmark to libbsd
- #3800 termios - Add Capability to Generate SIGINTR and SIGQUIT
- #3802 RSB Build of Spike Fails on Second Time (bug in upstream spike)
- #3803 RSB ssl context error fetching qemu patches
- #3804 sb-get-sources: Error repo_mail referenced before assignment
- #3805 libdebugger build error on atsamv
- #3806 Add fatal error for heap errors

Details

Ticket	Created	Resolution	Component	Reporter	Owner	Modified
#1247	12 years ago	fixed	fs	strauman	Chris Johns	2 years ago
Summary	RTEMS does not implement locks needed by multithreaded newlib					
Description	multi-threaded newlib protects a number of internal data structures (as of newlib-1.15 these comprise: • global list of FILE objects • stdio FILE object initializer • individual FILEs [since FILEs with the exception of stdin/stdout/stderr are per-process entities] • global hash table used by telldir/seekdir • individual DIR structures (opendir/readdir) • atexit list • list of environment variables • global timezone variable) using mutexes. It expects the OS to implement these locks but defaults to not using locking if the OS does not provide an implementation. Currently, RTEMS does *not* provide its own implementation of 'sys/lock.h' and therefore vital data structures in newlib are currently *unprotected* (with the exception of environment variables -- 'envlock.c' had been added to RTEMS a while ago but since then, newlib has introduced more locks and a general OS interface which - once implemented - will obsolete 'envlock.c'). Note that while semantics of having no protection for individual FILE objects may be tolerable, having no protection for global newlib data structures such as lists of FILEs is not acceptable. I am currently working on an implementation which should be available shortly.					
#1394	11 years ago	fixed	tool/newlib	Daniel Hellstrom	Chris Johns	2 years ago
Summary	scandir() fails due to MAXNAMELEN is incorrect					
Description	I have been trying to use scandir() however the newlib one does not work due to MAXNAMELEN and NAMELEN differ. scandir in libcsupport seems to have a fix for this, however my libcsupport_a-scandir.o is empty, I'm guessing because HAVE_SCANDIR is defined. It is used in scandir() (newlib-1.17.0/newlib/libc/posix/scandir.c:117) by the macro DIRSIZ. Where DIRSIZ uses the MAXNAMELEN define which is set incorrectly. It does not match the sizeof(struct dirent) which makes the DIRSIZ return a negative number, then malloc(DIRSIZ(d)) will try to allocate 4GB which fail. My guess is that MAXNAMELEN should be defined in newlib-1.17.0/newlib/libc/sys/rtems/sys/dirent.h or newlib-1.17.0/newlib/libc/sys/rtems/include/limits.h or in a new file. I tried to run the code below on my FAT filesystem, taken directly from the scandir(3) man page. <pre>/* print files in current directory in reverse order */ #include <dirent.h> main(){ struct dirent namelist; int n; n = scandir(".", &namelist, 0, NULL); if (n < 0) perror("scandir"); else { while(n--) { printf("%s\n", namelist[n]->d_name); free(namelist[n]); } free(namelist); } }</pre>					
#1662	9 years ago	fixed	fs	Bharath Suri	Chris Johns	21 months ago
Summary	termios.c: semaphore not deleted, consequently resulting in failure of rtems_termios_open					

Descripti on	The semaphore osem is still in use in rtems_semaphore_close while an attempt to delete it is made and hence is not deleted. Consequently, it results in a RTEMS_TOO_MANY on rtems_semaphore_create, which further results in failure of rtems_termios_open.					
#1747	9 years ago	fixed	score	Chris Johns	Sebastian Huber	2 years ago
Summar y	Heap extend allows discontinuous memory regions.					
Descripti on	The check in (cpukit/ChangeLog) states: 2010-06-07 Sebastian Huber <sebastian.huber@...> score/src/heapextend.c: Implemented support for scattered heap areas. The heap cannot support scattered blocks because the _Heap_Is_block_in_heap assumes the region is continuous between the first and last blocks of the heap. Making the gaps in the regions passed to the heap extend call used is questionable and makes the _Heap_Is_block_in_heap test not really perform the task it's name states. This is an issue because it is this check that determines if a heap free of NULL should proceed. This issue is covered in another PR. I also wonder about a heap free call to an address that maps to one of the "in-use" gap regions. The previous heap code knew if an address was in the heap and therefore it was kind of safe to probe for a valid block. This assumption is now not valid. The former heap extend code: http://www.rtems.org/viewvc/rtems/cpukit/score/src/heapextend.c?revision=1.7&view=markup clearly states the type of memory that can be added to an existing heap. The current code has no restrictions. The user manual is not great in this area. It would also be useful if comments are added to the heap extend code. The heap extend code is used by the rtems_region_extend call and this call clearly states in the manual that the memory region must be continuous. If this has changed we should discuss the API change and make better note of it. I also suspect the testsuite will need additions to test any API changes.					
#1971	8 years ago	fixed	fs	nopscmn	Chris Johns	21 months ago
Summar y	Memory leak in tmpfile()					
Descripti on	Hello, I use tmpfile() in my RTEMS application, and found that it has memory leak. I wrote small test application (see attachment), that output memory usage: Memory usage before: Number of used blocks: 12 Largest used block: 1288 Total bytes used: 3628 Memory used after: Number of used blocks: 1013 Largest used block: 1288 Total bytes used: 112064 By 1000 iteration, each call tmpfile() cause memory leak about 108 bytes.					
#2132	6 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summar y	<rtems/score/basedefs.h> superfluously includes <limits.h>					
Descripti on	In older RTEMS versions <rtems.h> provided <limits.h> indirectly. The include of <limits.h> was added to not break application source files that relied on this accidentally. We may remove this include in the future.					
#2133	6 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summar y	<rtems/score/basedefs.h> superfluously includes <string.h>					
Descripti on	In older RTEMS versions <rtems.h> provided <string.h> indirectly. The include of <string.h> was added to not break application source files that relied on this accidentally. We may remove this include in the future.					
#2135	6 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summar y	times() and _times() are subject to integer overflows					
Descripti on	The clock_t type is defined as unsigned long for RTEMS in Newlib. With a 1ms clock tick an overflow happens after 7 days on 32-bit long targets.					
#2173	6 years ago	fixed	score	Sebastian Huber	Joel Sherrill	2 years ago
Summar y	Potential integer overflow problem in EDF scheduler					
Descripti on	On 2014-03-21 14:46, Gedare Bloom wrote:> On Fri, Mar 21, 2014 at 9:43 AM, Sebastian Huber <sebastian.huber@...> wrote: [...] I have another question regarding the EDF scheduler. Does this work in case _Watchdog_Ticks_since_boot overflows? No. For this, I think we need to use "deadline folding" which is just modulo arithmetic. <pre>void _Scheduler_EDF_Release_job(Thread_Control *the_thread, uint32_t deadline) { Priority_Control new_priority; if (deadline) { /* Initializing or shifting deadline. */ new_priority = (_Watchdog_Ticks_since_boot + deadline) & ~SCHEDULER_EDF_PRIO_MSB; } else { /* Switch back to background priority. */ new_priority = the_thread->Start.initial_priority; } the_thread->real_priority = new_priority; _Thread_Change_priority(the_thread, new_priority, true); }</pre> _Watchdog_Ticks_since_boot us uint32_t and overflows after 49 days with a one millisecond clock tick.					
#2176	6 years ago	wontfix	score	Jeffrey Hill	Joel Sherrill	2 years ago
Summar y	fishy behavior in termios tx task mode					
Descripti on	I have a look around in the drivers in the various BSPs and I notice that none of the termios drivers appear to transmit characters at task level even if they are running in termios task mode. Maybe all (most) of them send characters in the ISR. If there was a large frame of characters to send then this could lock out task activity for too long. FWIW, I had a closer look at this today, and maybe something is fishy in the termios code when the TX part of termios runs in task driven mode. It seems that in task mode if the UART can accept characters immediately in the write routine then we wouldnt need to turn on any interrupts at all. The write routine would need to somehow tell termios how many characters it sent; presumably this would occur by calling rtems_termios_dequeue_characters in the driver's write function. I see in the code that this tries to work, rtems_termios_dequeue_characters posts the semaphore of termios tx and increases the characters sent count of termios. However after the write routine returns it goes badly. If the transmitter runs in termios TASK mode and the driver's write routine does not immediately enable an interrupt, then it returns to the code below in rtems_termios_puts and it sets the transmitter to rob_busy. After that the termios tx daemon proceeds to step through all of the characters remaining (I think that I see this in the debugger) and discards them because the transmitter stays in rob_busy state. It's also probably odd that termios calls the write function with interrupts disabled when it is in task driven mode; we could loop outputting a large frame of characters in the write routine at task level with interrupts globally disabled. <pre>if (tty->rawOutBufState == rob_idle) { /* check, whether XOFF has been received */ if (!(tty->flow_ctrl & FL_ORCVXOF)) {</pre>					

	(*tty->device.write)(tty->minor, (char *)&tty->rawOutBuf.theBuf[tty->rawOutBuf.Tail],1); } else { /* remember that output has been stopped due to flow ctrl*/ tty->flow_ctrl = FL_OSTOP; } tty->rawOutBufState = rob_busy; } [debug]#0 rtems_termios_puts (_buf=0x9ca60, len=1, tty=0x11509c) at /home/hill/nios2-rtems/rtems/rtems-git/rtems-4.10/c/src/./../cpukit/libcsupport/src/termios.c:677 [debug]##1 0x00015c68 in oproc (c=99 'c', tty=0x11509c) at /home/hill/nios2-rtems/rtems/rtems-git/rtems-4.10/c/src/./../cpukit/libcsupport/src/termios.c:748 [debug]##2 0x00015d9c in rtems_termios_write (arg=0x9cad8) at /home/hill/nios2-rtems/rtems/rtems-git/rtems-4.10/c/src/./../cpukit/libcsupport/src/termios.c:770 [debug]##3 0x00002ef0 in console_write (major=0, minor=0, arg=0x9cad8) at /home/hill/nios2-rtems/rtems/rtems-git/rtems-4.10/c/src/lib/libbsp/nios2/altera-sys-config/.console/console.c:171 [debug]##4 0x00006c328 in rtems_io_write (major=0, minor=0, argument=0x9cad8) at /home/hill/nios2-rtems/rtems/rtems-git/rtems-4.10/c/src/./../cpukit/sapi/src/iowrite.c:47 [debug]#5 0x00068044 in device_write (iop=0x114988, buffer=0x3366d4, count=44) at /home/hill/nios2-rtems/rtems/rtems-git/rtems-4.10/c/src/./../cpukit/libbfs/src/imfs/deviceio.c:160 [debug]##6 0x00017ef4 in write (fd=1, buffer=0x3366d4, count=44) at /home/hill/nios2-rtems/rtems/rtems-git/rtems-4.10/c/src/./../cpukit/libcsupport/src/write.c:51 [debug]##7 0x0007f078 in _write_r (ptr=0x9d638, fd=1, buf=0x3366d4, nbytes=44) at /home/hill/nios2-rtems/rtems/rtems-git/rtems-4.10/c/src/./../cpukit/libcsupport/src/write_r.c:38 [debug]##8 0x0006d488 in _fflush_r (ptr=0x9d638, fp=0x9d98c) at ./.././.././../nios2-rtems/altera/altera11.0/gnu-tools/rtems-patched/gcc-4.1/newlib/libc/stdio/fflush.c:214 [debug]##9 0x000754e8 in sfvwrite_r (ptr=0x9d638, fp=0x9d98c, uio=0x9cbe0) at ./.././.././../nios2-rtems/altera/altera11.0/gnu-tools/rtems-patched/gcc-4.1/newlib/libc/stdio/fvwrite.c:257 [debug]##10 0x0007830c in sprint_r (ptr=0x9d638, fp=0x20, uio=0x9cbe0) at ./.././.././../nios2-rtems/altera/altera11.0/gnu-tools/rtems-patched/gcc-4.1/newlib/libc/stdio/vfprintf.c:322 [debug]##11 0x00072fc8 in _vfprintf_r (data=0x9d638, fp=0x9d98c, fmt0=<value optimized out>, ap=0x0) at ./.././.././../nios2-rtems/altera/altera11.0/gnu-tools/rtems-patched/gcc-4.1/newlib/libc/stdio/vfprintf.c:1501 [debug]##12 0x0006dce8 in printf (fmt=0x1 "") at ./.././.././../nios2-rtems/altera/altera11.0/gnu-tools/rtems-patched/gcc-4.1/newlib/libc/stdio/printf.c:52 [debug]##13 0x00057de0 in bootpc_init (update_files=false, forever=true) at /home/hill/nios2-rtems/rtems/rtems-git/rtems-4.10/c/src/./../cpukit/libnetworking/nfs/bootp_subr.c:997 [debug]##14 0x0002960c in rtems_bsdnet_do_bootp () at /home/hill/nios2-rtems/rtems/rtems-git/rtems-4.10/c/src/./../cpukit/libnetworking/rtems_bootp.c:23 [debug]##15 0x0002b218 in rtems_bsdnet_initialize_network () at /home/hill/nios2-rtems/rtems/rtems-git/rtems-4.10/c/src/./../cpukit/libnetworking/rtems/rtems_glue.c:980 [debug]##16 0x00001528 in Init (ignored=565432) at init.c:47 [debug]##17 0x00006ccb0 in _Thread_Handler () at /home/hill/nios2-rtems/rtems/rtems-git/rtems-4.10/c/src/./../cpukit/score/src/threadhandler.c:145 [debug]##18 0x00006cc28 in _Thread_Is_heir (the_thread=0x6cc28) at ./../cpukit/./../altera-sys-config/lib/include/rtems/score/thread.inl:82 [debug]Backtrace stopped: frame did not save the PC						
	#2198	5 years ago	fixed	doc	Gedare Bloom	Chris Johns	17 months ago
Summary	Automate doxygen build						
Description	The doxygen builds are no longer being generated nightly.						
	#2207	5 years ago	fixed	unspecified	Chris Johns	Chris Johns	2 years ago
Summary	RTEMS tar does not overwrite.						
Description	A host tar by default will overwrite the contents of a directory. A sort of refresh. The RTEMS tar requires you remove the existing files rather than overwrite. This is dangerous because you have to remove files yet you do not know if the tar will be successful and moving and saving files assumes you know the contents of the tar file before hand. Tar should be changed to overwrite and so allow files to be refreshed. Consistence of files should be managed outside of tar via hashes or checksums.						
	#2213	5 years ago	fixed	tool/gcc	daniel.cederman	Daniel Hellstrom	2 years ago
Summary	Decreased performance for whetstone benchmark using GCC >=4.5						
Description	Moving from GCC 4.4.2 to 4.9.2 increases the execution time of the whetstone benchmark on both SPARC and x86. The cause seems to be a single commit. I have submitted a bug report to the GCC bugzilla: https://gcc.gnu.org/bugzilla/show_bug.cgi?id=64193						
	#2261	5 years ago	fixed	unspecified	Joel Sherrill		2 years ago
Summary	Add coverage report generation support to rtems-tools						
Description	This ticket is to capture the current state of the project started by Krzysztof Mięsiowicz <krzysztof.miesowicz@...>. The goals of the project were to: • replace the existing shell scripts in rtems-testing with Python code integrated into rtems-tools • add the capability to generate a report per directory. This is important because a large body of code with low coverage negatively impacts the overall coverage area and makes reports harder to read. Breaking the reports down by functional area lets us do coverage reporting on more code even when some of the areas are in need of testing improvement. The remaining effort in conjunction with other activity related to coverage such as inclusion of gcov generated reports is a good "summer of code" type project. This is an important capability to add to the rtems-tools. The attached tar file krzy-patches.tar.bz2 contains the current code. There may be other issues to resolve but writing from memory, the following are the highest priority ones: • no default setting for coverage enable/disable • configuration file has hard coded paths. This should be able to be a template which is adjusted by the tools at run-time. • variable naming and coding style does not match that used in other Python code in rtems-tools Krzysztof wrote some in his blog about this (http://kmiesowicz.blogspot.com/p/esa-socis-2014.html). Ensure that your base RTEMS tools are built with the RTEMS Source Builder and check on the development list if it builds a qemu with coverage support. This may have changed since he blogged.						
	#2266	5 years ago	invalid	unspecified	Joel Sherrill		2 years ago
Summary	Move bsp_pretasking_hook() into files named bsppretaskinghook.c						
Description	Over the past few years, we have split out the BSP required methods into their own files with consistent names. bsp_pretasking_hook() is next on the list. \$ grep -rl bsp_pretasking_hook . ./sparc/shared/bsppretaskinghook.c ./powerpc/score603e/startup/bspstart.c ./powerpc/beatnik/startup/bspstart.c ./powerpc/virtex5/startup/bspstart.c ./powerpc/virtex5/start/start.S ./powerpc/shared/startup/pretaskinghook.c ./powerpc/virtex4/startup/bspstart.c ./powerpc/virtex4/start/start.S ./powerpc/ep1a/startup/bspstart.c ./arm/lpc176x/startup/bspstart.c ./arm/lpc24xx/startup/bspstart.c ./bfin/bf537/Stamp/startup/bspstart.c ./bfin/bf537/Stamp/startup/bspstart.c ./bfin/TLL6527M/startup/bspstart.c ./bfin/eZKit533/startup/bspstart.c ./shared/include/bootcard.h ./shared/bsppretaskinghook.c ./shared/bootcard.c						
	#2284	5 years ago	wontfix	unspecified	Joel Sherrill	Chris Johns	2 years ago
Summary	h8300 gets error linking dl0* tests						
Description	rtems-syms -e -c "-mh -mint32 -O2 -g -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs" -o dl-sym.o dl01.pre h8300-rtems4.11-gcc -B./.././../h8sim/lib/ -specs bsp_specs -qrtems -mh -mint32 -O2 -g -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -mh -mint32 \ -o dl01.exe init.o dl-load.o dl-tar.o dl-sym.o dl-sym.o: In function `rtems_rtl_base_global_syms_init': rld-gTgaaa.c:(text+0xa): undefined reference to `rtemsrtl_base_globals_size' rld-gTgaaa.c:(text+0x10): undefined reference to `rtemsrtl_base_globals' collect2: error: ld returned 1 exit status						
	#2289	5 years ago	fixed	tool/gcc	Sebastian Huber	Needs Funding	2 years ago
Summary	rtems_ada_self is broken on SMP						
Description	The global variable rtems_ada_self is broken on SMP (similar to the task variables) and should be replaced with a function call or thread specific data.						
	#2305	5 years ago	wontfix	unspecified	Joel Sherrill		2 years ago
Summary	sp07 needs to be split into an user extensions and a notepad test						
Description	I was reviewing all code in the tree which uses deprecated methods. I will fix most of the cases. This is going to take a little more time. This test needs to be split apart. I think the notepad usage can go into a new test spnotepad02. It is primarily ensuring that two threads can exchange values through notepads. The remaining use of notepads in sp07 can probably just be a count down on the priority. I am starting to move code to spnotepad02 from sp07 that is not related to the tasks counting down. Hopefully I can resolve this without much feedback.						

#2306	5 years ago	fixed	arch/powerpc	Joel Sherrill		2 years ago
Summary	powerpc/mvme5500/vectors/exceptionhandler.c uses task variables					
Description	I am addressing almost all uses of deprecated methods. They are mostly calls to rtems_clock_get() which can be easily corrected or test code which will be removed when the deprecated feature is removed. This BSP however has what appears to be a unique feature -- the ability for a thread to add a unique exception fault handler. My inclination is to rip this out but I am not doing it now. I am just turning off deprecated warnings for the file.					
#2308	5 years ago	fixed	unspecified	Chris Johns		2 years ago
Summary	Change uniprocessor INIT task mode to preempt.					
Description	The current INIT task mode for a uni-processor build is NO_PREEMPT. This is not possible on an SMP system and so the default mode is PREEMPT. Both system should be the same and so the uniprocessor mode should be changed.					
#2325	5 years ago	fixed	arch/sparc	Sebastian Huber	Daniel Hellstrom	2 years ago
Summary	Broken console driver infrastructure for SPARC					
Description	The stuff in "c/src/lib/libbsp/sparc/shared/uart/cons.c" should get removed and the new Termios device API should be used instead (see also rtems_termios_device_install()).					
#2344	4 years ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Second argument of ualarm() is ignored					
Description	I don't think this is in line with POSIX.					
#2350	4 years ago	fixed	score	Sebastian Huber		2 years ago
Summary	One watchdog ticks header per scheduler instance					
Description	Currently there is one watchdog header for all ticks based watchdogs. This is not scalable. For example on the Freescale T4240 platform with 24-processors we observe in the smptests/smpwakeafter01 test a maximum thread dispatch disabled time of 3.8ms on processor 0 and 1.7ms on the other processors. <pre><PerCPUProfilingReport processorIndex="0"> <MaxThreadDispatchDisabledTime unit="ns">3807457</MaxThreadDispatchDisabledTime> <MeanThreadDispatchDisabledTime unit="ns">124091</MeanThreadDispatchDisabledTime> <TotalThreadDispatchDisabledTime unit="ns">1706880473</TotalThreadDispatchDisabledTime> <ThreadDispatchDisabledCount>13755</ThreadDispatchDisabledCount> <MaxInterruptDelay unit="ns">0</MaxInterruptDelay> <MaxInterruptTime unit="ns">24661</MaxInterruptTime> <MeanInterruptTime unit="ns">10148</MeanInterruptTime> <TotalInterruptTime unit="ns">127682501</TotalInterruptTime> <InterruptCount>12582</InterruptCount> </PerCPUProfilingReport> <PerCPUProfilingReport processorIndex="1"> <MaxThreadDispatchDisabledTime unit="ns">1715826</MaxThreadDispatchDisabledTime> <MeanThreadDispatchDisabledTime unit="ns">102805</MeanThreadDispatchDisabledTime> <TotalThreadDispatchDisabledTime unit="ns">1884937615</TotalThreadDispatchDisabledTime> <ThreadDispatchDisabledCount>18335</ThreadDispatchDisabledCount> <MaxInterruptDelay unit="ns">0</MaxInterruptDelay> <MaxInterruptTime unit="ns">47</MaxInterruptTime> <MeanInterruptTime unit="ns">12</MeanInterruptTime> <TotalInterruptTime unit="ns">8299</TotalInterruptTime> <InterruptCount>664</InterruptCount> </PerCPUProfilingReport> <SMPLockProfilingReport name="Watchdog"> <MaxAcquireTime unit="ns">47020</MaxAcquireTime> <MaxSectionTime unit="ns">2709</MaxSectionTime> <MeanAcquireTime unit="ns">31</MeanAcquireTime> <MeanSectionTime unit="ns">52</MeanSectionTime> <TotalAcquireTime unit="ns">990203330</TotalAcquireTime> <TotalSectionTime unit="ns">1674926849</TotalSectionTime> <UsageCount>31604848</UsageCount> <ContentionCount initialQueueLength="0">10574</ContentionCount> <ContentionCount initialQueueLength="1">8168</ContentionCount> <ContentionCount initialQueueLength="2">8578</ContentionCount> <ContentionCount initialQueueLength="3">31577528</ContentionCount> </SMPLockProfilingReport></pre> The watchdog lock is highly contended and since the watchdog insert procedure acquires and releases the lock during the iteration of the watchdog chain several times, this yields the high thread dispatch disabled times. To get rid of this bottleneck we should move the watchdog context into the scheduler context to use one watchdog context per scheduler instance. Take care that active watchdogs move in case of a scheduler change of a thread.					
#2354	4 years ago	fixed	unspecified	Sebastian Huber		2 years ago
Summary	Replace red-black tree implementation, change API					
Description	The RTEMS red-black tree implementation is not as good as the BSD implementation which performs quite well in a benchmark: https://github.com/sebhub/rb-bench Proposal: https://github.com/sebhub/rb-bench/blob/master/test-rbtree-bsd-for-rtems.c One benefit is that the search/insert is done inline and the red-black tree fixup is done in a general purpose _BSD_RBTree_Insert_color() function (similar to the Linux red-black tree API). This makes it possible to get rid of the red-black tree implementation used by the JFFS2 support.					
#2355	4 years ago	fixed	arch/sparc	Sebastian Huber	Daniel Hellstrom	2 years ago
Summary	SPARC: Several shared drivers are not SMP ready					
Description	Several drivers in c/src/lib/libbsp/sparc/shared/ use interrupt disable/enable for low-level mutual exclusion. This is not enough on SMP configurations.					
#2363	4 years ago	duplicate	arch/sparc	Sebastian Huber		21 months ago
Summary	SPARC: Silent FP context corruption possible					
Description	On uni-processor configurations the post-switch actions (e.g. signal handlers) and context switch extensions may silently corrupt the floating point context. Set test sptests/spcontext01. This problem exists for many years and might be working as intended. It is possible to fix this issue using the SPARC_USE_SAFE_FP_SUPPORT option. This is already used for the SMP configurations. The disadvantage is that this disables the deferred floating point support.					
#2366	4 years ago	wontfix	score	Joel Sherrill		2 years ago
Summary	Create a Public API for the Atomic Operations					
Description	Ticket #2364 regarded use of a pthread mutex in three graphics driver as basically an atomic flag to ensure only one open() was active at a time. This created an unnecessary dependency on the POSIX API being enabled. I changed the code to use score Atomic flags.					

Descripti on	This highlighted the need for a public Atomic API. The existing tests could be converted to the public API, a macro wrapper written for Classic API Atomics, and documentation added. This may be enough to be a small GSOC project.					
#2367	4 years ago	fixed	doc	mw	Sebastian Huber <sebastian.huber@...>	2 years ago
Summar y	Documentation of User Extensions needs more information					
Descripti on	The documentation for User Extension sets in the C User's Guide could use some clarification. It discusses the multiple sets of extensions, but it is unclear as to whether or not the extensions are added or replaced when rtems_extension_create() is called. There is a section - 22.2.4 (Order of Invocation) that does discuss the operation of the sets, but it only makes sense once the reader understands that the sets are, in fact, additive.					
#2377	4 years ago	wontfix	tool	Sebastian Huber		2 years ago
Summar y	rtems_waf: Tools without a version are not supported					
Descripti on	waf configure --prefix=/opt/rtems --rtems=/opt/rtems --rtems-tools=/opt/rtems --rtems-bsps=i386/pc686 Setting top to : /scratch/git-rtems-libbsd Setting out to : /scratch/git-rtems-libbsd/build Could not find any architectures (complete log in /scratch/git-rtems-libbsd-upstream/build/config.log)					
#2385	4 years ago	fixed	arch/arm	Chris Johns	Sebastian Huber	2 years ago
Summar y	Warning from commit "bsps/arm: Do not use ARM ARCH 7A"					
Descripti on	This change https://git.rtems.org/rtems/commit/?h=4.11&id=d0733bb8 generate a warning in user code. The warning is:					
	<pre>.../arm-errata.h:45:1: warning: 'in line' is not at beginning of declaration [-Wold-style-declaration] static bool inline arm_errata_is_applicable_processor_errata_764369(void) ^</pre>					
#2407	4 years ago	fixed	build	Sebastian Huber	Joel Sherrill	2 years ago
Summar y	Enable function and data sections					
Descripti on	In order to reduce the size of executables it is beneficial to put all global functions and data into separate sections. This enables the linker to perform a garbage collection which removes all items not directly referenced. The following steps are necessary: 1. Modify the build system to use the following compiler and linker flags: CFLAGS += -ffunction-sections -fdata-sections LDFLAGS += -Wl,--gc-sections 2. Review all linker command files and ensure that linker sets and global constructor sections are not affected by the garbage collection (e.g. use the KEEP() directive of GNU ld).					
#2408	4 years ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	19 months ago
Summar y	Linker set based initialization					
	Linker sets are used for example in Linux, FreeBSD (they are used in the RTEMS port of the FreeBSD network stack, e.g. libbsd), eCos and for global C++ constructors. They provide a space efficient and flexible means to initialize modules. A linker set consists of • dedicated input sections for the linker (e.g. <code>.ctors</code> and <code>.ctors.*</code> in the case of global constructors), • a begin marker (e.g. provided by <code>crtbegin.o</code>), and • an end marker (e.g. provided by <code>ctrend.o</code>). A module may place a certain data item into the dedicated input section. The linker will collect all such data items in this section and creates a begin and end marker. The initialization code can then use the begin and end markers to find all the collected data items (e.g. function pointers). Lets look how this works using a simple example. For this we need three files <code>myset.h</code>,					
	<pre>#ifndef MYSET_H #define MYSET_H /* The linker set items */ typedef struct { void (*func)(void); } item; /* * Macro to create a linker set item. The first parameter is * the designator of the item. It must be unique within the * module scope. The second parameter is the desired function. */ #define MYSET_ITEM(i, f) \ __attribute__((used)) \ __attribute__((section(".rtemsroset.myset.content"))) \ static item i = { f } #endif /* MYSET_H */</pre>					
	<code>module.c</code>					
	<pre>#include "myset.h" #include <stdio.h> /* * Some global function that needs a module specific * initialization done by f(). */ void g(void) { printf("g()\n"); } /* The module constructor */ static void f(void) { printf("f()\n"); } /* * This registers the module constructor f() * in the linker set "myset". */ MYSET_ITEM(i, &f);</pre>					
	and <code>init.c</code> .					
Descripti on						

```
#include "myset.h"
#include <stddef.h>

/* Should be in a proper header file */
void g(void);

/* Define the start marker */
__attribute__((used))
__attribute__((section(".rtemsroset.myset.begin")))
static volatile const item begin[0];

/* Define the end marker */
__attribute__((used))
__attribute__((section(".rtemsroset.myset.end")))
static volatile const item end[0];

int main(void)
{
    size_t n = &end[0] - &begin[0];
    size_t i;

    /* Call all functions of the linker set */
    for (i = 0; i < n; ++i) {
        (*begin[i].func)();
    }

    /*
     * This will pull in the module.c and register its item in the
     * linker set "myset". So g() can rely on f() being called first.
     */
    g();

    return (0);
}
```

In the linker command file of the GNU linker we need the following statement.

```
.rtemsroset : {
KEEP (*(SORT(.rtemsroset.*)))
}
```

The `KEEP()` ensures that a garbage collection by the linker will not discard the content of this section. This would be normally the case since the linker set items are not referenced directly. The `SORT()` directive sorts the input sections lexicographically. Please note the lexicographical order of the `.begin`, `.content` and `.end` section name parts in the previous example which ensures that the position of the begin and end markers are right. The interesting part of linker map file of the previous example may look like this.

```
.rtemsroset 0x0000000001001990 0x4 load address 0x00000000002268c
*(SORT(.rtemsroset.*))
.rtemsroset.myset.begin
0x0000000001001990 0x0 init.o
.rtemsroset.myset.content
0x0000000001001990 0x4 module.o
.rtemsroset.myset.end
0x0000000001001994 0x0 init.o
```

So what is the benefit of using linker sets to initialize modules? Currently in RTEMS all available managers (semaphore, message queue, barrier, etc.) are initialized since the initialization code doesn't know what is actually used by the application. With the linker set approach we need to initialize only those managers that are used by the application. In case an application uses message queues, then it must call `rtems_message_queue_create()`. In the module implementing this function we can place a linker set item and register the message queue handler constructor. Otherwise, in case the application doesn't use message queues, then there will be no reference to the `rtems_message_queue_create()` function and the constructor is not registered, thus nothing of the message queue handler will be in the final executable.

#2412	4 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Improved priority inheritance implementation					

Problem

The RTEMS mutexes implement only a very simple approximation of the priority inheritance protocol. The real priority of a thread is only restored once it releases its last mutex. Lets consider this scenario. We have a file system instance protected by one mutex (e.g. JFFS2) and a dynamic memory allocator protected by another mutex. A low priority thread performs writes some log data into a file, thus it acquires the file system instance mutex. The file system allocates dynamic memory. Now a high priority thread interrupts and tries to allocate dynamic memory. The allocator mutex is already owned, so the priority of the low priority thread is raised to the priority of the high priority thread. The memory allocation completes and the allocator mutex is released, since the low priority thread still owns the file system instance mutex it continues to execute with the high priority (the high priority thread is not scheduled). It may now perform complex and long file system operations (e.g. garbage collection, polled flash erase and write functions) with a high priority.

Functional requirements

- The mutex shall use the priority inheritance protocol to prevent priority inversion. On SMP configurations OMIP shall be used.
- The mutex shall allow vertical nesting (a thread owns multiple mutexes).
- The mutex shall allow horizontal nesting (a thread waits for ownership of a mutex those owner waits for ownership of a mutex, and so on).
- Threads from one scheduler instance shall wait in priority order. The highest priority thread shall be dequeued first.
- The highest priority waiting thread of each scheduler instance shall wait in FIFO order.
- The mutex shall provide an acquire operation with timeout.
- In case a mutex is released, then the previous owner shall no longer use the priorities inherited by this mutex.
- In case a mutex acquire operation timeout occurs, then the current owner of the mutex shall no longer use the priorities inherited by the acquiring thread.
- The order of the mutex release operations may differ from the order of the mutex acquire operations.
- Priority changes not originating due to the priority inheritance protocol shall take place immediately.
- Deadlock shall be detected. In case a deadlock would occur an error status shall be returned or a fatal error shall be generated.
- Deadlocks at application level shall not lead to a deadlock at operating system level.

Performance requirements

- The mutex acquire operation shall use only object-specific locks in case the mutex is not owned currently.
- The mutex release operation shall use only object-specific locks in case no threads wait for ownership of this mutex.

Invariants

- A mutex shall be owned by at most one thread.
- A thread shall wait for ownership of at most one mutex.

Possible implementation

Use a recursive data structure to determine the highest priority available to a thread for each scheduler instance, e.g.


```
typedef struct Thread_Priority_node {
    Priority_Control current_priority;
    Priority_Control real_priority;
    struct Thread_Priority_node *owner;
    RBTNode Node;
    RBTControl Inherited_priorities;
} Thread_Priority_node;

typedef struct {
    ...
    Thread_Priority_node *priority_nodes; /* One per scheduler instances */
    ...
} Thread_Control;
```

Initially a thread has a priority node reflecting its real priority. The Thread_Priority_node::owner is NULL. The Thread_Priority_node::current_priority is set to the real priority. The Thread_Priority_node::Inherited_priorities is empty.

In case the thread must wait for ownership of a mutex, then it enqueues its priority node in Thread_Priority_node::Inherited_priorities of the mutex owner.

In case the thread is dequeued from the wait queue of a mutex, then it dequeues its priority node in Thread_Priority_node::Inherited_priorities of the previous mutex owner (ownership transfer) or the current mutex owner (acquire timeout).

In case the minimum of Thread_Priority_node::real_priority and Thread_Priority_node::Inherited_priorities changes, then Thread_Priority_node::current_priority is updated. In case the Thread_Priority_node::owner its not NULL, the priority change propagates to the owner, and so on. In case Thread_Priority_node::current_priority changes, the corresponding scheduler is notified.

The biggest issue is the locking on SMP configurations in case of recursive minimum updates.

Somehow we must connect this to the scheduler helping protocol for OMIP. We may have to replace the return value based scheduler operations with a pre-context-switch action. Due to some recent implementation changes the run-time of the _Thread_Dispatch() function is no longer average-case performance critical.

#2423	4 years ago	fixed	unspecified	Jeffrey Hill		2 years ago
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Summary	rtems_iterate_over_all_threads lacks user callback private pointer pass through					
Description	Typically when designing an API that calls a user callback there is a user private "void *" pointer transparently passed through to the user callback so that the user can access his private state inside of his callback without being forced to employ a global variable. A global variable doesnt work very well if there are multiple objects instances created each of them using the same method with rtems_iterate_over_all_threads. This type of "void *" private pointer is of course a standard approach allowing the users callback to behave much the same way as a virtual method in C++, but nevertheless retaining a compatible C based API. An enhanced version of the API might look like this. <pre>void rtems_iterate_over_all_threads_xxx(rtems_per_thread_routine routine, void * const pUserPrivatePassThrogh);</pre> <pre>typedef void (*rtems_per_thread_routine_xxx)(Thread_Control *the_thread, void * const pUserPrivatePassThrogh);</pre> The pUserPrivatePassThrogh is not used by the library; it is retained for the duration of the rtems_iterate_over_all_threads_xxx function only so that it can be passed through to the user's callback. thanks for your consideration of this matter					

#2428	4 years ago	fixed	tool/rsb	Joel Sherrill	Chris Johns	2 years ago
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Summary	Add 4.12 Tool Target Configurations to RSB					
Description	Even though so far the 4.11 and master tools don't need to be different, 4.12 configurations need to be added. This gives us space to: + (DONE) remove obsolete targets (avr, h8300, m32r) + (DONE) update versions + complete submission of patches and bump gdb + ...					

#2441	4 years ago	fixed	unspecified	Joel Sherrill	Sebastian Huber	2 years ago
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Summary	lpc1768 variants fail to build with error in gpio.c					
Description	arm-lpc1768_mbed_ahb_ram_eth arm-lpc1768_mbed_ahb_ram arm-lpc1768_mbed In file included from ../../../../../../rtems/c/src/lib/libbsp/arm/lpc176x/gpio/gpio.c:25:0: ../../../../../../lpc1768_mbed_ahb_ram_eth/lib/include/bsp/gpio.h:28:4: error: #error "BSP_GPIO_PIN_COUNT or BSP_GPIO_PINS_PER_BANK is not defined." <pre>#error "BSP_GPIO_PIN_COUNT or BSP_GPIO_PINS_PER_BANK is not defined."</pre> <pre>../../../../lpc1768_mbed_ahb_ram_eth/lib/include/bsp/gpio.h:32:4: error: #error "Invalid BSP_GPIO_PIN_COUNT or BSP_GPIO_PINS_PER_BANK."</pre> <pre>#error "Invalid BSP_GPIO_PIN_COUNT or BSP_GPIO_PINS_PER_BANK."</pre> <pre>../../../../lpc1768_mbed_ahb_ram_eth/lib/include/bsp/gpio.h:41:5: error: division by zero in #if</pre> <pre>#if GPIO_LAST_BANK_PINS > 0</pre> <pre>../../../../rtems/c/src/lib/libbsp/arm/lpc176x/gpio/gpio.c:29:8: error: unknown type name 'lpc176x_registered_interrupt_function'</pre> <pre>static lpc176x_registered_interrupt_function function_vector[</pre> <pre>../../../../rtems/c/src/lib/libbsp/arm/lpc176x/gpio/gpio.c:30:3: error: 'LPC176X_RESERVED_ISR_FUNCT_SIZE' undeclared here (not in a function)</pre> <pre>LPC176X_RESERVED_ISR_FUNCT_SIZE];</pre> <pre>../../../../rtems/c/src/lib/libbsp/arm/lpc176x/gpio/gpio.c:35:9: error: unknown type name 'lpc176x_gpio_direction'</pre> <pre>const lpc176x_gpio_direction dir</pre>					

#2442	4 years ago	fixed	bsps	Joel Sherrill	joel.sherrill@...	2 years ago
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Summary	Remove avrttest BSP					
Description	Remove the avr/avrttest BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP					

#2443	4 years ago	fixed	unspecified	Joel Sherrill	Joel Sherrill <joel@...>	2 years ago
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Summary	Remove AVR Architectural Port					
Description	Remove the AVR port per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_Port. All BSPa must be removed before the architectural port can be removed. These are tracked by the following tickets: • #2442 - avrttest Rationale: The AVR port is incomplete and the largest AVR CPU models are just barely large enough to run RTEMS. This by itself is not enough to drop the port. However, the state of GCC for this target is poor. It is marginally maintained. Atmel maintains their own patch set independent of GCC. Plus they use their own small (and unique) C Library. This makes avr-rtems the only user of AVR-newlib. The target size is a challenge but that was why the port was initially interesting. It provided a real goal. But the tool state is painful for a port which is incomplete and has neither users nor anyone interested in actively maintaining it for GCC or RTEMS.					

#2444	4 years ago	fixed	arch/m68k	Joel Sherrill	Aun-Ali Zaidi <admin@...>	2 years ago
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Summary	Remove m68k/mvme136 BSP					
	Remove the m68k/mvme136 BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP					

Descripti on	Rationale: Although it is sad to see the BSP for the board that RTEMS was developed for be removed, this board was current in 1988-9. It has only 1MB RAM, 2 UARTS, and no NIC. It is unlikely to be available and without a NIC, isn't that useful.				
#2445	4 years ago	fixed	arch/m68k	Joel Sherrill	Aun-Ali Zaidi <admin@...>
Summar y	Remove m68k/sim68000 BSP				
Descripti on	Remove the m68k/sim68000 BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP Rationale: This is a BSP for a simulator named BSVC (http://www4.ncsu.edu/~bwmott/bsvc/) that was never under a truly free license and has not been updated in a decade. Although a decent tool, it was extremely slow.				
#2446	4 years ago	fixed	unspecified	Joel Sherrill	Joel Sherrill
Summar y	Remove M32R Architectural Port				
Descripti on	Remove the M32R port per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_Port . All BSPa must be removed before the architectural port can be removed. These are tracked by the following tickets: #2447 - m32rsim Rationale: The M32R port is incomplete, appears to have no users, and the CPU architecture is end-of-lifed.				
#2447	4 years ago	fixed	bsps	Joel Sherrill	Aun-Ali Zaidi <admin@...>
Summar y	Remove m32r/m32rsim				
Descripti on	Remove the m32r/m32rsim BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP #2448				
#2448	4 years ago	fixed	arch/mips	Joel Sherrill	
Summar y	Remove mips/mongoose BSP				
Descripti on	Remove the m32r/m32rsim BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP Rationale: This is a radiation hardened MIPS R3000 CPU that has only been used by a few missions. After discussions with various NASA and commercial engineers, we have learned that it is no longer considered an option for new missions and has not an option for a considerable length of time. The missions still underway (including New Horizons) are locked down on very old versions of their development infrastructure including hosts.				
#2449	4 years ago	fixed	arch/arm	Joel Sherrill	Aun-Ali Zaidi <admin@...>
Summar y	Remove arm/gba BSP				
Descripti on	Remove the arm/gba BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP Rationale: This BSP is for very old Nintendo hardware and required the use of either a simulator or hard to obtain programmable game cartridge. Nintendo was aggressive in shutting down resellers of those cartridges. There is no real console input and it is hard to automate testing. This was a useful BSP when there were few ARM BSPs but with the Pi, Beagle, etc. these days are long past.				
#2450	4 years ago	fixed	arch/arm	Joel Sherrill	Aun-Ali Zaidi <admin@...>
Summar y	Remove arm/nds				
Descripti on	Remove the arm/nds BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP Rationale: This BSP is for very old Nintendo hardware and required the use of either a simulator or hard to obtain programmable game cartridge. Nintendo was aggressive in shutting down resellers of those cartridges. There is no real console input and it is hard to automate testing. This was a useful BSP when there were few ARM BSPs but with the Pi, Beagle, etc. these days are long past.				
#2451	4 years ago	fixed	arch/arm	Joel Sherrill	Aun-Ali Zaidi <admin@...>
Summar y	Remove arm/gp32 BSP				
Descripti on	Remove the arm/gp32 BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP Rationale: This BSP is for an open source alternative to the Gameboy Advance introduced in 2001. Wikipedia notes that 30K units were sold but it has been unavailable since 2007. This was a useful BSP when there were few ARM BSPs and the openness was interesting but with the Pi, Beagle, etc. these days are long past.				
#2452	4 years ago	fixed	unspecified	Joel Sherrill	Joel Sherrill
Summar y	Remove H8300 Architectual Port				
Descripti on	Remove the H8300 port per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_Port . All BSPa must be removed before the architectural port can be removed. These are tracked by the following tickets: #2453 - h8sim Rationale: The h8 has been end of lifed. There do not appear to be any users based up questions and tickets filed. The architecture itself has issues which lead to breakages in gcc (which do get fixed though often slowly) and those same issues force us to disable some features like iconv in newlib. With no users, end of life, and tool issues, it is time to remove it.				
#2453	4 years ago	fixed	bsps	Joel Sherrill	Aun-Ali Zaidi <admin@...>
Summar y	Remove h8300/h8sim BSP				
Descripti on	Remove the h8300/h8sim BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP #2454				
#2454	4 years ago	fixed	unspecified	Joel Sherrill	Sebastian Huber
Summar y	Warning in threadqops.c				
Descripti on	This may apply to the 4.11 branch as well. I am not sure. ../././././././rtems/c/src/./././cpukit/score/src/threadqops.c:202:29: warning: passing argument 1 of 'RBTree_Initialize_empty' from incompatible pointer type This happens building many/all BSPs.				
#2455	4 years ago	fixed	unspecified	Joel Sherrill	Sebastian Huber
Summar y	Warning in spsimplesched02				
Descripti on	This may apply to the 4.11 branch as well. I am not sure. ../././././././rtems/c/src/./././testsuites/sptests/spsimplesched02/init.c:84:5: warning: passing argument 1 of '_Objects_Name_to_id_u32' from incompatible pointer type This happens building many/all BSPs.				
#2457	4 years ago	fixed	arch/powerpc	Joel Sherrill	Aun-Ali Zaidi <admin@...>
Summar y	Remove powerpc/ep1a BSP				
Descripti on	Remove the powerpc/ep1a BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP Rationale: AFAIK this BSP was only used on a program supported by OAR. That program is no longer in active development and is completely frozen. If that situation changes, the BSP can be resurrected. It was introduced 10 years ago and has not has a modification other than general maintenance in the last four years.				
#2458	4 years ago	fixed	arch/powerpc	Joel Sherrill	Ralph Holmes <ralph@...>
Summar y	Remove powerpc/score603e BSP				
Descripti on	Remove the powerpc/score603e BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP Rationale: AFAIK this BSP was only used on a program supported by OAR. That program is no longer in active development and is completely frozen. If that situation changes, the BSP can be resurrected. It was introduced in 1999 and has not has a modification other than general maintenance in the last six years.				

#2459	4 years ago	fixed	rtems	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Add rtems_chain_get_first_unprotected() to chain API					
#2464	4 years ago	wontfix	tool	Sebastian Huber		2 years ago
Summary	RSB: Tool patches use the RTEMS version					
Description	In rtems/config/rtems-urls.bset the tool patches are set to an RTEMS version dependent directory. This makes re-use of the general purpose files quite difficult.					
#2468	4 years ago	fixed	arch/i386	Joel Sherrill	Sebastian Huber	2 years ago
Summary	Add Thread Local Storage (TLS) support on x86					
Description	The x86 is one of the architectures which does not support Thread Local Storage. Each architecture requires target architecture specific support to provide this standard language feature. Details on the implementation by the compiler may be found at http://wiki.osdev.org/Thread_Local_Storage. Based on this information, I think a segment register needs to be added to the thread context and some hooks to the TLS implemented. Architecture information on TLS implementation should be added to the CPU Supplement document as this is part of the ABI and context switch. As part of effort, the documentation for the general procedure of adding target specific TLS support should be added to the porting guide or reviewed.					
#2477	4 years ago	fixed	unspecified	Sebastian Huber	Sebastian Huber <sebastian.huber@...>	2 years ago
Summary	Remove <rtems/debug.h>					
	RTEMS has an API for dynamic debug support in <rtems/debug.h>. This feature is sparely used:					
Description	<pre>cpukit/sapi/src/debug.c: rtems_debug_disable(RTEMS_DEBUG_ALL_MASK); cpukit/sapi/src/debug.c:void rtems_debug_enable (cpukit/sapi/src/debug.c: rtems_debug_control to_be_enabled cpukit/sapi/src/debug.c:void rtems_debug_disable (cpukit/sapi/src/debug.c: rtems_debug_control to_be_disabled cpukit/sapi/src/debug.c:bool rtems_debug_is_enabled(cpukit/sapi/src/debug.c: rtems_debug_control level cpukit/rtems/include/rtems/rtems/regionimpl.h: if (rtems_debug_is_enabled(RTEMS_DEBUG_REGION)) \ cpukit/score/include/rtems/debug.h:typedef uint32_t rtems_debug_control; cpukit/score/include/rtems/debug.h:SCORE_EXTERN rtems_debug_control _Debug_Level; cpukit/score/include/rtems/debug.h:void rtems_debug_enable(cpukit/score/include/rtems/debug.h: rtems_debug_control to_be_enabled cpukit/score/include/rtems/debug.h:void rtems_debug_disable(cpukit/score/include/rtems/debug.h: rtems_debug_control to_be_disabled cpukit/score/include/rtems/debug.h:bool rtems_debug_is_enabled(cpukit/score/include/rtems/debug.h: rtems_debug_control level c/src/lib/libbsp/shared/bootcard.c: * - rtems_debug_enable(RTEMS_DEBUG_ALL_MASK); c/src/lib/libbsp/shared/bootcard.c: rtems_debug_enable(RTEMS_DEBUG_ALL_MASK); c/src/lib/libbsp/shared/include/bootcard.h: * - rtems_debug_enable(RTEMS_DEBUG_ALL_MASK) testsuites/sptests/spreion_err01/init.c: puts("TA1 - rtems_debug_disable - RTEMS_DEBUG_REGION"); testsuites/sptests/spreion_err01/init.c: rtems_debug_disable(RTEMS_DEBUG_REGION); testsuites/sptests/spreion_err01/init.c: puts("TA1 - rtems_debug_enable - RTEMS_DEBUG_REGION"); testsuites/sptests/spreion_err01/init.c: rtems_debug_enable(RTEMS_DEBUG_REGION); testsuites/sptests/sp10/init.c: puts("Init - rtems_debug_is_enabled - is 0x1 set? No"); testsuites/sptests/sp10/init.c: is_set = rtems_debug_is_enabled(0x1); testsuites/sptests/sp10/init.c: puts("Init - rtems_debug_enable - set 0x1"); testsuites/sptests/sp10/init.c: rtems_debug_enable(0x1); testsuites/sptests/sp10/init.c: puts("Init - rtems_debug_is_enabled - is 0x1 set? Yes"); testsuites/sptests/sp10/init.c: is_set = rtems_debug_is_enabled(0x1); testsuites/sptests/sp10/init.c: puts("Init - rtems_debug_disable - clear 0x1"); testsuites/sptests/sp10/init.c: rtems_debug_disable(0x1); testsuites/sptests/sp10/init.c: puts("Init - rtems_debug_is_enabled - is 0x1 set? No"); testsuites/sptests/sp10/init.c: is_set = rtems_debug_is_enabled(0x1);</pre>					
	The only user is the Classic Region and it is only active in case RTEMS_DEBUG is defined. Due to the heap protection support which is also available in case RTEMS_DEBUG is defined, the expensive heap walks are superfluous. We should remove this API entirely to simplify the code base.					
#2487	4 years ago	fixed	tool/website	Joel Sherrill	Chris Johns	2 years ago
Summary	Should https://devel.rtems.org/wiki/TBR/Delete/SpecBuilder be Deleted?					
Description	Chris.. you are the only one who knows if this tool is obsolete or not. Please do what you think is right with this page.					
#2488	4 years ago	fixed	unspecified	Joel Sherrill	Ben Gras	2 years ago
Summary	Vagrant Scripts					
Description	Ben.. someone posted on IRC that they used your scripts but the clones point to your personal repos which are out of date I am guessing. Also is this discussed anywhere on the RTEMS wiki?					
#2490	4 years ago	wontfix	tool/rsb	Sebastian Huber	Chris Johns	19 months ago
Summary	RSB: Use SHA512 instead of MD5					
Description	Since MD5 is not a secure hash algorithm, we should change all hashes used by the RSB configuration files to use SHA512.					
#2493	4 years ago	fixed	unspecified	Sebastian Huber	Joel Sherrill <joel.sherrill@...>	2 years ago
Summary	Remove notepads					
Description	Notepads were marked as obsolete in #2265. Next step is to remove them. Documentation should mention that notepads are removed an list the alternatives, e.g. POSIX keys or thread local storage.					
#2494	4 years ago	fixed	unspecified	Sebastian Huber		2 years ago
Summary	Remove task variables					
Description	Notepads were marked as obsolete in 4.11. Next step is to remove them. Documentation should mention that notepads are removed and list the alternatives, e.g. POSIX keys or thread local storage.					
#2503	4 years ago	fixed	arch/powerpc	Aun-Ali Zaidi	joel.sherrill@...	2 years ago
Summary	mvme5500 BSP: Exception Handler uses deprecated Notepads.					
Description	The MVME5500 BSP uses Notepads in its exception handler and #2493 removes them. This is obviously not portable and requires a rewrite.					
#2509	4 years ago	fixed	tool/website	Santosh Vattam	Joel Sherrill	2 years ago
Summary	Should " https://devel.rtems.org/wiki/TBR/Delete/BSP_Template " be replaced?					
Description	As part of the GCI Task https://codein.withgoogle.com/dashboard/task-instances/5106463810781184/?sp-page=1 , the student has created a new page with a corrected template and placed it under "UserManual?" at: https://devel.rtems.org/wiki/TBR/UserManual/Submitting_a_BSP/BSP_Template Is it a good idea to replace the older page with the newly created					

on page?						
#2513	4 years ago	fixed	arch/m68k	Joel Sherrill		2 years ago
Summary	Remove m68k/idp BSP					
Description	Remove the m68k/idp BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP					
#2514	4 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	12 months ago
Summary	Make POSIX API mandatory (except signals and the sporadic server)					
Description	The POSIX API is currently a build-time configuration option. In general it is beneficial to avoid build-time configuration options since this reduces the testing scope. Applications not using the POSIX API should observe only a minimal overhead due to this change. This enhancement depends on #2408.					
#2515	4 years ago	fixed	unspecified	Gedare Bloom	Gedare Bloom	2 years ago
Summary	i386 score/libcpu API Layering Violation					
Description	The file libcpu/i386/cpu.h provides functions referenced in rtems/score/i386.h Relatedly, libcpu/i386/cpu.h is the only other consumer than score/cpu.h of the score/interrupts.h. The libcpu/i386/cpu.h should be refactored into rtems/score/i386.h, which could also then subsume rtems/score/interrupts.h.					
#2527	4 years ago	wontfix	tool	Joel Sherrill	Chris Johns	2 years ago
Summary	Move pc386/tools/bin2boot to rtems-tools					
Description	Per discussion with Chris. Begin to eliminate BSP specific tools.					
#2529	4 years ago	fixed	arch/arm	Sebastian Huber	Sebastian Huber	2 years ago
Summary	BSP for the Atmel SAM V71/V70/E70/S70 chip platform					
Description	http://www.atmel.com/products/microcontrollers/arm/sam-v-mcus.aspx					
#2536	4 years ago	fixed	tool/rsb	Sebastian Huber	Chris Johns <chrisj@...>	2 years ago
Summary	RSB allows use of insecure hash algorithms like MD5 and SHA1					
Description	Support for these hashes should be removed. Hashes should be mandatory.					
#2537	4 years ago	fixed	unspecified	Joel Sherrill	Joel Sherrill	2 years ago
Summary	Use Newlib exec*() variants and remove RTEMS versions					
Description	In reviewing RTEMS+newlib POSIX conformance, I noticed that our newlib configuration does include the exec*() variants. All of these call _execve() which we already provided. This ticket is just to explain the removal of the RTEMS copies. The functional behavior to the user is still to return ENOSYS.					
#2542	4 years ago	fixed	bsps	Joel Sherrill	joel.sherrill@...	2 years ago
Summary	Review cxx_iostream size change per function-section changes					
Description	It looks like some BSPs with their own linkcmds may have shrunk too much. Norm appears to be 50% while some went to 75-80%. A second look after catching the pattern indicates that the KEEP() section requirements in the linker scripts were not correct and it was missed. Rather than reverting a bunch of patches, this ticket is to review all function-section patches from this one back in time for cxx_iostream shrinking too much. commit 6d21c13e5094d490280a941cf0e8333f91f85715 Author: Ralph Holmes <ralph@...> Date: Sat Jan 23 21:15:40 2016 +0000 powerpc/gen5200: Add per-section compilation and linking support. For the brs5l BSP variant:					
#2543	4 years ago	fixed	unspecified	Joel Sherrill	Joel Sherrill	2 years ago
Summary	Obsolete gen68302 BSP					
Description	Delete the gen68302 BSP after 4.11 and before 4.12.					
#2544	4 years ago	duplicate	unspecified	Joel Sherrill	Joel Sherrill	2 years ago
Summary	Osolete m68k/ods68302					
Description	Obsolete and remove the ods68302 BSP before 4.12.					
#2545	4 years ago	fixed	unspecified	Joel Sherrill	Joel Sherrill	2 years ago
Summary	Obsolete mbx8xx BSP					
Description	Obsolete and remove.					
#2546	4 years ago	fixed	arch/m68k	Joel Sherrill	Joel Sherrill	2 years ago
Summary	Obsolete idp BSP					
Description	Obsolete and remove the m68k/idp BSP before the 4.12 release.					
#2553	4 years ago	fixed	arch/powerpc	Nick Withers	Sebastian Huber	2 years ago
Summary	[mvme3100] boot_card() broken by 37030e38					
Description	Backtrace with 37030e38* (with a fatal exception handler installed): <pre>#0 fatal_extension (the_source=INTERNAL_ERROR_CORE, is_internal=true, the_error=23) at init.c:425 #1 0x000a6d18 in _User_extensions_iterate (arg=arg@entry=0x1ab6348, visitor=0xa6c70 <_User_extensions_Fatal_visitor>) at ../././././././rtems/c/src/./././cpukit/score/src/userextiterate.c:155 #2 0x000a1c90 in _User_extensions_Fatal (error=23, is_internal=true, source=INTERNAL_ERROR_CORE) at .././cpukit/./././mvme3100/lib/include/rtems/score/userextimpl.h:254 #3 _Terminate (the_source=the_source@entry=INTERNAL_ERROR_CORE, is_internal=is_internal@entry=true, the_error=the_error@entry=23) at ../././././././rtems/c/src/./././cpukit/score/src/interr.c:44 #4 0x0007ad40 in RTEMS_Malloc_Initialize (areas=areas@entry=0x1ab6398, area_count=area_count@entry=1, extend=extend@entry=0x0 <preload>) at ../././././././rtems/c/src/./././cpukit/libcsupport/src/malloc_initialize.c:53 #5 0x0005cf84 in bsp_work_area_initialize_default (area_size=<optimized out>, area_begin=<optimized out>) at ../././././././mvme3100/lib/include/bsp/bootcard.h:183 #6 bsp_work_area_initialize () at .././././././././rtems/c/src/lib/libbsp/powerpc/mvme3100/././powerpc/shared/startup/bspgetworkarea.c:23 #7 0x0005ce4 in boot_card (cmdline=<optimized out>) at .././././././././rtems/c/src/lib/libbsp/powerpc/mvme3100/./././shared/bootcard.c:80 #8 0x00003294 in __rtems_entry_point () at ../././././././././rtems/c/src/lib/libbsp/powerpc/mvme3100/start/start.S:89</pre> If I reverse the changes to c/src/lib/libbsp/shared/bootcard.c it works again. * With RSB e3b9fb68 and the following RTEMS patches: https://git.rtems.org/rtems/patch/?id=af418e8f6b76a14a1d543d79fc79aa469f06b47d					

#2554	4 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago

Summary	New watchdog handler implementation					
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Background

The watchdog handler uses delta chains. The insert operation has a $O(n)$ worst-case time complexity with n being the count of watchdogs in the delta chain. In each step of the insert operation, the SMP lock of the corresponding watchdog header is acquired and released. The profiling data obtain by test program `smptests/smpwakeafter01` showed that the current implementation leads to unacceptable latencies, thus it should be replaced by something else.

The use cases for the watchdog handler fall roughly into two categories.

- Timeouts - used to detect if some operations needs more time than expected. Since the unexpected happens hopefully rarely, timeout timers are usually removed before they expire. The critical operations are insert and removal. They are important for the performance of a network stack.
- Timers - used to carry out some work in the future. They usually expire and need a high resolution. An example user is a time driven scheduler, e.g. rate-monotonic or EDF.

One approach is to use a red-black tree with the expiration time as the key. This leads to $O(\log(n))$ worst-case insert and removal operations. For each operation it is sufficient to acquire and release the lock only once. The drawback is that a 64-bit integer type must be used for the intervals to avoid a potential overflow of the key values. With a system tick interval of 1ns the system could run more than 500 years before an overflow happens. The EDF scheduler would also profit from a 64-bit interval representation, see [#2173](#).

An alternative is the use of a **timer wheel** based algorithm which is used in Linux and **FreeBSD** for example. A timer wheel based algorithm offers $O(1)$ worst-case time complexity for insert and removal operations. The drawback is that the run-time of the watchdog tick procedure is somewhat unpredictable due to the use of a hash table or cascading.

Which approach should we choose? Since the watchdog serves the timeout and timer services in RTEMS we have to make some trade-offs. We recommend to use the red-black tree approach which offers a more predictable run-time behaviour and sacrifice the constant insert and removal operations offered by the timer wheel algorithms, see also <https://www.kernel.org/doc/ols/2006/ols2006v1-pages-333-346.pdf>. We can reuse the red-black tree support already used for the thread priority queues.

The new watchdog handler implementation is a prerequisite to eliminate the Giant lock in the Classic Timer manager.

Implementation

Change the `_Watchdog_Ticks_since_boot` to a 64-bit integer type. Keep the `_Watchdog_Interval` at 32-bit for backward compatibility. Replace the delta chains with a red-black tree. Use the ticks for timers with a relative expiration time. Use `struct timespec` or `struct bintime` for timers with an absolute expiration time. This has the benefit that we do not have to adjust the data structures in case the absolute time changes, e.g. due to NTP. It simplifies the POSIX timer services, since no conversion to ticks is necessary.

#2555	4 years ago	fixed	score	Sebastian Huber	Sebastian Huber	23 months ago
Summary	Eliminate the Giant lock					

Background

The standard approach to turn a uni-processor operating system into an SMP-capable operating system is to encapsulate virtually the complete operating system state and protect it by one global recursive lock - the Giant lock. Thus, at most one processor can modify the operating system state at a time. Under Giant lock protection interrupt disable/enable critical sections still work. This approach is easy to realize and leads to something that runs on SMP with a minimal effort. Unfortunately, such an operating system does not scale with the processor count and offers very poor performance. It is quite useless for real applications.

The first steps to get rid of the Giant lock are tackled with the introduction of fine grained locking for the scheduler, watchdog handler, timestamps, thread queues, events, semaphores and message queues. The Giant lock is still used in a couple of places, e.g. all other objects using thread queues, thread life cycle changes (termination, restart) and scheduler changes. It is a straight forward task to eliminate it entirely, but it is also somewhat labour intensive since a lot of code must be changed.

Implementation

Eliminate all remaining code areas that use

- `_ISR_Disable()`,
- `_ISR_Enable()`, and
- `_ISR_Flash()`.

Direct users of these macros are

- `_Chain_Append()`,
- `_Chain_Extract()`,
- `_Chain_Get()`,
- `_Chain_Insert()`, and
- `_Chain_Prepnd()`.

Each spot must be dealt with individually. Once this is done, delete these macros since they are now superfluous. Rename `_ISR_Disable_without_giant()` into `_ISR_Locale_disable()`. Rename `_ISR_Enable_without_giant()` into `_ISR_Locale_enable()`.

Eliminate all remaining code areas that use

- `_Thread_Disable_dispatch()` and
- `_Thread_Enable_dispatch()`.

A prominent user of this functions is `_Objects_Get()`. The following components are affected by these functions

- Classic barrier handler,
- Classic dual-ported memory handler,
- Classic message queue handler,
- Classic partition handler,
- Classic rate-monotonic handler,
- Classic region handler,
- Classic semaphore handler,
- Classic timer handler,
- extension handler,
- IO manager,
- multi-processing management,
- objects management,
- POSIX barrier handler,
- POSIX condition handler,
- POSIX key handler,
- POSIX message queue handler,
- POSIX mutex handler,
- POSIX rwlock handler,
- POSIX semaphore handler,
- POSIX spinlock handler,
- POSIX timer handler,
- signals,
- thread cancellation,
- thread life-cycle changes, and
- thread scheduler changes.

Once this is done, delete `_Thread_Disable_dispatch()` and `_Thread_Enable_dispatch()`. As a side-effect the Giant lock will be removed.

#2556	4 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Implement the O(m) Independence-Preserving Protocol (OMIP)					

Background

The O(m) Independence-Preserving Protocol (**OMIP**) is a generalization of the priority inheritance protocol to clustered scheduling which avoids the non-preemptive sections present with priority boosting. The m denotes the number of processors in the system. Its implementation requires an extension of the scheduler helping protocol already used for the **MrsP** semaphores. However, the current implementation of the scheduler helping protocol has two major issues, see Catellani, Sebastiano, Luca Bonato, Sebastian Huber, and Enrico

Mezzetti: Challenges in the Implementation of MrsP. In Reliable Software Technologies - Ada-Europe 2015, pages 179-195, 2015. Firstly, the run-time of some scheduler operations depend on the size of the resource dependency tree. Secondly, the scheduler operations of threads which don't use shared resources must deal with the scheduler helping protocol in case an owner of a shared resource is somehow involved.

To illustrate the second issue, let us look at the following example. We have a system with eight processors and two L2 caches. We assign processor 0 to a partition P for latency sensitive real-time tasks (e.g. sensor and actuator handling), processors 1, 2 and 3 are assigned to a cluster C_A and the remaining processors are assigned to a cluster C_B for soft real-time worker tasks. The worker tasks use a shared resource, e.g. a file system for data storage. Let us suppose a task R of partition P sends a message to the workers. This may make a waiting worker ready, which in turn pre-empts the owner of a shared resource. In this case the scheduler helping protocol takes action and is carried out by the task R. This contradicts the intended isolation of scheduler instances.

The reason for this unfortunate coupling is a design issue of the scheduler helping protocol implementation. Some scheduler operations may return a thread in need of help. For example, if a thread is unblocked which pre-empts an owner of a shared resource, then the pre-empted thread is returned. Once a thread in need of help is returned, the ask for help operation of the scheduler is executed. An alternative to this return value based approach is the introduction of a pre-emption intervention during thread dispatching. Threads taking part in the scheduler helping protocol indicate this with a positive resource count value. In case a thread dispatch occurs and pre-empts an owner of a shared resource, the scheduler ask for help operation is invoked. So, the work is carried out on behalf of the thread which takes part in the scheduler helping protocol.

To overcome the first issue, an improved resource dependency tracking is required. One approach is to use a recursive red-black tree based data structure, see [#2412](#).

Implementation

There are several steps necessary to implement OMIP.

- Introduce per-scheduler locks.
- Enable context switches with interrupts enabled.
- Add a pre-emption intervention to the thread dispatch.
- Add a table for priority nodes to the thread control block. For each scheduler instance there is one priority node.
- Update the table in case the thread blocks on a resource, a timeout while waiting for a resource occurs, or ownership of a resource is transferred to the thread.
- Use this table in the pre-emption intervention.
- Update the MrsP implementation to the new infrastructure.

Currently, only one scheduler lock for all scheduler instances is used. This simplified the MrsP implementation and due to the presence of a Giant lock, this was not an issue. With the elimination of the Giant lock, however, we need one scheduler lock per scheduler instance to really profit from a decoupled system due to clustered scheduling.

The current implementation of thread dispatching has some implications with respect to the interrupt latency. It is crucial to preserve the system invariant that a thread can execute on at most one processor in the system at a time. This is accomplished with a boolean indicator in the thread context. The processor architecture specific context switch code will mark that a thread context is no longer executing and waits that the heir context stopped execution before it restores the heir context and resumes execution of the heir thread (the boolean indicator is basically a TTAS lock). So, there is one point in time in which a processor is without a thread. This is essential to avoid cyclic dependencies in case multiple threads migrate at once. Otherwise some supervising entity is necessary to prevent deadlocks. Such a global supervisor would lead to scalability problems so this approach is not used. Currently the context switch is performed with interrupts disabled. Thus in case the heir thread is currently executing on another processor, the time of disabled interrupts is prolonged since one processor has to wait for another processor to make progress.

If we add pre-emption intervention to the thread dispatch sequence, then there is an even greater need to avoid this issue with the interrupt latency. Interrupts normally store the context of the interrupted thread on its stack. In case a thread is marked as not executing, we must not use its thread stack to store such an interrupt context. We cannot use the heir stack before it stopped execution on another processor. If we enable interrupts during this transition, then we have to provide an alternative thread independent stack for interrupts in this time frame.

Descripti
on

The pre-emption intervention should be added to `_Thread_Do_dispatch()` before the heir is read and perform the following pseudo-code actions.

```
pre_emption_intervention(executing):
if executing.resource_count > 0:
    executing.lock()
    if executing.is_ready():
        for scheduler in executing.schedulers:
            scheduler.lock()
    if !executing.is_scheduled():
        for scheduler in executing.schedulers:
            scheduler.ask_for_help(executing)
        for scheduler in executing.schedulers:
            scheduler.unlock()
    else if executing.active_help_level > 0:
        idle.use(executing.scheduler_node)
    executing.unlock()
```

The scheduler help operation affects multiple scheduler instances. In terms of locking we have only two options,

- use a global scheduler lock, or
- obtain multiple per-scheduler locks at once.

A global scheduler lock is not an option. To avoid deadlocks obtain the per-scheduler locks in a fixed order. However, in this case the per-scheduler locks will observe different worst-case and average-case acquire times (depending on the order).

Use a recursive data structure to determine the highest priority available to a thread for each scheduler instance, e.g.

```
typedef struct Thread_Priority_node {
    Priority_Control current_priority;
    Priority_Control real_priority;
    struct Thread_Priority_node *owner;
    RBTNode Node;
    RBTNode_Control Inherited_priorities;
} Thread_Priority_node;

typedef struct {
    ...
    Thread_Priority_node *priority_nodes; /* One per scheduler instances */
    ...
} Thread_Control;
```

Initially a thread has a priority node reflecting its real priority. The `Thread_Priority_node::owner` is `NULL`. The `Thread_Priority_node::current_priority` is set to the real priority. The `Thread_Priority_node::Inherited_priorities` is empty.

In case the thread must wait for ownership of a mutex, then it enqueues its priority node in `Thread_Priority_node::Inherited_priorities` of the mutex owner.

In case the thread is dequeued from the wait queue of a mutex, then it dequeues its priority node in `Thread_Priority_node::Inherited_priorities` of the previous mutex owner (ownership transfer) or the current mutex owner (acquire timeout).

In case the minimum of the `Thread_Priority_node::real_priority` and the `Thread_Priority_node::Inherited_priorities` changes, then `Thread_Priority_node::current_priority` is updated. In case the `Thread_Priority_node::owner` its not `NULL`, the priority change propagates to the owner, and so on. In case `Thread_Priority_node::current_priority` changes, the corresponding scheduler is notified.

Use the thread lock to protect the priority nodes.

#2557	4 years ago	fixed	doc	Amar Takhar	Amar Takhar	2 years ago
Summary	Add word splitting to print output					
#2559	4 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Delete the EXTERN pattern					
Change the following pattern: some.h:						
<pre>#ifndef SOME_XYZ_EXTERN #define SOME_XYZ_EXTERN extern #endif SOME_XYZ_EXTERN type xyz;</pre>						

some_xyz.c:

#define SOME_XYZ_EXTERN
#include <some.h>

into: some.h:

extern type xyz;

some_xyz.c:

#include <some.h>
type xyz;

See discussion:

https://lists.rtems.org/pipermail/devel/2016-January/013506.html

Update Developer/Coding/Conventions accordingly.

#25604 years agofixedarch/armSebastian Huber2 years ago

Summarysmdk2410 is broken due to gp32 removal

DescriptionThe smdk2410 BSPs use files of the removed gp32 BSP.
[f2a228b2cb5ce376c56ae8d767084b92f2822af0/rtems]

#25764 years agofixedarch/armJoel SherrillJoel Sherrill <joel@...>14 months ago

Summaryarm/lpc176x: linker script update (add KEEP() sections)

DescriptionThis BSP's linker script does not include KEEP() directives and thus cannot have per-function and per-data element section support enabled.
The preferred solution is to convert the BSP to use a shared base linker script. The acceptable solution is to add the proper KEEP directives to the existing linker script(s).
Shared linker scripts for the arm, m68k, and sparc have the proper KEEP sections and can serve as examples.

#26064 years agofixedposixSebastian HuberSebastian Huber2 years ago

Summaryalarm() uses seconds watchdog and thus is affected by clock changes

Descriptionalarm() uses _Watchdog_Insert_seconds() and thus is affected by clock changes, e.g. via _TOD_Set(). This is wrong. The POSIX documentation is not that clear since it talks only about "realtime seconds". However, the FreeBSD implementation uses the uptime. This is also in line with the RTEMS ualarm() and nanosleep().

#26084 years agofixedposixJoel SherrillGedare Bloom2 years ago

SummaryPOSIX Condition Variables Clock Attribute Support

DescriptionI am beginning to add support for the clock attribute to POSIX condition variables.
http://pubs.opengroup.org/onlinepubs/9699919799/functions/pthread_condattr_getclock.html
Since the clock can't be a CPU time clock, that leaves CLOCK_MONOTONIC and CLOCK_REALTIME. The thread queue is based on CLOCK_MONOTONIC and does not have an option to use CLOCK_REALTIME. Threads and timers waiting on CLOCK_REALTIME should be impacted by time of day changes.
https://docs.google.com/document/d/1GsGer0t84p-nUfZFim4Ty0LTDYNhgKBvIwip_gLQjTY/edit?usp=sharing is a Google doc with my notes so far in it on POSIX clocks. I will move it to the Wiki as it turns into something more concrete than notes and reflects plans/code.
So the first issue is how best to alter the thread queue to support using either clock source? And what does that do to the current ticks based API since you proposed different time representations for the ticks (relative/monotonic) and seconds (absolute/realtime) structures?

#26174 years agofixedscoreJoel SherrillSebastian Huber2 years ago

Summaryrtems_heap_allocate_aligned_with_boundary() body and prototype inconsistent

DescriptionThe first parameter is size_t in the .h and uintptr_t in the body. This resulted in a compiler error on the m32c. But it is an inconsistency which should be fixed even if no architecture complained.
The malloc.h header file has this:
void *rtems_heap_allocate_aligned_with_boundary(
size_t size, uintptr_t alignment, uintptr_t boundary
);
malloc_deferred.c has this:
void *rtems_heap_allocate_aligned_with_boundary(
uintptr_t size, uintptr_t alignment, uintptr_t boundary
)

#26244 years agofixedtool/newlibSebastian HuberNeeds Funding14 months ago

SummaryFix the year 2038 problem

DescriptionRTEMS uses currently a signed 32-bit integer for time_t on Newlib. Thus, it is affected by the year 2038 problem. There are only 22 years left and this time span is within the realistic time frame of some RTEMS applications that are developed now.
The time_t should be changed to int64_t in Newlib. To make sure that all integer operations are carried out properly I suggest to temporarily do this
{
#include <sys/stdint.h>
typedef struct {
int64_t val;
} time_t;
static inline time_t_time_add(time_t a, time_t b) {
time_t r = { a_val + b_val }; return r;
}
static inline time_t_time_sub(time_t a, time_t b) {
time_t r = { a_val - b_val }; return r;
}
static inline time_t_time_mul(time_t a, time_t b) {
time_t r = { a_val * b_val }; return r;
}
static inline time_t_time_div(time_t a, time_t b) {
time_t r = { a_val / b_val }; return r;
}}}

#2625	4 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Use one lookup tree per-thread for the POSIX keys					
Description	Currently a global lookup tree is used for all the POSIX key/value pairs. On SMP configurations this is a bottleneck. Use one lookup tree per thread instead.					
#2626	4 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Unify thread cancel/join and delete					
Description	The rtems_task_delete() is basically a pthread_cancel() plus pthread_join(). Unify the implementation and introduce a _Thread_Cancel() and _Thread_Join() to be used by both APIs. Get rid of the Giant lock for thread delete.					
#2627	4 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Fix CPU time used for threads on SMP					
Description	The CPU time used of a thread is currently maintained per-processor mostly during _Thread_Dispatch(). However, on SMP configurations the actual processor of a thread is difficult to figure out since thread dispatching is a highly asynchronous process (e.g. via inter-processor interrupts). Only the intended processor of a thread is known to the scheduler easily. Do the CPU usage accounting during thread heir updates in the context of the scheduler operations. Provide a function to get the CPU usage of a thread using proper locks to get a consistent value.					
#2628	4 years ago	wontfix	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Avoid home-grown condition variable implementation in the Classic Regions					
Description	The Classic Region manager enables users to wait until memory is available to satisfy an allocation request. This is done through special purpose code that basically implements a condition variable.					
#2631	4 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Use an ISR lock to protect the state of Classic Rate Monotonic objects					
Description	The state of Classic Rate Monotonic is currently protected by the Giant lock and ISR disable sections. Use a per-object ISR lock to protect state changes instead.					
#2632	4 years ago	fixed	tool/rsb	Joel Sherrill	Chris Johns	2 years ago
Summary	rtems-tester failure					
Description	CentOS 7 on master <pre>\$../rtems-tools/tester/rtems-test --rtems-tools=/home/joel/rtems-4.11-work/tools/4.12 --rtems-bsp=sis find . -name "hello.exe" RTEMS Testing - Tester, 4.12 (a5d243d3f8e2)</pre> Command Line: ../rtems-tools/tester/rtems-test --rtems-tools=/home/joel/rtems-4.11-work/tools/4.12 --rtems-bsp=sis ./sparc-rtems4.12/c/sis/testsuites/samples/hello/hello.exe Python: 2.7.5 (default, Nov 20 2015, 02:00:19) [GCC 4.8.5 20150623 (Red Hat 4.8.5-4)] [1/1] p:0 f:0 t:0 i:0 sparc/sis: hello.exe Traceback (most recent call last): File "../rtems-tools/tester/rtems-test", line 40, in <module> rt.test.run() File "/data/home/joel/rtems-4.11-work/rtems-tools/tester/rt/test.py", line 287, in run tst.reraise() File "/data/home/joel/rtems-4.11-work/rtems-tools/tester/rt/test.py", line 123, in reraise raise (self.result[0], self.result[1], self.result[2]) TypeError?: init() takes exactly 2 arguments (1 given)					
#2633	4 years ago	fixed	network/legacy	joguin	Sebastian Huber	2 years ago
Summary	waf build failed for rtems-libbsd					
Description	The rtems-libbsd failed when building with waf. Here is the output: <pre>[488/845] Compiling freebsd/sys/kern/subr_taskqueue.c In file included from /home/josh/development/rtems/bsps/4.12/i386-rtems4.12/pc386/lib/include/rtems/score/threadimpl.h:36:0, from ../freebsd/sys/kern/subr_sleepqueue.c:91: /home/josh/development/rtems/bsps/4.12/i386-rtems4.12/pc386/lib/include/rtems/score/watchdogimpl.h: In function ' _Watchdog_Per_CPU_insert_relative': /home/josh/development/rtems/bsps/4.12/i386-rtems4.12/pc386/lib/include/rtems/score/watchdogimpl.h:356:18: error: 'struct <anonymous>' has no member named ' _bsd_ticks'; did you mean 'ticks'? cpu->Watchdog.ticks + ticks In file included from ../freebsd/sys/kern/subr_sleepqueue.c:62:0: ../freebsd/sys/kern/subr_sleepqueue.c: In function 'sleepq_set_timeout': ../freebsd/sys/kern/subr_sleepqueue.c:424:29: error: 'Thread_Timer_information {aka struct <anonymous>}' has no member named 'state' BSD_ASSERT(executing->Timer.state == WATCHDOG_INACTIVE); ../freebsd/sys/kern/subr_sleepqueue.c:424:2: note: in expansion of macro 'BSD_ASSERT' BSD_ASSERT(executing->Timer.state == WATCHDOG_INACTIVE); ~ ../freebsd/sys/kern/subr_sleepqueue.c:425:2: error: too many arguments to function ' _Watchdog_Initialize' _Watchdog_Initialize(&executing->Timer, sleepq_timeout, ~ In file included from /home/josh/development/rtems/bsps/4.12/i386-rtems4.12/pc386/lib/include/rtems/score/threadimpl.h:36:0, from ../freebsd/sys/kern/subr_sleepqueue.c:91: /home/josh/development/rtems/bsps/4.12/i386-rtems4.12/pc386/lib/include/rtems/score/watchdogimpl.h:178:27: note: declared here RTEMS_INLINE_ROUTINE void _Watchdog_Initialize(~ Waf: Leaving directory ` /home/josh/development/rtems/rtems-libbsd/build/i386-rtems4.12-pc386' Build failed</pre>					
#2634	4 years ago	fixed	arch/i386	Joel Sherrill	Pavel Pisa <ppisa@...>	2 years ago
Summary	New warning in pc386 VESA driver					
Description	Pavel.. can you look into this? <pre>../freebsd/sys/kern/lib/libbsp/i386/pc386/console/fb_vesa_rm.c: In function 'find_mode_using_EDID': ../freebsd/sys/kern/lib/libbsp/i386/pc386/console/fb_vesa_rm.c:502:13: warning: dereferencing type-punned pointer will break strict-aliasing rules [-Wstrict-aliasing] if (*(uint16_t*)&edid.STI[index] == EDID_STI_DescriptorUnused) ~</pre>					
#2638	4 years ago	fixed	unspecified	Joel Sherrill	Joel Sherrill <joel@...>	2 years ago
Summary	pc386: ld -r issue with per function sections					
Description	The pc386 BSP has an issue with "ld -r" when function-sections is enabled which does not seem to occur on any other BSP. The same lines were added to the custom .cfg file as on other BSPs. It is unknown at this point whether this is an x86 specific "ld -r" issue or a pc386 build configuration issue. Per-function-section linking is disabled until this is addressed.					

Descripti on	i386-rtems4.12-gcc --pipe -B../././././.lib -B../././././.pc386/lib -specs bsp_specs -qrtems -mtune=i386 -O2 -g -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -qnoinkcmds -nostdlib -r -Wl,--gc-sections -Wl,-Ttext,0x00100000 -o ne2000.rel ne2000_rel-ne2000.o /data/home/joel/rtems-4.11-work/tools/4.12/bin/./lib/gcc/i386-rtems4.12/6.0.0/././././i386-rtems4.12/bin/ld: gc-sections requires either an entry or an undefined symbol collect2: error: ld returned 1 exit status					
	#2641	4 years ago	fixed	build	aurelio	Chris Johns
Summar y	configure: enable-rtemsbsp doesn't warn if bsp does not exist					
Descripti on	When running configure with an incorrect bsp name the script does not cause an error. You can ever run make without getting any warning message. The script should check the name of the bsp and continue only if it is a valid bsp. On the other hand if the bsp name given by the user is invalid the script should prompt a message.					
	#2644	4 years ago	fixed	tool/rsb	Joel Sherrill	2 years ago
Summar y	sis does not run on gdb 7.11 but does on gdb 7.9					
Descripti on	I know we reported this on the gdb list but we should have a ticket. Neither gdb nor run works for sis on gdb 4.11. Checked against RTEMS 4.11 tools (gdb 4.9) and it will run sis. Not sure about other simulators.					
	#2649	4 years ago	fixed	tool/rsb	Chris Johns	Chris Johns
Summar y	RSB remove 4.11, 4.10 and 4.9 from the master branch.					
Descripti on	Having 4.11 on master is confusing users as they build 4.11 tool on master and there may be issues in 4.11 configurations fixed on the 4.11 branch. Leave 4.9 and 4.10 until they are branched off master. We will make these branches once 4.12 is stable again.					
	#2663	4 years ago	wontfix	arch/i386	Joel Sherrill	Sebastian Huber
Summar y	pc386 BSP has complex dependencies					
Descripti on	In 4.11, the minimum executable did not include open() and close() because the methods rtems_libio_post_driver() and rtems_libio_exit() were not included in the executable. On the master, these two methods are showing up in minimum and pulling in these methods. The dependency chain used to be if the console driver was installed, we needed to open and close stdin, stdout, and stderr. Now even without the console configured these are included. FWIW the minimum size looks pretty good on the master for sis. Fixing this would likely drop it at least another 5%.					
	#2664	4 years ago	duplicate	score	Joel Sherrill	Sebastian Huber
Summar y	spclock_err02					
Descripti on	New test failure on sis but likely all targets. * BEGIN OF TEST SPCLOCK_ERR 2 * TA1 - rtems_io_close - RTEMS_INVALID_NUMBER TA1 - rtems_io_control - RTEMS_INVALID_NUMBER TA1 - rtems_io_initialize - RTEMS_INVALID_NUMBER TA1 - rtems_io_open - RTEMS_INVALID_NUMBER TA1 - rtems_io_read - RTEMS_INVALID_NUMBER TA1 - rtems_io_write - RTEMS_INVALID_NUMBER TA1 - rtems_clock_set - 23:59:59 12/31/2000 - RTEMS_SUCCESSFUL TA1 - rtems_clock_get_tod - 00:00:00 01/01/2001 - RTEMS_SUCCESSFUL TA1 - rtems_clock_set - 23:59:59 12/31/1999 - RTEMS_SUCCESSFUL TA1 - rtems_clock_get_tod - 00:00:00 01/01/2000 - RTEMS_SUCCESSFUL assertion "ticks < 0x400000000" failed: file "/././cpukit/./././sis/lib/include/rtems/score/watchdogimpl.h", line 316, function: _Watchdog_Ticks_from_timespec Breakpoint 1, _Terminate (the_source=the_source@entry=RTEMS_FATAL_SOURCE_ASSERT, is_internal=is_internal@entry=false, the_error=the_error@entry=33694096) at .././././././rtems/c/src/./././cpukit/score/src/interr.c:36 36 { (gdb) bt #0 _Terminate (the_source=the_source@entry=RTEMS_FATAL_SOURCE_ASSERT, is_internal=is_internal@entry=false, the_error=the_error@entry=33694096) at .././././././rtems/c/src/./././cpukit/score/src/interr.c:36 #1 0x0200aed4 in rtems_fatal (source=source@entry=RTEMS_FATAL_SOURCE_ASSERT, error=error@entry=33694096) at .././././././rtems/c/src/./././cpukit/sapi/src/fatal2.c:34 #2 0x02004a9c in assert_func (file=file@entry=0x201a650 "/././cpukit/./././sis/lib/include/rtems/score/watchdogimpl.h", line=line@entry=316, func=func@entry=0x201a6d0 <func_3277> "_Watchdog_Ticks_from_timespec", failedexpr=failedexpr@entry=0x201a638 "ticks < 0x400000000") at .././././././rtems/c/src/./././cpukit/libcsupport/src/assert.c:52 #3 0x0200bbf8 in _Watchdog_Ticks_from_timespec (ts=0x02022210) at ../././cpukit/./././sis/lib/include/rtems/score/watchdogimpl.h:316 #4 _TOD_Set_with_timestamp (tod_as_timestamp=tod_as_timestamp@entry=0x02022280) at .././././././rtems/c/src/./././cpukit/score/src/coretodset.c:40 #5 0x02009880 in rtems_clock_set (tod=tod@entry=0x02022304) at .././././././rtems/c/src/./././cpukit/rtems/score/clockset.c:42 #6 0x02001818 in Init (argument=<optimized out>) at .././././././rtems/c/src/./././testsuites/sptests/spclock_err02/init.c:93 #7 0x0200fcbc in _Thread_Entry_adaptor_numeric (executing=0x201fb90) at .././././././rtems/c/src/./././cpukit/score/src/threadentryadaptornumeric---Type <return> to continue, or q <return> to quit---.c:25 #8 0x02012e0c in _Thread_Handler () at .././././././rtems/c/src/./././cpukit/score/src/threadhandler.c:93 #9 0x02012d60 in _Thread_Handler () at .././././././rtems/c/src/./././cpukit/score/src/threadhandler.c:29 (gdb) l init.c:93 88 status = rtems_clock_get_tod(&time); 89 directive_failed(status, "rtems_clock_get_tod"); 90 print_time("TA1 - rtems_clock_get_tod - ", &time, " - RTEMS_SUCCESSFUL\n"); 91 92 build_time(&time, 12, 31, 2100, 23, 59, 59, 0); 93 status = rtems_clock_set(&time); 94 directive_failed(status, "rtems_clock_set"); 95 print_time("TA1 - rtems_clock_set - ", &time, " - RTEMS_SUCCESSFUL\n"); 96 status = rtems_task_wake_after(rtems_clock_get_ticks_per_second()); 97 status = rtems_clock_get_tod(&time); (gdb)					
	#2669	4 years ago	fixed	tool/rsb	Stefan Wallentowitz	2 years ago
Summar y	Update OpenRISC toolchain in 4.12					
Descripti on	Bump the OpenRISC toolchain to newer versions: - Binutils to 2.26 - GCC to 4.9.3 - GDB to 7.11					
	#2672	4 years ago	fixed	unspecified	Serg Kruglov	Sebastian Huber <sebastian.huber@...>
Summar y	After latest patches with Objects_Get_by_name rtems-master not compiling without --enable-posix					
Descripti on	After latest patches with Objects_Get_by_name rtems-master not compiling if i use --disable-posix. Type "Objects_Get_by_name_error" not resolved in posixapi.h in sapi folder. If --enable-posix - all OK.					
	#2674	4 years ago	fixed	posix	Sebastian Huber	Sebastian Huber
Summar y	CORE spinlock implementation is next to be useless					

Lets assume we have two tasks A and B. Task A acquires a CORE spinlock. Now B somehow executes and tries to acquire the same CORE spinlock, then no progress can be made.

Alternative implementation:

Disable thread dispatching and interrupts while owning the spinlock. Forbid blocking calls while owning the spinlock.

Drawback: The test cases of the Linux Test Project would fail:

https://github.com/linux-test-project/ltp/blob/master/testcases/open_posix_testsuite/conformance/interfaces/pthread_spin_lock/1-2.c

Optimization: User provided storage space for pthread_spin_t. In line with POSIX:

"Only the object referenced by lock may be used for performing synchronization."

http://pubs.opengroup.org/onlinepubs/009695399/functions/pthread_spin_destroy.html

#2676	4 years ago	fixed	unspecified	Joel Sherrill	Joel Sherrill <joel@...>	2 years ago
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Summary
Obsolete clock_get() directive

This is deprecated on the 4.11 branch and its use has been isolated in the source tree.

Remove clock_get()
Should allow deletion of rtems_clock_get_options

\$ grep -rI "clock_get(" . ./doc/user/clock.t ./testsuites/tmtests/tmoverhd/testtask.c ./testsuites/tmtests/tmoverhd/dumrtems.h ./testsuites/sptests/spclockget/init.c ./testsuites/sptests/spclockget/spclockget.doc ./cpukit/rtems/include/rtems/rtems/clock.h ./cpukit/rtems/src/clockget.c

#2680	4 years ago	fixed	doc	Joel Sherrill	Chris Johns	2 years ago
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Summary
Add pthread_setconcurrency() and pthread_getconcurrency()

*** Code merged. Ticket changed to documentation to remind us to add documentation when master documentation reopens in new format.**

We only require the simple implementation documented here:

http://pubs.opengroup.org/onlinepubs/9699919799/functions/pthread_getconcurrency.html

This is required for FACE Conformance.

#2684	4 years ago	fixed	arch/sparc	David Binderman	Sebastian Huber	2 years ago
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Summary
rtems/c/src/lib/libbsp/sparc/leon3/clock/ckinit.c:122: duplicate if

rtems/c/src/lib/libbsp/sparc/leon3/clock/ckinit.c:122]: (style) Expression is always false because 'else if' condition matches previous condition at line 116.

Source code is

```
    } else if (state == 1) {  
        unsigned int ks = 1U << 5;  
        state = 0;  
        irqmp_ts->control = ks | s1_s2 | (unsigned int) clkirq;  
    } else if (state == 1) {
```

#2685	4 years ago	fixed	arch/arm	David Binderman	Sebastian Huber	2 years ago
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Summary
c/src/lib/libbsp/arm/atsam/network/if_atsam.c:409: possible bad if statement

rtems/c/src/lib/libbsp/arm/atsam/network/if_atsam.c:409]: (style) Redundant condition: If 'phy <= 0', the comparison 'phy <= 31' is always true.

Source code is

```
    if ((phy <= 0) && (phy <= 31)) {  
        /*  
        • invalid phy number */  
    }  
    Maybe better code  
    if ((phy <= 0)  
        (phy >= 31)) {  
        /*  
        • invalid phy number */
```

#2689	4 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
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Summary
POSIX key destructors must be called during thread restart

POSIX key destructors must be called during thread restart. Just like the POSIX cleanup handlers. This ensures that the TLS object destructors are called during thread restart for example. It is important for the global construction, which uses a thread restart to run the Init task in a clean environment.

#2692	4 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
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Summary
User extensions execution order must be clarified

The implemented and documented execution order of some user extensions disagree. Intended behaviour must be tested. Documentation must be updated accordingly.

#2693	4 years ago	fixed	doc	Joel Sherrill	Chris Johns	2 years ago
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Summary
Update doc to reflect obsoleting rtems_clock_get()

Ticket to reflect documentation change needed on the master but not on 4.11. When new documentation format is available for master, this needs to be accounted for.

#2694	4 years ago	workforme	network/legacy	Joel Sherrill	Sebastian Huber	2 years ago
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Summary
linking issue for htonl, etc when using -std=c99

When -std=c99 is on the compile line, there is a linking error for undefined references to [htonl](#), [htons](#), [ntohl](#), and [ntohs](#). This test case is just for htonl but others should be similar.

This likely impacts the 4.11 branch of rtems-libbsd as well but I was testing on master.

Test case ===== #include <arpa/inet.h>

int main(

int argc, char argv

) {

uint32_t v = (uint32_t) argc; uint32_t rc = htonl(v); return v;

} =====

This script was what I used to find what caused the linking error to go away.

===== RTEMS_MAKEFILE_PATH=/home/joel/rtems-4.11-work/tools/4.12/i386-rtems4.12/pc586/
i386-rtems4.12-gcc -std=c99 \

```
-B${RTEMS_MAKEFILE_PATH}/lib -specs bsp_specs -qrtems \ main.c -lbsd -lm -lbsd
```

<https://devel.rtems.org/wiki/Release//5/5.1>

Description	[/] # cpuinfo					
	----- PER PROCESSOR INFORMATION -----					
	-----+-----+-----+-----					
	INDEX ONLINE SCHEDULER ID SCHEDULER NAME					
	-----+-----+-----+-----					
	0	1	0x0f010001	MPS		
	1	1	0x0f010001	MPS		
	2	1	0x0f010001	MPS		
	3	1	0x0f010001	MPS		
	4	1	0x0f010001	MPS		
	5	1	0x0f010001	MPS		
	6	1	0x0f010001	MPS		
	7	1	0x0f010001	MPS		
	8	1	0x0f010001	MPS		
	9	1	0x0f010001	MPS		
	10	1	0x0f010001	MPS		
	11	1	0x0f010001	MPS		
	12	1	0x0f010001	MPS		
	13	1	0x0f010001	MPS		
	14	1	0x0f010001	MPS		
	15	1	0x0f010001	MPS		
	16	1	0x0f010001	MPS		
	17	1	0x0f010001	MPS		
	18	1	0x0f010001	MPS		
	19	1	0x0f010001	MPS		
20	1	0x0f010001	MPS			
21	1	0x0f010001	MPS			
22	1	0x0f010001	MPS			
23	1	0x0f010001	MPS			

on	3 years ago	fixed	unspecified	Chris Johns	Chris Johns	2 years ago
Summary	untar does not keep permissions correctly.					
y	On disk I have 'x' with:					
	<pre>\$ ls -las x 4 -rwxr-xr-x 1 chris caeng 48 Jul 14 11:46 x</pre>					
	the tar file shows:					
Description	<pre>\$ tar tvf rootfs.tar -rwxr-xr-x 0 chris caeng 48 Jul 14 11:46 x</pre>					
on	and in the IMFS it shows:					
	<pre>[/] # ls -las x 0 -rw-r--r-- 1 root root 48 Jan 1 00:00 x</pre>					
	The makes adding 'joel' scripts difficult.					
#2769	3 years ago	invalid	unspecified	Chris Johns	Chris Johns	19 months ago
Summary	rtems-syms does not clean up temp files.					
y	I am seeing temps files such as:					
	<pre>\$ ls -las /tmp/rld-* 0 -rw----- 1 chris wheel 0 Jul 27 18:16 /tmp/rld--04lbaa.rldxx 0 -rw----- 1 chris wheel 0 Jul 27 18:42 /tmp/rld--0niaaa.rldxx 0 -rw----- 1 chris wheel 0 Jul 27 18:39 /tmp/rld--0viaaa.rldxx 0 -rw----- 1 chris wheel 0 Jul 27 18:38 /tmp/rld--1Hhaaa.rldxx 88 -rw----- 1 chris wheel 87426 Jul 27 18:30 /tmp/rld--1ibaaa.c 0 -rw----- 1 chris wheel 0 Jul 27 18:24 /tmp/rld--2EZaaa.rldxx 0 -rw----- 1 chris wheel 0 Jul 29 17:11 /tmp/rld--2rwaaa.rldxx 0 -rw----- 1 chris wheel 0 Jul 29 18:14 /tmp/rld--2sBaaa.rldxx 88 -rw----- 1 chris wheel 88148 Jul 29 17:40 /tmp/rld--2umaaa.c 88 -rw----- 1 chris wheel 87426 Jul 27 18:25 /tmp/rld--3baaaa.c 88 -rw----- 1 chris wheel 87426 Jul 27 18:27 /tmp/rld--4Jaaaa.c 0 -rw----- 1 chris wheel 0 Jul 27 18:52 /tmp/rld--4Wiaaa.rldxx 0 -rw----- 1 chris wheel 0 Jul 27 18:38 /tmp/rld--4bfaaa.rldxx</pre>					
Description	left in /tmp. They look like symbols and so I suspect rtems-syms when building the testsuite with 4.12 (master). This is on FreeBSD.					
on						
#2770	3 years ago	fixed	doc	Christian Mauderer	Sebastian Huber	2 years ago
Summary	Missing documentation for RTEMS_LINKER_ROSET_CONTENT and RTEMS_LINKER_RWSET_CONTENT					
y	Currently the two macros					
	RTEMS_LINKER_ROSET_CONTENT RTEMS_LINKER_RWSET_CONTENT					
Description	are not documented. This should be added as soon as the doc repo is ready for it.					
on	The macros have been introduced in this commit:					
	https://git.rtems.org/rtems/commit/?id=5fe6d07ad5690e3d9c6445ca3a465a700a5a5015					
#2771	3 years ago	wontfix	score	Chris Johns		2 years ago
Summary	Empty C++ file with just <rtems.h> does not compile with HEAD.					
y	I have an application that does not build.					
	The following C++ file:					
	<pre>\$ cat t1.cpp #include <rtems.h></pre>					
	does not compile with git head 5fe6d07ad5690e3d9c6445ca3a465a700a5a5015 on Zynq ARM. Build with:					
	<pre>\$ /opt/work/rtems/4.12/bin/arm-rtems4.12-g++ \ -B/opt/work/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib \ -B/opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib \ -specs bsp_specs -qrtems \ -march=armv7-a -mthumb -mcpu=neon -mfloat-abi=hard -mtune=cortex-a9 \ -g -O2 -DNDEBUG -std=c++11 \ -Werror -Wall -Wextra \ -o t1.o \ -c t1.cpp</pre>					
	Some (too much to post) of the output is:					
Description						
on						

							In file included from /opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/include/rtems/score/thread.h:36:0, from /opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/include/rtems/score/heap.h:22, from /opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/include/rtems/rtems/types.h:26, from /opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/include/rtems.h:31, from t1.cpp:1: /opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/include/rtems/score/timestamp.h: In function 'void _Timestamp_Set(Timestamp_Control*, time_t, long int)': /opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/include/rtems/score/timestamp.h:78:33: error: 'timespec2bintime' was not declared in this scope timespec2bintime(&_ts, _time); ^
#2775	3 years ago	fixed	arch/arm	Chris Johns	Chris Johns <chris@...>		2 years ago
Summary	ARM cp15 arm_cp15_set_translation_table_entries fails if TTB in read-only memory						
Description	If the TTB is held in the text section and the section is set to read-only, and cached when booting no section change happen at run time because the table cannot be written too to change it. The table cannot be changed while the MMIO is enabled. from /opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/include/sys/time.h:299:0, from /opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/include/rtems/score/timestamp.h:43, from /opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/include/rtems/score/thread.h:36, from /opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/include/rtems/score/heap.h:22, from /opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/include/rtems/rtems/types.h:26, from /opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/include/rtems.h:31 Note, the issue only shows up on real hardware, qemu does not complain. I suggest the MMIO be disabled for the table updates and then the MMU sync is not needed.						
#2776	3 years ago	fixed	score	Alexander Krutwig	Sebastian Huber		2 years ago
Summary	SPI Framework from t1.cpp:1: /opt/work/rtems/4.12/arm-rtems4.12/include/machine/_time.h:40:15: note: forward declaration of 'Timestamp_Control {aka struct bintime}'						
Description	Development of a SPI framework which shall be used for further SPI bus and device drivers. The framework shall be developed using the i2c framework as a template. It shall export the Linux Userspace SPI API.						
#2777	3 years ago	fixed	unspecified	Chris Johns	Chris Johns		2 years ago
Summary	Remove librtms++ arm-rtems4.12-g++: fatal error: /opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/bsp_specs: attempt to rename spec 'endfile' to already defined spec 'old_endfile'						
Description	This is old and there are better design patterns for threading and C++. We recommend you use the new C++ standards based support.						
#2784	3 years ago	fixed	rtems	Sebastian Huber	Sebastian Huber		2 years ago
Summary	Add function to get the current priority of a task by scheduler instance						
Description	/** * @brief Gets the current priority of the specified task with respect to the * specified scheduler instance. * * The current priority reflects temporary priority adjustments due to locking * protocols, the rate-monotonic objects on some schedulers and other * mechanisms. * * @param[in] task_id Identifier of the task. Use @ref RTEMS_SELF to select * the executing task. * @param[in] scheduler_id Identifier of the scheduler instance. * @param[out] priority Returns the current priority of the specified task with * respect to the specified scheduler instance. * * @retval RTEMS_SUCCESSFUL Successful operation. * @retval RTEMS_ILLEGAL_ON_REMOTE_OBJECT Directive is illegal on remote tasks. * @retval RTEMS_INVALID_ADDRESS The priority parameter is @c NULL. * @retval RTEMS_INVALID_ID Invalid task or scheduler identifier. * @retval RTEMS_NOT_DEFINED The task has no priority within the specified * scheduler instance. * * @see rtems_scheduler_ident(). */ rtems_status_code rtems_task_get_priority(rtems_id task_id, rtems_id scheduler_id, rtems_task_priority *priority);						
#2788	3 years ago	wontfix	score	Chris Johns	Chris Johns		2 years ago
Summary	RTEMS I2C API only defines Standard-mode (Sm) speed as a default.						
Description	The RTEMS I2C API as defined in cpukit/dev/include/dev/i2c/i2c.h only defines the bus speed as Standard-mode (Sm) as defined by the I2C standard. This is set as I2C_BUS_CLOCK_DEFAULT. The default speed is defined by the hardware, ie the devices connected, and not this API. The API should define the speeds as defined in the I2C standard and there should be no default. Drivers like the Cadence driver for the Zynq should be modified to require the bus speed be provided and all future drivers need to provide the speed.						
#2790	3 years ago	fixed	score	Sebastian Huber	Sebastian Huber		2 years ago
Summary	Linker sets broken with GCC 7						
Description	See also: https://gcc.gnu.org/ml/gcc/2016-09/msg00114.html The #define MAKEGCCNOTKNOWTHEADDRESS(ptr) asm(""+"r"(ptr)) is probably the best option. It works probably also with link-time optimization.						
#2795	3 years ago	fixed	score	Kuan	Gedare Bloom <gedare@...>		2 years ago
Summary	Overrun Handling for general real-time models						
Description	In the current implementation, if a task period is time out, the next call of rtems_rate_monotonic_period() 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. However, it may not be applicable for general task models, e.g., soft real-time task, arbitrary deadline, mixed-criticality system [1-4]. It is usually assumed that multiple task jobs of a task are executed in a first-come-first-serve manner. Thus, it is sufficient to release the second task job at the moment the first task job finishes according to a strictly periodic release pattern. The current design in fact shifts the release pattern of periodic/sporadic tasks. Since there maybe more than one postponed jobs due to the preemption, these postponed jobs that should be released are never released to the system.						

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 periodic release shifting. This way of handling is already widely considered in academia from 90s [2] until now [3] or even on multicores as well [4].

I refine the following four files and handle this requirement individually. The overhead seems to me negligible. cpukit/rtems/include/rtems/rtems/ratemon.h
cpukit/rtems/include/rtems/rtems/ratemonimpl.h cpukit/rtems/src/ratemontimeout.c cpukit/rtems/src/ratemonperiod.c I have tested the enhancement on Qemu and Raspberry Pi Model B+ with corresponding BSPs.

I believe this patch as a basis is required for further use for more general real-time task models. This enhancement only affect those timeout cases without changing any behaviour in normal cases. This enhancement is accepted in workshop mixed-criticality (WMC 2016) along with RTSS'16 this year [5].

To demonstrate the differences, a heuristic example is prepared in testsuites/sptests/sprmsched01 to show the benefit of the enhancement: 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)

[1] Buttazzo et al., Soft Real-Time Systems: Predictability vs. Efficiency, Springer 2005, <http://www.springer.com/gp/book/9780387237015> [2] Lehoczky et al., Fixed priority scheduling of periodic task sets with arbitrary deadlines, RTSS 1990, http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=128748 [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, <http://dl.acm.org/citation.cfm?doid=2597457.2597459> [5] Chen et al., Overrun Handling for Mixed-Criticality Support in RTEMS, WMC 2016, accepted.

#2797	3 years ago	fixed	rtems	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Add ability to add/remove processors to/from a scheduler instance					

The scheduler configuration is done at link-time. In order to support run-time re-configuration add functions to dd/remove processors to/from a scheduler instance.

```
/**
 * @brief Adds a processor the set of processors owned by the scheduler.
 *
 * Must be called from task context. This operation obtains and releases the
 * objects allocator lock.
 *
 * @param[in] scheduler_id Identifier of the scheduler.
 * @param[in] cpu_index Index of the processor to add.
 *
 * @retval RTEMS_SUCCESSFUL Successful operation.
 * @retval RTEMS_INVALID_ID Invalid scheduler identifier.
 * @retval RTEMS_NOT_CONFIGURED The processor is not configured to be used by
 * the application.
 * @retval RTEMS_INCORRECT_STATE The processor is configured to be used by
 * the application, however, it is not available.
 */
rtems_status_code rtems_scheduler_add_processor(
  rtems_id scheduler_id,
  uint32_t cpu_index
);

/**
 * @brief Removes a processor from set of processors owned by the scheduler.
 *
 * Must be called from task context. This operation obtains and releases the
 * objects allocator lock. Removing a processor from a scheduler is a complex
 * operation that involves all tasks in the system.
 *
 * @param[in] scheduler_id Identifier of the scheduler.
 * @param[in] cpu_index Index of the processor to add.
 *
 * @retval RTEMS_SUCCESSFUL Successful operation.
 * @retval RTEMS_INVALID_ID Invalid scheduler identifier.
 * @retval RTEMS_INVALID_NUMBER The processor is not owned by the scheduler.
 * @retval RTEMS_RESOURCE_IN_USE The set of processors owned by the scheduler
 * would be empty after the processor removal and there exists a non-idle
 * task that uses this scheduler as its home scheduler.
 */
rtems_status_code rtems_scheduler_remove_processor(
  rtems_id scheduler_id,
  uint32_t cpu_index
);
```

Description

#2798	3 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Fix POSIX timer interval					

#2819	3 years ago	fixed	arch/powerpc	Joel Sherrill	Sebastian Huber	2 years ago
Summary	powerpc-ss555 does not compile on master					
Description	Recent changes broke this configuration:					
	gmake[6]: Entering directory `./data/home/joel/rtems-4.11-work/rtems-testing/rtems/build-powerpc-ss555-rtems/powerpc-rtems4.12/c/ss555/testsuites/samples/hello' powerpc-rtems4.12-gcc -B../././././ss555/lib/ -specs bsp_specs -qrtems -DHAVE_CONFIG_H -I../././././././rtems/c/src/./././testsuites/samples/hello -I../mcpu=505 -Dmpc555 -O2 -g -fno-keep-inline-functions -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -MT init.o -MD -MP -MF .deps/init.Tpo -c -o init.o ../././././././rtems/c/src/./././testsuites/samples/hello/init.c In file included from .././././././ss555/lib/include/rtems/score/percpu.h:22:0,					
	from .././././././ss555/lib/include/rtems/confdefs.h:32, from ../././././././rtems/c/src/./././testsuites/samples/hello/init.c:51:					
	.././././././ss555/lib/include/rtems/score/cpuimpl.h:196:3: error: conflicting types for 'CPU_Interrupt_frame'					
	} CPU_Interrupt_frame;					
Description	In file included from .././././././ss555/lib/include/bsp/irq.h:28:0,					
	from .././././././ss555/lib/include/bsp.h:31, from ../././././././rtems/c/src/./././testsuites/samples/hello/init.c:17:					
	.././././././ss555/lib/include/libcpu/irq.h:193:3: note: previous declaration of 'CPU_Interrupt_frame' was here					
	} CPU_Interrupt_frame;					
	gmake[6]: * [init.o] Error 1 gmake[6]: Target `all' not remade because of errors.					
#2820	3 years ago	fixed	arch/sparc	Joel Sherrill	Sebastian Huber	2 years ago
Summary	All SPARC64 BSPs do not Build on master					
Description	Recent changes broke all builds:					
	sparc64-rtems4.12-gcc --pipe -DHAVE_CONFIG_H -I.././././././././cpukit/./././././././usiii/lib/include -mcpu=ultrasparc3 -DUS3 -DSUN4U -g -O2 -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -MT libscorecpu_a-sparc64-exception-frame-print.o -MD -MP -MF .deps/libscorecpu_a-sparc64-exception-frame-print.Tpo -c -o libscorecpu_a-sparc64-exception-frame-print.o test -f 'sparc64-exception-frame-print.c' echo '...../rtems/c/src/./././cpukit/score/cpu/sparc64/' sparc64-exception-frame-print.c sparc64-rtems4.12-gcc --pipe -DHAVE_CONFIG_H -I.././././././././cpukit/./././././././usiii/lib/include -mcpu=ultrasparc3 -DUS3 -DSUN4U -g -O2 -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -MT ../no_cpu/libscorecpu_a-cpucounterread.o -MD -MP -MF ../no_cpu/deps/libscorecpu_a-cpucounterread.Tpo -c -o ../no_cpu/libscorecpu_a-cpucounterread.o test -f 'no_cpu/cpucounterread.c' echo '...../rtems/c/src/./././cpukit/score/cpu/sparc64/' ../no_cpu/cpucounterread.c In file included from ../././././././rtems/c/src/./././cpukit/score/cpu/sparc64/./no_cpu/cpucounterread.c:15:0: ../././././cpukit/././././usiii/lib/include/rtems/score/cpu.h: In function 'CPU_ISR_Is_enabled':					
	../././././cpukit/././././usiii/lib/include/rtems/score/cpu.h:759:12: error: 'psr' undeclared (first use in this function)					
	return (psr & SPARC_PSTATE_IE_MASK) != 0;					
	../././././cpukit/././././usiii/lib/include/rtems/score/cpu.h:759:12: note: each undeclared identifier is reported only once for each function it appears in gmake[7]: * no_cpu/libscorecpu_a-cpucounterread.o Error 1 mv -f .deps/libscorecpu_a-context.Tpo .deps/libscorecpu_a-context.Po In file included from ../././././cpukit/././././usiii/lib/include/rtems/system.h:23:0,					
#2821	3 years ago	invalid	unspecified	Joel Sherrill	Sebastian Huber	2 years ago
Summary	No BSPs Build on Master					
Description	I have the latest tools.					
	All BSPs appear to fail like this:					
	powerpc-rtems4.11-gcc --pipe -DHAVE_CONFIG_H -I.././././././././cpukit/./././././././psim/lib/include -meabi -mcpu=603e -msdata=sysv -fno-common -Dppc603e -O2 -g -fno-keep-inline-functions -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -MT src/libscore_a-smpbarrierwait.o -MD -MP -MF src/.deps/libscore_a-smpbarrierwait.Tpo -c -o src/libscore_a-smpbarrierwait.o test -f 'src/smpbarrierwait.c' echo '...../rtems/c/src/./././cpukit/score/' src/smpbarrierwait.c powerpc-rtems4.11-gcc --pipe -DHAVE_CONFIG_H -I.././././././././cpukit/./././././././psim/lib/include -meabi -mcpu=603e -msdata=sysv -fno-common -Dppc603e -O2 -g -fno-keep-inline-functions -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -MT src/libscore_a-kern_tc.o -MD -MP -MF src/.deps/libscore_a-kern_tc.Tpo -c -o src/libscore_a-kern_tc.o test -f 'src/kern_tc.c' echo '...../rtems/c/src/./././cpukit/score/' src/kern_tc.c powerpc-rtems4.11-gcc --pipe -DHAVE_CONFIG_H -I.././././././././cpukit/./././././././psim/lib/include -meabi -mcpu=603e -msdata=sysv -fno-common -Dppc603e -O2 -g -fno-keep-inline-functions -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -MT src/libscore_a-libatomic.o -MD -MP -MF src/.deps/libscore_a-libatomic.Tpo -c -o src/libscore_a-libatomic.o test -f 'src/libatomic.c' echo '...../rtems/c/src/./././cpukit/score/' src/libatomic.c mv -f src/.deps/libscore_a-semaphore.Tpo src/.deps/libscore_a-semaphore.Po mv -f src/.deps/libscore_a-once.Tpo src/.deps/libscore_a-once.Po ../././././././rtems/c/src/./././cpukit/score/src/libatomic.c:19:32: fatal error: machine/_libatomic.h: No such file or directory					
	#include <machine/_libatomic.h>					
	compilation terminated. gmake[6]: * [src/libscore_a-libatomic.o] Error 1 In file included from /data/home/joel/rtems-4.11-work/tools/4.11/powerpc-rtems4.11/include/sys/param.h:89:0,					
Description	from .././././././rtems/c/src/./././cpukit/score/src/kern_tc.c:48:					
	.././cpukit/././././psim/lib/include/sys/uo.h:41:9: error: unknown type name 'ssize_t'					
	typedef ssize_t ssize_t;					
	.././cpukit/././././psim/lib/include/sys/uo.h:46:9: error: unknown type name 'off_t'					
	typedef off_t off_t;					
Description	.././cpukit/././././psim/lib/include/sys/uo.h:46:17: error: conflicting types for 'off_t'					
	typedef off_t off_t;					
#2822	3 years ago	fixed	unspecified	Joel Sherrill	Sebastian Huber	2 years ago
Summary	m32csim does not build on master					
Description	In file included from .././cpukit/././././m32csim/lib/include/rtems/score/types.h:22:0,					
	from .././cpukit/././././m32csim/lib/include/rtems/score/cpu.h:40, from ../././././././rtems/c/src/./././cpukit/score/src/percpuasm.c:19:					
	.././cpukit/././././m32csim/lib/include/rtems/score/defs.h:244:17: error: size of array 'rtems_static_assert_PER_CPU_OFFSET_EXECUTING' is negative					
	typedef int rtems_static_assert_ ## msg [(cond) ? 1 : -1]					
	.././././././rtems/c/src/./././cpukit/score/src/percpuasm.c:98:1: note: in expansion of macro 'RTEMS_STATIC_ASSERT'					
Description	RTEMS_STATIC_ASSERT(					
	.././cpukit/././././m32csim/lib/include/rtems/score/defs.h:244:17: error: size of array 'rtems_static_assert_PER_CPU_OFFSET_HEIR' is negative					
	typedef int rtems_static_assert_ ## msg [(cond) ? 1 : -1]					
	.././././././rtems/c/src/./././cpukit/score/src/percpuasm.c:103:1: note: in expansion of macro 'RTEMS_STATIC_ASSERT'					
	RTEMS_STATIC_ASSERT(					
#2823	3 years ago	fixed	unspecified	Joel Sherrill	Sebastian Huber	2 years ago
Summary	Nearly all m68k BSPs do not Build on Master					
Description	av5282 is the first					
	In file included from .././cpukit/././././av5282/lib/include/rtems/score/types.h:22:0,					
	from ../././cpukit/././././av5282/lib/include/rtems/score/cpu.h:26, from ../././././././rtems/c/src/./././cpukit/score/src/percpuasm.c:19:					

name	ratio	1%	2%	5%	10%	20%	50%	100%
CPU_Thread_Idle_body	33.395%	=====						
atsam_spi_setup_transfer	6.061%	=====						
atsam_spi_interrupt	4.690%	=====						
Mutex_recursive_Release	3.011%	=====						
Event_Seize	2.955%	=====						
ARMV7M_NVIC_interrupt_dispatch	2.885%	=====						
rtems_termios_enqueue_raw_characters	2.771%	=====						
rtems_termios_read_tty	2.722%	=====						
Timecounter_Binuptime	2.653%	=====						
Thread_Do_dispatch	2.240%	=====						
Scheduler_priority_Block	2.112%	=====						
ARMV7M_interrupt_service_leave	2.100%	=====						
Scheduler_priority_Unblock	1.919%	=====						
Mutex_recursive_Acquire	1.876%	=====						
iproc	1.773%	=====						
CPU_Context_switch								

The change resulted in 10% more total idle time on the system.

#2841	3 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
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Summary	Add NXP SC16IS752 serial device driver					
Description	Add Termios device driver for NXP SC16IS752 (RS232/RS485 over SPI or I2C).					

#2843	3 years ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	21 months ago
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Summary	Use self-contained objects instead of Classic API for drivers and support libraries					
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The Classic API has some weaknesses:

- Dynamic memory (the workspace) is used to allocate object pools. This requires a complex configuration with heavy use of the C pre-processor.
- Objects are created via function calls which return an object identifier. The object operations use this identifier and map it internally to an object representation.
- The objects reside in a table, e.g. they are suspect to false sharing of cache lines.
- The object operations use a rich set of options and attributes. For each object operation these parameters must be evaluated and validated at run-time to figure out what to do exactly for this operation.

The overhead for Classic API mutexes used for example in Termios and the SPI framework is significant, see discussion:

<https://lists.rtems.org/pipermail/devel/2016-December/016543.html>

There are some API options available:

1. Use C11 mutexes and condition variables.
2. Turn the POSIX synchronization objects into self-contained objects and use them.
3. Use FreeBSD synchronization objects like **MUTEX(9)** or **CONDVAR(9)**.
4. Add RTEMS-specific self-contained synchronization objects and use them.

Option 1. and 2. lack support for binary semaphores which are used for task/interrupt synchronization, e.g. Termios.

Option 2. needs run-time evaluation to figure out the actual object variant, e.g. non-recursive, recursive, ceiling, error-checking, robust POSIX mutex.

Option 3. uses hash tables, thus it is not suitable for real-time systems.

Option 1. and 2. lack support for user-defined object names that may help for system diagnostic, tracing and debugging.

Option 4. could be used to avoid all shortcomings of options 1-3. It would be trivial to implement, test and document.

In order to enable user-defined object names one option is to add a const char *name member to Thread_queue_Queue.

#2844	3 years ago	fixed	fs	Sebastian Huber	Sebastian Huber	2 years ago
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Summary	JFFS2: Add IO controls to get filesystem instance information and force a garbage collection					
Description	Some applications need to control the garbage collection of the JFFS2 filesystem. For example during bootloader to application transitions with execute in place flashes (XIP).					

#2845	3 years ago	fixed	doc	Sebastian Huber		2 years ago
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Summary	Add I2C framework documentation					
Description	The new I2C framework lacks documentation.					

#2849	3 years ago	fixed	doc	Sebastian Huber		2 years ago
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Summary	ATA/IDE support in RTEMS is out-dated					
Description	The ATA/IDE support in RTEMS is out-dated. New platforms should consider to use the SATA support provided by FreeBSD via libbsd.					
	Update the documentation accordingly.					

#2850	3 years ago	fixed	doc	Sebastian Huber		2 years ago
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Summary	Driver manual covers non-existent Analog Driver					
Description	Remove this chapter from the documentation.					

#2851	3 years ago	fixed	doc	Sebastian Huber		2 years ago
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Summary	Driver manual covers non-existent Discrete Driver					
Description	Remove this chapter from the documentation.					

#2853	3 years ago	fixed	doc	Sebastian Huber		2 years ago
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Summary	Driver manual covers non-existent Non-Volatile Memory Driver					
Description	Remove this chapter from the documentation.					

#2858	3 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
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Summary	Add user defined thread names					
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Descripti on	Add user defined thread names to ease debugging, enhance the system diagnostics and improve compatibility to other systems, e.g. Linux and FreeBSD.					
	Implement pthread_setname_np() and pthread_getname_np(). Add CONFIGURE_MAXIMUM_THREAD_NAME_SIZE to the application configuration options. Add a application configuration dependent storage area for thread names to the thread control block.					
#2859	3 years ago	fixed	posix	Gedare Bloom	Gedare Bloom	2 years ago
Summar y	Implement POSIX Shared Memory Objects					
	POSIX Shared Memory is a widely used API for inter-process communication. The functions in the API include:					
Descripti on	- shm_open - ftruncate - mmap - munmap - shm_unlink - close - fstat - fchown - fchmod					
#2862	3 years ago	fixed	doc	Chris Johns	Chris Johns	2 years ago
Summar y	docs.rtems.org Add support to ReST format releases.					
	Add support to the releases section of the web site to handle ReST packages. The catalogues have a legacy field for texinfo docs.					
	The 4.11.0 and 4.11.1 releases need to have a catalogue added because this did not exist when those releases were created.					
#2863	3 years ago	duplicate	doc	Joel Sherrill	Joel Sherrill	2 years ago
Summar y	Update POSIX 1003.1 Compliance Guide for ReST					
	The POSIX 1003.1 Compliance Guide should be auto-generated from a spreadsheet into the ReST format. My vague recollection is that we used shell scripts to do this for texinfo output.					
Descripti on	I will have to decipher what we used to do and define a new procedure.					
	This impacts 4.11 and newer. One issue is having correct information for what methods are present on a branch. The FACE Conformance Test Suite can be used for ~800 of the methods.					
#2864	3 years ago	fixed	doc	Chris Johns		2 years ago
Summar y	docs.rtems.org Automatic update of branches content when a rtems-doc.git change is made.					
	Add support to automatically update the branches when a git commit happens.					
#2865	3 years ago	fixed	doc	Chris Johns	Chris Johns	2 years ago
Summar y	Coverage installed when building the docs repeats catalogue.xml entries					
	The catalogue repeats entries.					
#2867	3 years ago	fixed	tool	Stavros Passas	Chris Johns	2 years ago
Summar y	Fix exclude rule in rtems-test-check					
	rtems-test-check is responsible of checking the testsuite configuration of a given BSP and adapt it based on a given "command". Currently for the "exclude" command, we never exclude anything, the output of the script is always the whole list of the input tests.					
	This happens because the script always starts with output = \$tests and appends on the list the tests that are not excluded, so the output is always all the tests.					
#2868	3 years ago	fixed	arch/arm	David Binderman	Gedare Bloom <gedare@...>	2 years ago
Summar y	src/c/src/lib/libbsp/arm/smdk2410/smc/smc.c: 3 * pointless local variables ?					
	[src/c/src/lib/libbsp/arm/smdk2410/smc/smc.c:235]: (style) Variable 'cnt1' is modified but its new value is never used. [src/c/src/lib/libbsp/arm/smdk2410/smc/smc.c:243]: (style) Variable 'cnt2' is modified but its new value is never used. [src/c/src/lib/libbsp/arm/smdk2410/smc/smc.c:246]: (style) Variable 'cnt3' is modified but its new value is never used.					
Descripti on	\$ egrep "cnt1]cnt2]cnt3" src/c/src/lib/libbsp/arm/smdk2410/smc/smc.c					
	uint32_t pblock, i, j, lblock, zone, count, cnt1, cnt2, cnt3; cnt1 = 0; cnt2 = 0; cnt3 = 0;					
	cnt1++;					
	cnt2++; cnt3++;					
	\$					
	Maybe someone left some debug code in ?					
#2873	3 years ago	fixed	arch/arm	David Binderman	Gedare Bloom <gedare@...>	2 years ago
Summar y	src/c/src/lib/libbsp/arm/raspberrypi/i2c/i2c.c:320: defective error checking ?					
	src/c/src/lib/libbsp/arm/raspberrypi/i2c/i2c.c:320): (style) Checking if unsigned variable 'rv' is less than zero.					
	Source code is					
	rv = rpi_i2c_setup_transfer(bus);					
	if (rv < 0) {					
Descripti on	but					
	uint32_t rv = 0;					
	and					
	static int rpi_i2c_setup_transfer(rpi_i2c_bus *bus)					
	Suggest put return value into an int local variable, then sanity check it, then assign it to rv.					
#2874	3 years ago	fixed	arch/powerpc	David Binderman	Sebastian Huber <sebastian.huber@...>	2 years ago
Summar y	src/c/src/lib/libbsp/powerpc/beatnik/marvell/gt_timer.c: 4 * pointless check ?					
	[src/c/src/lib/libbsp/powerpc/beatnik/marvell/gt_timer.c:102]: (style) Checking if unsigned variable 'timer' is less than zero. [src/c/src/lib/libbsp/powerpc/beatnik/marvell/gt_timer.c:109]: (style) Checking if unsigned variable 'timer' is less than zero. [src/c/src/lib/libbsp/powerpc/beatnik/marvell/gt_timer.c:117]: (style) Checking if unsigned variable 'timer' is less than zero. [src/c/src/lib/libbsp/powerpc/beatnik/marvell/gt_timer.c:128]: (style) Checking if unsigned variable 'timer' is less than zero.					
	Parameter "timer" is only ever type uint32_t, so any check < 0 seem pointless.					
#2877	3 years ago	fixed	score	Stavros Passas	joel.sherrill@...	2 years ago
Summar y	DHCP client fails on complex networks					
	What happens is that on networks with more than one DHCP servers, or on networks that use multiple vlans it can happen that After a DHCP discover our client broadcasts, it receives multiple offers, which is perfectly fine based on the DHCP RFC.					
	However our implementation of a DHCP client, expects a linear execution flow:					
	1. Broadcast a DHCP discover;					
	2. Wait for a DHCP offer;					

Description	3. Transmit a DHCP request; 4. Wait for a DHCP ack;					
	However the network stack is not cleaned between the reception of a DHCP offer and a DHCP ack, so if multiple offers are received, just the first one will be processed during the "Receive DHCP offer" phase, and the next one will be received when we expect a "DHCP ack", which makes our implementation assume the DHCP handshake is invalid and fail. Thus we restart the network and retry the whole process from the beginning which will cause the same issue again.					
#2878	3 years ago	fixed	arch/sparc	David Binderman	Daniel Hellstrom2 years ago	
Summary	src/c/src/lib/libbsp/sparc/shared/can/occan.c:1573: broken error checking ?					
Description	src/c/src/lib/libbsp/sparc/shared/can/occan.c:1573]: (style) Checking if unsigned variable 'speed=pelican_speed_auto(can)' is less than zero.					
	Source code is					
	<pre>if ((speed=pelican_speed_auto(can)) < 0){ /* failed */ return RTEMS_IO_ERROR; }</pre>					
	but					
	<pre>unsigned int speed; and static int pelican_speed_auto(occan_priv *priv); I am not sure which C compiler gets using in rtems, but I do know that gcc compiler flag -Wtype-limits will flag this kind of problem.</pre>					
#2879	3 years ago	fixed	score	David Binderman	Chris Johns2 years ago	
Summary	src/cpukit/libdebugger/rtems-debugger-server.c: four problems					
Description	1.					
	src/cpukit/libdebugger/rtems-debugger-server.c:1306]: (style) Redundant condition: extended. '!extended (extended && check_pid(pid))' is equivalent to '!extended check_pid(pid)'					
	Suggest simplify.					
	2.					
	src/cpukit/libdebugger/rtems-debugger-server.c:1858]: (warning) Possible null pointer dereference: rtems_debugger					
	Source code is					
	<pre>if (r < 0) { rtems_printf(printer, "error: rtems-db: remote begin: %s: %s\n", rtems_debugger->remote->name, strerror(errno)); free(rtems_debugger); rtems_debugger = NULL; } /* * Reset at the end of the session. */ rtems_debugger->flags = 0;</pre>					
	Suggest adding <code>return -1</code> inside the <code>if</code> .					
	3.					
	src/cpukit/libdebugger/rtems-debugger-server.c:906]: (style) Redundant condition: extended. '!extended (extended && check_pid(pid))' is equivalent to '!extended check_pid(pid)'					
	Duplicate.					
	4.					
src/cpukit/libdebugger/rtems-debugger-server.c:956]: (warning) Char literal compared with pointer 'p'. Did you intend to dereference it?						
Source code is						
<pre>while (p != NULL && p != '\0') {</pre>						
Maybe better code						
<pre>while (p != NULL && *p != '\0') {</pre>						
#2880	3 years ago	wontfix	unspecified	David Binderman	2 years ago	
Summary	src/cpukit/libfs/src/jffs2/src/readinode.c:189: faulty logic					
Description	src/cpukit/libfs/src/jffs2/src/readinode.c:189]: (style) Condition 'tn.fn.ofs>=offset' is always true					
	Source code is					
	<pre>if (tn->fn->ofs < offset) next = tn->rb.rb_right; else if (tn->fn->ofs >= offset) next = tn->rb.rb_left; else break;</pre>					
	Maybe better code					
	<pre>if (tn->fn->ofs < offset) next = tn->rb.rb_right; else if (tn->fn->ofs > offset) next = tn->rb.rb_left; else break;</pre>					
	#2883					
	3 years ago	fixed	arch/arm	David Binderman	Pavel Pisa2 years ago	
	Summary	src/c/src/lib/libbsp/arm/tms570/console/tms570-sci.c:248: strange expression ?				
	src/c/src/lib/libbsp/arm/tms570/console/tms570-sci.c:248]: (style) Same expression on both sides of ' '. 					

Summary	Source code is					
Description	uint32_t flr_tx_ready = TMS570_SCI_FLR_TX_EMPTY TMS570_SCI_FLR_TX_EMPTY;					
#2885	3 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Fix rtems_rate_monotonic_postponed_job_count() prototype					
Description	rtems_rate_monotonic_postponed_job_count() should return an RTEMS status code. It should be renamed to rtems_rate_monotonic_get_postponed_job_count() or rtems_rate_monotonic_get_postponed_jobs() (similar to rtems_rate_monotonic_get_statistics()).					
#2889	3 years ago	fixed	score	Stavros Passas	Stavros Passas <stavros.passas@...>	2 years ago
Summary	RTEMS_STACK_CHECKER_EXTENSION has incomplete definition					
Description	The extension for the stack checker defines 8 entries, while the structure for RTEMS extensions gets 9 arguments. This causes warnings to appear on applications compiled with -Werror, or similar flags.					
	The handler that is missing is for the terminate callback, so a 0 entry would be enough to fix this error.					
#2890	3 years ago	fixed	score	Stavros Passas	Sebastian Huber <sebastian.huber@...>	2 years ago
Summary	_RBTREE_initialize_node generates warnings					
Description	Currently, when _RBTREE_initialize_node is used, it generates warnings of unused variables. I traced the issue down to the variable being used only if RTEMS_DEBUG is set.					
	Thus, the argument should be marked as RTEMS_UNUSED, if RTEMS_DEBUG is not set.					
#2893	3 years ago	fixed	config	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Remove CONFIGURE_SMP_APPLICATION					
Description	SMP support must be enabled with the CONFIGURE_SMP_APPLICATION configuration option. Remove this option and enable the SMP support if CONFIGURE_SMP_MAXIMUM_PROCESSORS > 1.					
#2894	3 years ago	fixed	config	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Rename CONFIGURE_SMP_MAXIMUM_PROCESSORS to CONFIGURE_MAXIMUM_PROCESSORS					
Description	Rename CONFIGURE_SMP_MAXIMUM_PROCESSORS to CONFIGURE_MAXIMUM_PROCESSORS since the SMP part is superfluous.					
#2895	3 years ago	fixed	config	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Prefix the confdefs.h internal defines with an underscore					
Description	Prefix the confdefs.h internal defines with an underscore to simplify the review of this extremely complex header file.					
#2896	3 years ago	wontfix	tool/rsb	Joel Sherrill	Chris Johns	2 years ago
Summary	RSB requirements are missing pax					
Description	Loading a new VM, I noticed that pax is needed. It isn't mentioned in the RSB manual at all.					
	I can only accurately fix this for Centos 7 but we can safely assume that advice applies to Centos 6, Fedora, and RHEL.					
	Can users of other distributions check about pax. Please					
#2897	3 years ago	fixed	score	Kevin Kirspele	Needs Funding	2 years ago
Summary	Update termios.h to match the latest FREEBSD definitions					
Description	The FREEBSD struct termios separates out the input and output baud rates into individual speed_t variables. It also supports more flag options. The big benefit is that the rtems-libbsd tty code can be ported cleanly without the need to fixup the input and output baud rates. This should be a transparent change unless someone was manipulating the baud rates directly through the c_cflags (not using the cfgetispeed, cfgetospeed, cfsetispeed, cfsetospeed functions).					
#2905	3 years ago	fixed	arch/sparc	Tanu Hari Dixit	Daniel Hellstrom	2 years ago
Summary	Merge LEON					

Merge LEON

Students: Past, Present, and Potential Students

Status: Some work may be done.

Introduction: Merge Leon RTEMS and mainstream RTEMS merge the Leon **DriverManager**, **samples**, and **LEON-RTEMS** into mainstream RTEMS.

Goal: Concise statement of the overall goal of the project. Refine this initial statement to include: project deliverables (code, docs, testing), required/suggested methodology, standards of quality, possible goal extensions beyond the main objective.

Requirements: List the requirements and level of expertise you estimate are required by the developer tackling this project will have to have: Required level of programming language(s), specific areas of RTEMS or tools, level of familiarity with RTEMS, cross-development, GNU/Linux, etc., development/documentation/testing tools, mathematical/algebraic background, other desirable skills.

Resources: Current RTEMS developers, papers, etc that may help you in this project.

Acknowledgements

- who helped and did work

Miscellaneous Sections

As the project progresses, you will need to add build instructions, etc and this page will evolve from a project description into a HOWTO.

References

- TBD

Other sections: If you have more to say about the project that doesn't fit in the proposed sections of this template, feel free to add other sections at will.

#2906	3 years ago	fixed	doc	Chris Johns		2 years ago
Summary	rtems-doc waf configure does not detect sphinxcontrib.bibtex status					
Description	The rtems-docs requires the Sphinx contribution extension for bibtex to build. A configure check should be added to see if the extension is installed and an error raised or the documentation conditionally built. It is not clear to me if bibtex needs Tex Alive. Requiring Tex on all hosts to build the documentation is a regression so the extension will need to be removed or a fall back position taken where degraded quality documentation in HTML is created.					
#2909	3 years ago	fixed	score	Sebastian Huber	Chris Johns	2 years ago
Summary	xz: Support for 64-bit CRC is build although XZ_USE_CRC64 is not defined					
Description	This leads to: <pre>.././././././././rtems/c/src/.././cpukit/libmisc/xz/xz_crc64.c:21:16: warning: no previous prototype for 'xz_crc64_init' [-Wmissing-prototypes] .././././././././rtems/c/src/.././cpukit/libmisc/xz/xz_crc64.c:40:20: warning: no previous prototype for 'xz_crc64' [-Wmissing-prototypes]</pre> We should enable the 64-bit CRC or remove this file from the build.					
#2912	3 years ago	fixed	score	Sebastian Huber	Chris Johns	2 years ago
Summary	libdebugger: control reaches end of non-void function					

<https://devel.rtems.org/wiki/Release//5/5.1>

Description	4. Condition i < 6U /* sizeof (struct drvmgr_drv_ops) / sizeof (void (*)(void)) */ , taking true branch. 5. cond_at_most: Checking i < 6U implies that i may be up to 5 on the true branch.					
	358 for (i = 0, ppfunc = (fun_ptr *)&drv->ops->init[0]; 359 i < DRVMGR_OPS_NUM(struct drvmgr_drv_ops); i++) 4. Jumping back to the beginning of the loop. CID 1399730 (#1 of 1): Out-of-bounds read (OVERRUN) 7. overrun-local: Overrunning array of 4 4-byte elements at element index 5 (byte offset 20) by dereferencing pointer ppfunc + i.					
#2933	3 years ago	fixed	unspecified	Amir Takhar	Amir Takhar	13 months ago
Summary	Flexibleasignto is broken on new ticket page.					
Description	The plugin needs to be fixed for new trac template changes. I usually don't have to modify this often but we made a huge version jump. Right now all we see is assign to <default> There should be a list of developers.					
	#2935	3 years ago	wontfix	score	Martin Aberg	joel.sherrill@... 2 years ago
Summary	Termios task driven mode not compatible with SMP					
Description	When the Termios task driven functioning mode is used, rtems_termios_open_tty() calls rtems_task_create() with RTEMS_NO_PREEMPT in the initial task mode parameter. RTEMS_NO_PREEMPT is not supported on SMP. rtems_task_create() returns RTEMS_UNSATISFIED in this SMP scenario and Termios ends up in rtems_fatal_error_occurred(). Termios starts the RX and TX tasks successfully on SMP if RTEMS_NO_PREEMPT is removed from the initial task modes of these tasks. However, I suspect there may be assumptions on the NO_PREEMPT mode for the RX and TX tasks in other parts of Termios.					
	#2941	3 years ago	invalid	tool/rsb	DHANPAL SINGH	2 years ago
Summary	building rsb freezes					
Description	dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC:~\$ cd dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC:~\$ mkdir -p development/rtems/rsb dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC:~/development/rtems/rsb\$ git clone git://git.rtems.org/rtems-source-builder.git fatal: destination path 'rtems-source-builder' already exists and is not an empty directory. dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC:~/development/rtems/rsb\$ cd rtems-source-builder dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC:~/development/rtems/rsb/rtems-source-builder\$ cd rtems dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC:~/development/rtems/rsb/rtems-source-builder/rtems\$../source-builder/sb-set-builder --prefix=\$HOME/development/rtems/4.12.12/rtems-sparc RTEMS Source Builder - Set Builder, 4.12 (10d9e2dfacf7) Build Set: 4.12/rtems-sparc Build Set: 4.12/rtems-autotools.bset Build Set: 4.12/rtems-autotools-internal.bset config: tools/rtems-autoconf-2.69-1.cfg package: autoconf-2.69-x86_64-linux-gnu-1 Creating source directory: sources download: ftp://ftp.gnu.org/gnu/autoconf/autoconf-2.69.tar.gz -> sources/autoconf-2.69.tar.gz downloading: sources/autoconf-2.69.tar.gz - 1.8MB of 1.8MB (100%) building: autoconf-2.69-x86_64-linux-gnu-1 config: tools/rtems-automake-1.12.6-1.cfg package: automake-1.12.6-x86_64-linux-gnu-1 download: ftp://ftp.gnu.org/gnu/automake/automake-1.12.6.tar.gz -> sources/automake-1.12.6.tar.gz downloading: sources/automake-1.12.6-x86_64-linux-gnu-1 download: ftp://ftp.gnu.org/gnu/automake/automake-1.12.6.tar.gz -> sources/automake-1.12.6-x86_64-linux-gnu-1 building: automake-1.12.6-x86_64-linux-gnu-1 building: automake-1.12.6-bugzilla.redhat.com-1239379.diff -> patches/automake-1.12.6-bugzilla.redhat.com-1239379.diff downloading: patches/automake-1.12.6-bugzilla.redhat.com-1239379.diff - 0.0 bytes downloading: patches/automake-1.12.6-bugzilla.redhat.com-1239379.diff - 408.0 bytes of 408.0 bytes (100%) building: automake-1.12.6-x86_64-linux-gnu-1 cleaning: autoconf-2.69-x86_64-linux-gnu-1 cleaning: automake-1.12.6-x86_64-linux-gnu-1 Build Set: Time 0:00:44.961728 Build Set: 4.12/rtems-autotools-base.bset config: tools/rtems-autoconf-2.69-1.cfg package: autoconf-2.69-x86_64-linux-gnu-1 building: autoconf-2.69-x86_64-linux-gnu-1 reporting: tools/rtems-autoconf-2.69-1.cfg -> autoconf-2.69-x86_64-linux-gnu-1.txt reporting: tools/rtems-autoconf-2.69-1.cfg -> autoconf-2.69-x86_64-linux-gnu-1.xml config: tools/rtems-automake-1.12.6-1.cfg package: automake-1.12.6-x86_64-linux-gnu-1 building: automake-1.12.6-x86_64-linux-gnu-1 building: automake-1.12.6-x86_64-linux-gnu-1 reporting: tools/rtems-automake-1.12.6-1.cfg -> automake-1.12.6-x86_64-linux-gnu-1.txt reporting: tools/rtems-automake-1.12.6-1.cfg -> automake-1.12.6-x86_64-linux-gnu-1.xml installing: autoconf-2.69-x86_64-linux-gnu-1 -> /home/dhanpal/development/rtems/4.12 installing: automake-1.12.6-x86_64-linux-gnu-1 -> /home/dhanpal/development/rtems/4.12 cleaning: autoconf-2.69-x86_64-linux-gnu-1 cleaning: automake-1.12.6-x86_64-linux-gnu-1 Build Set: Time 0:00:15.092702 Build Set: Time 0:01:00.058748 config: devel/expat-2.1.0-1.cfg package: expat-2.1.0-x86_64-linux-gnu-1 download: http://downloads.sourceforge.net/project/expat/expat/2.1.0/expat-2.1.0.tar.gz -> sources/expat-2.1.0.tar.gz redirect: https://nchc.dl.sourceforge.net/project/expat/expat/2.1.0/expat-2.1.0.tar.gz					
	download: sources/expat-2.1.0.tar.gz - 549.4kB of 549.4kB (100%) building: expat-2.1.0-x86_64-linux-gnu-1 reporting: devel/expat-2.1.0-1.cfg -> expat-2.1.0-x86_64-linux-gnu-1.txt reporting: devel/expat-2.1.0-1.cfg -> expat-2.1.0-x86_64-linux-gnu-1.xml config: tools/rtems-binutils-2.27-1.cfg package: sparc-rtems4.12-binutils-2.27-x86_64-linux-gnu-1 download: ftp://ftp.gnu.org/gnu/binutils/binutils-2.27.tar.bz2 -> sources/binutils-2.27.tar.bz2 downloading: sources/binutils-2.27.tar.bz2 - 24.9MB of 24.9MB (100%) download: https://git.rtems.org/rtems-tools/plain/tools/4.12/binutils/binutils-2.26-gas-reloc.patch -> patches/binutils-2.26-gas-reloc.patch downloading: patches/binutils-2.26-gas-reloc.patch - 0.0 bytes of 510.0 bytes (0% downloading: patches/binutils-2.26-gas-reloc.patch - 510.0 bytes of 510.0 bytes (100%) building: sparc-rtems4.12-binutils-2.27-x86_64-linux-gnu-1 reporting: tools/rtems-binutils-2.27-1.cfg -> sparc-rtems4.12-binutils-2.27-x86_64-linux-gnu-1.txt reporting: tools/rtems-binutils-2.27-1.cfg -> sparc-rtems4.12-binutils-2.27-x86_64-linux-gnu-1.xml config: tools/rtems-gcc-6.3.0-newlib-2.5.0.20170228-1.cfg package: sparc-rtems4.12-gcc-6.3.0-newlib-2.5.0.20170228-x86_64-linux-gnu-1 download: ftp://ftp.gnu.org/gnu/gcc/gcc-6.3.0/gcc-6.3.0.tar.bz2 -> sources/gcc-6.3.0.tar.bz2 downloading: sources/gcc-6.3.0.tar.bz2 - 95.3MB of 95.3MB (100%) download: ftp://sourceware.org/pub/newlib/newlib-2.5.0.20170228.tar.gz -> sources/newlib-2.5.0.20170228.tar.gz downloading: sources/newlib-2.5.0.20170228.tar.gz - 17.1MB of 17.1MB (100%) download: http://www.mprfr.org/mpfr-2.4.2/mpfr-2.4.2.tar.bz2 -> sources/mpfr-2.4.2.tar.bz2 downloading: sources/mpfr-2.4.2.tar.bz2 - 1.0MB of 1.0MB (100%) download: http://www.multiprecision.org/mpc/download/mpc-0.8.1.tar.gz -> sources/mpc-0.8.1.tar.gz downloading: sources/mpc-0.8.1.tar.gz - 532.2kB of 532.2kB (100%) download: ftp://ftp.gnu.org/gnu/gmp/gmp-4.3.2.tar.bz2 -> sources/gmp-4.3.2.tar.bz2 downloading: sources/gmp-4.3.2.tar.bz2 - 1.8MB of 1.8MB (100%) building: sparc-rtems4.12-gcc-6.3.0-newlib-2.5.0.20170228-x86_64-linux-gnu-1					
#2942	3 years ago	invalid	unspecified	DHANPAL SINGH		2 years ago
Summary	rtems building error					
Description	dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC:~\$ export PATH=\$HOME/development/rtems/4.12/bin:\$PATH dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC:~\$ cd dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC:~\$ cd development/rtems dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC:~/development/rtems\$ mkdir kernel dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC:~/development/rtems\$ cd kernel dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC:~/development/rtems/kernel\$ git clone git://git.rtems.org/rtems.git items Cloning into 'rtems'... remote: Counting objects: 504955, done. remote: Compressing objects: 100% (90780/90780), done. remote: Total 504955 (delta 407126), reused 499936 (delta 403143) Receiving objects: 100% (504955/504955), 73.12 MiB 113 KiB/s, done. Resolving deltas: 100% (407126/407126), done. dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC:~/development/rtems/kernel\$ cd rtems dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC:~/development/rtems/kernel/rtems\$./bootstrap -c && ./bootstrap -p && \					
	\$HOME/development/rtems/rsb/source-builder/sb-bootstrap					
removing automake generated Makefile.in files removing configure files removing aclocal.m4 files Generating ./cpukit/libmisc/preinstall.am Generating ./cpukit/preinstall.am Generating ./cpukit/ftpd/preinstall.am Generating ./cpukit/mghttpd/preinstall.am Generating ./cpukit/score/preinstall.am Generating ./cpukit/score/cpu/no_cpu/preinstall.am Generating ./cpukit/score/cpu/arm/preinstall.am Generating ./cpukit/score/cpu/lm32/preinstall.am Generating ./cpukit/score/cpu/nios2/preinstall.am Generating ./cpukit/score/cpu/epiphany/preinstall.am Generating ./cpukit/score/cpu/sparc64/preinstall.am Generating ./cpukit/score/cpu/m32c/preinstall.am Generating ./cpukit/score/cpu/i386/preinstall.am Generating ./cpukit/score/cpu/mips/preinstall.am Generating ./cpukit/score/cpu/sh/preinstall.am Generating ./cpukit/score/cpu/m68k/preinstall.am Generating ./cpukit/score/cpu/or1k/preinstall.am Generating ./cpukit/score/cpu/bfin/preinstall.am Generating ./cpukit/score/cpu/moxie/preinstall.am Generating ./cpukit/score/cpu/sparc/preinstall.am Generating ./cpukit/libcrypt/preinstall.am Generating ./cpukit/dev/preinstall.am Generating ./cpukit/libcpi/preinstall.am Generating ./cpukit/wrapup/preinstall.am Generating ./cpukit/sapi/preinstall.am Generating ./cpukit/libdl/preinstall.am Generating ./cpukit/libcspport/preinstall.am Generating ./cpukit/pppd/preinstall.am Generating ./cpukit/dtc/libfdt/preinstall.am Generating ./cpukit/libnetworking/preinstall.am Generating ./cpukit/libfs/preinstall.am Generating ./cpukit/libfs/src/nfsclient/preinstall.am Generating ./cpukit/zlib/preinstall.am Generating ./cpukit/posix/preinstall.am Generating ./cpukit/librpc/preinstall.am Generating ./cpukit/telnetd/preinstall.am Generating ./cpukit/libdebugger/preinstall.am Generating ./cpukit/rtems/preinstall.am Generating ./cpukit/libmd/preinstall.am Generating ./c/srclib/wrapup/preinstall.am Generating ./c/srclibchip/preinstall.am Generating ./c/srclib/libbsp/no_cpu/no_bsp/preinstall.am Generating ./c/srclib/libbsp/preinstall.am Generating ./c/srclib/libbsp/arm/csb336/preinstall.am Generating ./c/srclib/libbsp/arm/smdk2410/preinstall.am Generating ./c/srclib/libbsp/arm/realview-pbx-a9/preinstall.am Generating ./c/srclib/libbsp/arm/preinstall.am Generating ./c/srclib/libbsp/arm/stm32f4/preinstall.am Generating ./c/srclib/libbsp/arm/atsam/preinstall.am Generating ./c/srclib/libbsp/arm/rt122xx/preinstall.am Generating ./c/srclib/libbsp/arm/csb337/preinstall.am Generating ./c/srclib/libbsp/arm/beagle/preinstall.am Generating ./c/srclib/libbsp/arm/edb7312/preinstall.am Generating ./c/srclib/libbsp/arm/lm3s69xx/preinstall.am Generating ./c/srclib/libbsp/arm/lpc24xx/preinstall.am Generating ./c/srclib/libbsp/arm/gumstix/preinstall.am Generating ./c/srclib/libbsp/arm/xilinx-zynq/preinstall.am Generating ./c/srclib/libbsp/arm/gdbarmsim/preinstall.am Generating ./c/srclib/libbsp/arm/lpc32xx/preinstall.am Generating ./c/srclib/libbsp/arm/tms570/preinstall.am Generating ./c/srclib/libbsp/arm/raspberrypi/preinstall.am Generating ./c/srclib/libbsp/arm/altera-cyclone-v/preinstall.am Generating ./c/srclib/libbsp/lm32/milkyimst/preinstall.am Generating ./c/srclib/libbsp/lm32/lm32_evr/preinstall.am Generating ./c/srclib/libbsp/nios2/nios2_iss/preinstall.am Generating ./c/srclib/libbsp/epiphany/preinstall.am Generating ./c/srclib/libbsp/epiphany/epiphany_sim/preinstall.am Generating ./c/srclib/libbsp/sparc64/niagara/preinstall.am Generating ./c/srclib/libbsp/sparc64/usiii/preinstall.am Generating ./c/srclib/libbsp/m32c/m32cbps/preinstall.am Generating ./c/srclib/libbsp/i386/csb386/preinstall.am Generating ./c/srclib/libbsp/mips/btx4938/preinstall.am Generating ./c/srclib/libbsp/mips/btx4925/preinstall.am Generating ./c/srclib/libbsp/mips/hurricane/preinstall.am Generating ./c/srclib/libbsp/mips/jmr3904/preinstall.am Generating ./c/srclib/libbsp/mips/malta/preinstall.am Generating ./c/srclib/libbsp/mips/csb350/preinstall.am Generating ./c/srclib/libbsp/v850/gdbv850sim/preinstall.am Generating ./c/srclib/libbsp/or1k/preinstall.am Generating ./c/srclib/libbsp/or1k/generic_or1k/preinstall.am Generating ./c/srclib/libbsp/bfin/TL6527M/preinstall.am Generating ./c/srclib/libbsp/bfin/bf537Stamp/preinstall.am Generating ./c/srclib/libbsp/bfin/eZKit533/preinstall.am Generating ./c/srclib/libbsp/sh/gensh2/preinstall.am Generating ./c/srclib/libbsp/sh/gensh1/preinstall.am Generating ./c/srclib/libbsp/sh/gensh4/preinstall.am Generating ./c/srclib/libbsp/sh/shsim/preinstall.am Generating						

Descripti on	./c/src/lib/libbsp/m68k/mcf5235/preinstall.am Generating ./c/src/lib/libbsp/m68k/genmcf548x/preinstall.am Generating ./c/src/lib/libbsp/m68k/preinstall.am Generating ./c/src/lib/libbsp/m68k/mcf5329/preinstall.am Generating ./c/src/lib/libbsp/m68k/csb360/preinstall.am Generating ./c/src/lib/libbsp/m68k/av5282/preinstall.am Generating ./c/src/lib/libbsp/m68k/mcf5225x/preinstall.am Generating ./c/src/lib/libbsp/m68k/mvme147s/preinstall.am Generating ./c/src/lib/libbsp/m68k/mvme162/preinstall.am Generating ./c/src/lib/libbsp/m68k/gen68360/preinstall.am Generating ./c/src/lib/libbsp/m68k/mrm332/preinstall.am Generating ./c/src/lib/libbsp/m68k/gen68340/preinstall.am Generating ./c/src/lib/libbsp/m68k/mcf52235/preinstall.am Generating ./c/src/lib/libbsp/m68k/mvme167/preinstall.am Generating ./c/src/lib/libbsp/m68k/uC5282/preinstall.am Generating ./c/src/lib/libbsp/m68k/mvme147/preinstall.am Generating ./c/src/lib/libbsp/m68k/mcf5206elite/preinstall.am Generating ./c/src/lib/libbsp/powerpc/motorola_powerpc/preinstall.am Generating ./c/src/lib/libbsp/powerpc/virtex5/preinstall.am Generating ./c/src/lib/libbsp/powerpc/haleakala/preinstall.am Generating ./c/src/lib/libbsp/powerpc/ss555/preinstall.am Generating ./c/src/lib/libbsp/powerpc/qemuppc/preinstall.am Generating ./c/src/lib/libbsp/powerpc/gen83xx/preinstall.am Generating ./c/src/lib/libbsp/powerpc/gen5200/preinstall.am Generating ./c/src/lib/libbsp/powerpc/virtex/preinstall.am Generating ./c/src/lib/libbsp/powerpc/mpc55xxevb/preinstall.am Generating ./c/src/lib/libbsp/powerpc/t32mppc/preinstall.am Generating ./c/src/lib/libbsp/powerpc/virtex4/preinstall.am Generating ./c/src/lib/libbsp/powerpc/mvme3100/preinstall.am Generating ./c/src/lib/libbsp/powerpc/beatnik/preinstall.am Generating ./c/src/lib/libbsp/bfin/preinstall.am Generating ./c/src/lib/libcpu/sh/preinstall.am Generating ./c/src/lib/libcpu/m68k/mvme5500/preinstall.am Generating ./c/src/lib/libbsp/powerpc/mpc8260ads/preinstall.am Generating ./c/src/lib/libbsp/powerpc/psim/preinstall.am Generating ./c/src/lib/libbsp/moxie/moxiesim/preinstall.am Generating ./c/src/lib/libbsp/sparc/erc32/preinstall.am Generating ./c/src/lib/libbsp/sparc/leon3/preinstall.am Generating ./c/src/lib/libbsp/sparc/leon2/preinstall.am Generating ./c/src/lib/libcpu/arm/preinstall.am Generating ./c/src/lib/libcpu/lm32/preinstall.am Generating ./c/src/lib/libcpu/nios2/preinstall.am Generating ./c/src/lib/libcpu/sparc64/preinstall.am Generating ./c/src/lib/libcpu/i386/preinstall.am Generating ./c/src/lib/libcpu/mips/preinstall.am Generating ./c/src/lib/libcpu/or1k/preinstall.am Generating ./c/src/lib/libcpu/bfin/preinstall.am Generating ./c/src/lib/libcpu/sh/preinstall.am Generating ./c/src/lib/libcpu/m68k/preinstall.am Generating ./c/src/lib/libcpu/powerpc/preinstall.am Generating ./c/src/lib/libcpu/sparc/preinstall.am Generating ./c/src/ada/preinstall.am bash: /home/dhanpal/development/rtems/rsb/source-builder/sb-bootstrap: No such file or directory dhanpal@dhanpal-HP-Pavilion-15-Notebook-PC: ~/development/rtems/kernel/rtems\$ sudo -s [sudo] password for dhanpal: root@dhanpal-HP-Pavilion-15-Notebook-PC: ~/development/rtems/kernel/rtems# ./bootstrap -c && ./bootstrap -p && \					
	S\$HOME/development/rtems/rsb/source-builder/sb-bootstrap					
Descripti on	removing automake generated Makefile.in.files removing configure files removing aclocal.m4 files Generating ./cpukit/libmisc/preinstall.am Generating ./cpukit/preinstall.am Generating ./cpukit/ftpd/preinstall.am Generating ./cpukit/mghttpd/preinstall.am Generating ./cpukit/score/preinstall.am Generating ./cpukit/score/cpu/no_cpu/preinstall.am Generating ./cpukit/score/cpu/arm/preinstall.am Generating ./cpukit/score/cpu/lm32/preinstall.am Generating ./cpukit/score/cpu/nios2/preinstall.am Generating ./cpukit/score/cpu/epiphany/preinstall.am Generating ./cpukit/score/cpu/sparc64/preinstall.am Generating ./cpukit/score/cpu/m32c/preinstall.am Generating ./cpukit/score/cpu/l386/preinstall.am Generating ./cpukit/score/cpu/mips/preinstall.am Generating ./cpukit/score/cpu/v850/preinstall.am Generating ./cpukit/score/cpu/or1k/preinstall.am Generating ./cpukit/score/bfin/preinstall.am Generating ./cpukit/score/cpu/moxie/preinstall.am Generating ./cpukit/score/cpu/sparc/preinstall.am 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Descripti on	#2943 3 years ago wontfix unspecified DHANPAL SINGH 2 years ago					
	rtems building error					
Descripti on	i am attaching the screenshot of file system					
	#2945 3 years ago workforme unspecified Joel Sherrill Daniel Hellstrom 2 years ago					
Descripti on	Many failures on LEON3 with SMP disabled					
	There are approximately ~100 failures, timeouts, etc on the LEON3 BSP. See this thread for some discussion where Jiri notes it is broken on his checkout from December: https://lists.rtems.org/pipermail/devel/2017-March/017277.html Passed: 458 Failed: 20 Timeouts: 73 Invalid: 3 Total: 554 Failures: cdtest.exe spintrcritical20.exe dl05.exe spintrcritical01.exe spintrcritical04.exe spintrcritical10.exe spintrcritical22.exe sp69.exe spintrcritical21.exe sp11.exe spintrcritical16.exe spintrcritical23.exe psxfile01.exe spintrcritical05.exe spintrcritical02.exe spintrcritical08.exe psxgetrusage01.exe sppcucounter01.exe spintrcritical03.exe psxtimes01.exe Timeouts: nsecs.exe sptask_err02.exe spprivenv01.exe psxkey03.exe psxsignal01.exe psx06.exe psx10.exe sp04.exe mrfs_fstime.exe ticker.exe psxmmsgq03.exe psxkey09.exe psx07.exe sptimerserver01.exe psxsusleep.exe psxstack02.exe psxkey07.exe psxkey10.exe stackchk.exe sp01.exe fileio.exe spsimplesched01.exe sp03.exe psxcond01.exe sp65.exe sp62.exe psx11.exe psx12.exe psx02.exe imfs_fstime.exe crypt01.exe psxstack01.exe spcbssched01.exe termios.exe mimfs_fstime.exe psxsignal02.exe psx08.exe top.exe psxrwlock01.exe sp22.exe psxsignal04.exe psxkey04.exe mouse01.exe sp24.exe psx04.exe spedfsched01.exe uid01.exe mdosfs_fstime.exe psx16.exe psxai03.exe sp19.exe psxtime.exe psx09.exe psxkey06.exe psxclock.exe cpuuse.exe psx05.exe sp66.exe psxsignal03.exe capture.exe sp30.exe psxcleanup.exe psxcancel.exe jifs2_fstime.exe psxsignal06.exe spstdthreads01.exe psxbarrier01.exe sp31.exe sp73.exe psxualarm.exe spffio03.exe psxtimer01.exe monitor.exe Invalid: cxx_iostream.exe spinternalerror01.exe sptimecounter01.exe					
Descripti on	#2946 3 years ago fixed unspecified Chris Johns joel.sherrill@... 2 years ago					
	Add a top level global testsuite configuration file (.tcfg) and a 'user-input' test state.					
Descripti on	Adding a top level testsuite configuration file lets us specify tests that have a common test state across all BSPs.					
	Adding the test state 'user-input' clearly tags the test as needing user input and test result tools can correctly determine the test result. The current practice of passing a test needing user input is actually hiding the real result of the test.					

<https://devel.rtems.org/wiki/Release//5/5.1>

Descripti on	When used with 64KiB clusters, the FAT driver will loop forever in cpukit/libfs/src/dosfs/fat.c, line 580. This happens because struct fat_vol_s declares bytes per cluster variable as uint16_t bpc , whereas it can be as big as 256KiB. Here is a link for Linux FAT driver which doesn't make any assumption about cluster size: http://lxr.free-electrons.com/source/fs/fat/inode.c?v=2.6.24#L1262					
#3006	3 years ago	fixed	arch/sparc	Chris Johns	Daniel Hellstrom	2 years ago
Summar y	SPARC LEON3 BSP SMP build is broken.					
Descripti on	The rtems-bsp-builder failure output is:					
	<pre>2 smp-debug sparc/leon3 build: configure: /opt/work/chris/rtems/kernel/rtems.git/configure --target\ =sparc-rtems4.12 --enable-rtemsbsp=leon3 --prefix=/opt/rtems/4.12\ --enable-debug --enable-smp --enable-tests error: c/src/lib/libbsp/sparc/shared/spw/grspw_pkt.c:61:2 error: #error SMP mode not compatible with these interrupt lock primitives</pre>					
	The BSP builder command line is:					
	<pre>RTEMS Tools Project - RTEMS Kernel BSP Builder, 4.12.not_released command: /opt/work/rtems/4.12/bin/rtems-bsp-builder --rtems-\ tools=/build/rtems/tools/4.12\ --rtems=/opt/work/chris/rtems/kernel/rtems.git --build=smp-debug\ --log=x</pre>					
#3007	3 years ago	fixed	arch/arm	munster	joel.sherrill@...	2 years ago
Summar y	ARM caching issues					
Descripti on	There are two problems with the caching on ARM:					
	- In cases where the buffer is not aligned to line boundary at the beginning or the end, the invalidate operation would lose modifications done on the adjacent data. This applies to both L1 and L2 caches. - The L2C-310 cache management operations use excessive locking. According to manual, the used operations (Clean Line by PA, Clean and Invalidate Line by PA, Cache Sync) are atomic and do not require locking.					
	I have attached the proposed patch.					
#3008	2 years ago	fixed	doc	Hassan Karim	chrisj@...	2 years ago
Summar y	missing pax causes install failures					
Descripti on	I have tried to install sparc bsp=erc32 on 4 different builds. 3 failed, and 1 flawlessly installed. The others all seem to fail somewhere during make install of test suites. Each reports one missing config problem or another.					
	I believe the problem resulted in a missing package, pax & libbsd-dev on Ubuntu 12.04.5 LTS (GNU/Linux 3.2.0-126-virtual x86_64)					
	I hadn't seen this exact problem because I normally update & upgrade as soon as I get a new image. Pressed for time, I skipped it. So, I am not sure if we need to update the documentation to directly include pax, since it is directly called in configure and breaks if not present.					
	https://docs.rtems.org/rsb/#_host_setups Under this section, 11.1.5. Ubuntu					
	Add pax to this line \$ sudo apt-get build-dep binutils gcc g++ gdb unzip git python2.7-dev pax					
#3009	2 years ago	wontfix	tool/website	Chris Johns	joel.sherrill@...	2 years ago
Summar y	Provide invalid link handler for docs.rtems.org so old docs can be removed.					
Descripti on	The docs.rtems.org website has lots of old docs which need to be removed.					
	See #3008 for a reference to old documentation.					
#3010	2 years ago	fixed	unspecified	David Binderman	Gedare Bloom <gedare@...>	2 years ago
Summar y	src/cpukit/posix/src/mmap.c:189]: (style) Suspicious condition					
Descripti on	src/cpukit/posix/src/mmap.c:189]: (style) Suspicious condition (bitwise operator + comparison); Clarify expression with parentheses.					
	Source code is					
	} else if ((flags & MAP_PRIVATE != MAP_PRIVATE)) {					
	Maybe better code					
	} else if ((flags & MAP_PRIVATE) != MAP_PRIVATE) {					
#3011	2 years ago	workforme	arch/arm	Arturo Pérez	Gedare Bloom	2 years ago
Summar y	Error compiling xilinx_zynq_zedboard.					
Descripti on	I encountered an error compiling the xilinx_zynq_zedboard BSP. I am using a built of the RSB that I compiled in December. With that built of the RSB I could built this BSP several times until I did a git pull of the RTEMS repo two weeks ago. Today I updated my repos of the RTEMS and RSB sources, I rebuilt the RSB and I tried to built again the xilinx_zynq_zedboard BSP, encountering the same error:					
	gmake[6]: * No rule to make target posix/include/sys/mman.h', needed by ../cpukit/../../xilinx_zynq_zedboard/lib/include/sys/mman.h'. Stop.					
#3012	2 years ago	fixed	tool/newlib	Sebastian Huber	Chris Johns	2 years ago
Summar y	Global C++ IO streams are broken (cout, cin, cerr)					
Descripti on	The global C++ IO stream objects are initialized here					
	https://gcc.gnu.org/viewcvs/gcc/trunk/libstdc%2B%2B-v3/src/c%2B%2B98/ios_init.cc?view=markup#I85					
	via a placement new. The "stdout" etc. is thread-local in Newlib					
	#define stdout (_REENT->_stdout)					
	Using this for a global object like std::cout is quite broken. Which FILE object should be used instead? Potential fix:					

				<pre>diff --git a/libstdc++-v3/src/c++98/ios_init.cc b/libstdc++-v3/src/c++98/ios_init.cc index c5bcc83..7470c44 100644 --- a/libstdc++-v3/src/c++98/ios_init.cc +++ b/libstdc++-v3/src/c++98/ios_init.cc @@ -33,6 +33,15 @@ #include <ext/stdio_filebuf.h> #include <ext/stdio_sync_filebuf.h> +#ifdef __rtems_ +#undef stdout +#undef stdin +#undef stderr +#define stdout (_GLOBAL_REENT->_stdout) +#define stdin (_GLOBAL_REENT->_stdout) +#define stderr (_GLOBAL_REENT->_stdout) +#endif + +namespace __gnu_internal _GLIBCXX_VISIBILITY(hidden) +{ + using namespace __gnu_cxx;</pre>		
				<pre>diff --git a/newlib/libc/stdio/findfp.c b/newlib/libc/stdio/findfp.c index 83d3dc5..7d50951 100644 --- a/newlib/libc/stdio/findfp.c +++ a/newlib/libc/stdio/findfp.c</pre>		
#3013	2 years ago	fixed	tool/website	Nikolay Komashinskiy	Amar Takhar	13 months ago
Summary	Program @ 259.5 + 259.1060 @ Yandex and in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'sid='nikolaykomashinskiy()'AND authenticated=1 AND name='force_change_passwd at line 1') 'sid='nikolaykomashinskiy()'AND authenticated=1 AND name='force_change_passwd at line 1') Hello, during reset password I had an internal error. This card was automatically generated.					
Description	How to Reproduce <pre>+static void __attribute__((__constructor__(0))) + __global_reent_init(void) + { + While doing a POST operation on /reset_password, Trac issued an internal error. + + __sinit(_GLOBAL_REENT); + (please provide additional details here) + } + Request parameters: + {u'__FORM_TOKEN': u'5688d70c5e5799302935f97', + u'LOCK_INT': u'set_recursive_mutex', + u'remail': u'nikolay.komashinskiy@yandex.ru', + u'register_phone': u'', + u'rtems_user_phone': u'', + u'username': u'nikolaykomashinskiy'}</pre>					
	User agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/57.0.2987.98 Safari/537.36					
	System Information System information not available Enabled Plugins Plugin information not available Interface Customization Interface customization information not available Python Traceback Traceback (most recent call last): File "/data/src/trac/trac/web/main.py", line 620, in _dispatch_request dispatcher.dispatch(req) File "/data/src/trac/trac/web/main.py", line 253, in dispatch resp = chosen_handler.process_request(req) File "/data/trac/plugins/TracAccountManager-0.5.dev0-py2.7.egg/acct_mgr/web_ui.py", line 168, in process_request self._do_reset_password(req) File "/data/trac/plugins/TracAccountManager-0.5.dev0-py2.7.egg/acct_mgr/web_ui.py", line 256, in _do_reset_password self._reset_password(req, username, email) File "/data/trac/plugins/TracAccountManager-0.5.dev0-py2.7.egg/acct_mgr/web_ui.py", line 301, in _reset_password set_user_attribute(self.env, username, 'force_change_passwd', 1) File "/data/trac/plugins/TracAccountManager-0.5.dev0-py2.7.egg/acct_mgr/model.py", line 509, in set_user_attribute (value, username, attribute)) File "/data/src/trac/trac/db/util.py", line 128, in execute cursor.execute(query, params if params is not None else []) File "/data/src/trac/trac/db/util.py", line 72, in execute return self.cursor.execute(sql_escape_percent(sql), args) File "/usr/local/lib/python2.7/site-packages/MySQLdb/cursors.py", line 205, in execute self.errorhandler(self, exc, value) File "/usr/local/lib/python2.7/site-packages/MySQLdb/connections.py", line 36, in defaulterrorhandler raise errorclass, errorvalue ProgrammingError: (1064, "You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'sid='nikolaykomashinskiy()'AND authenticated=1 AND name='force_change_passwd' at line 1")					
#3014	2 years ago	fixed	bsps	phongvanpham	joel.sherrill@...	2 years ago
Summary	interrupt vector indexing is assuming BSP_INTERRUPT_VECTOR_MIN = 0 for this code.					
Description	Someone implement bsp_interrupt_handler_index() forgot to update this delta in rtems/c/src/lib/bsp/shared/src/irq-generic.c:bsp_interrupt_allocate_handler_index(). See attachment.					
#3015	2 years ago	fixed	arch/powerpc	phongvanpham	joel.sherrill@...	2 years ago
Summary	Add support for IBM PPC 750 chip					
Description	Currently MPC750 chip is supported. However, PPC750 (from IBM) is very close to MPC750 except minor differences. Enclosed is the delta to support PPC750.					
#3016	2 years ago	fixed	bsps	phongvanpham	joel.sherrill@...	2 years ago
Summary	missing a couple register names + a #ifndef ASM around serial.h inclusion					
Description	In rtems/c/src/libchip/serial/ns16550_p.h, need to add a couple register and #ifndef around serial.h					
#3017	2 years ago	worksforme	score	phongvanpham	joel.sherrill@...	2 years ago
Summary	improvement in pci.h					
Description	In pci.h, there are references to BSP_pci_configuration data structure which is in pci.c. However, in this file, there are also references to detect_host_bridge () in detect_raven_bridge.c. For folks that are just interested in pci_read_config_dword () + its brothers, all they need is to include pci.h and content for where BSP_pci_configuration is defined. The rest of the stuff in pci.c should be separate. Or in another word, data structures and #defines involving with BSP_pci_configuration needs to be in separate files rather all stuffed in pci.c					

on	I currently do not need this functionality for my BSP (nor do I able to test it), so I cannot modify code and submit. It is best someone who can test the code to make the code change. Or else, just shelf it under the table and/or close this ticket.					
#3018	2 years ago	fixed	tool/rsb	phongvanpham	Chris Johns	2 years ago
Summary	RSB cannot compile tool chain in CentOS 7.					
Description	In CentOS 6.8, everything works fine. But in CentOS 7, it does not. Initial investigation (I did a while back around New Year time) looks like later version of texinfo has an issue with autoconf. Enclosed is the email Chris Johns replied but I didn't follow through since I switched to CentOS 6.8 for my work.					
	"Looks to me like the RSB is trying to download autoconf 2.69-1 and from https://bugs.debian.org/cgi-bin/bugreport.cgi?bug=711297					
	Looks like this autoconf version has a bug. I also noticed my autoconf version is 2.69-11; however, from what I am reading, RSB will download its own version independent of what user has."					
	Chris John replies:					
	"I guess a recent texinfo version has exposed the issue. I suggest you get the patch from the link in the bug report, create a patch for rtems-tools.git to add the autoconf patch, then create a patch to the RSB adding the patch to the autoconf build, finally 'git send-email' the patches to devel@... for review."					
	#3023	2 years ago	fixed	tool/newlib	Sebastian Huber	2 years ago
Summary	Parameter of CPU_COPY() are in wrong order					
Description	According to the FreeBSD man page we have:					
	https://www.freebsd.org/cgi/man.cgi?query=cpuset&sektion=9&apropos=0&manpath=FreeBSD+11.0-RELEASE+and+Ports					
	CPU_COPY(cpuset_t *from, cpuset_t *to);					
	However, in Newlib we have:					
	static __inline void CPU_COPY(cpu_set_t *dest, const cpu_set_t *src)					
	{					
	*dest = *src;					
	}					
#3025	2 years ago	fixed	unspecified	Chris Johns	joel.sherrill@...	2 years ago
Summary	m32c/m32csim does not build linpack-pc.c					
Description	1 tests m32c/m32csim build:					
	configure: /opt/work/chris/rtems/kernel/rtems.git/configure --target\ =m32c-rtems4.12 --enable-rtemsbps=m32csim --prefix=/opt/rtems/4.12\ --enable-					
	tests					
	error: testsuites/benchmarks/linpack/linpack-pc.c:253:33: error:					
	storage size of 'a' isn't constant					
	error: testsuites/benchmarks/linpack/linpack-pc.c:253:21: error:					
	storage size of 'aa' isn't constant					
#3027	2 years ago	fixed	tool/rsb	Worth Burruss	Chris Johns	19 months ago
Summary	RTEMS source builder fails when building gcc documentation with newer versions of gcc					
Description	Originally discovered with MSYS2 on windows. Building the gcc compiler fails for older versions of gcc (ie 4.8.3) when building bfin and m32c architectures. The gcc maintainers recommend the use of MISSING=texinfo switch during configuration. A possible solution is attached.					
#3032	2 years ago	fixed	tool/newlib	Sebastian Huber	Sebastian Huber	2 years ago
Summary	CPU_NAND_S() implementation is not in line with FreeBSD					
Description	According to the FreeBSD man page we have:					
	https://www.freebsd.org/cgi/man.cgi?query=cpuset&sektion=9&apropos=0&manpath=FreeBSD+11.0-RELEASE+and+Ports					
	The CPU_NAND() macro removes CPUs in src from dst. (It is the cpuset(9) equivalent of the scalar: dst &= ~ src.)					
	However, in Newlib we had:					
	static __inline void CPU_NAND_S(size_t setsize, cpu_set_t *destset,					
	const cpu_set_t *srcset1, const cpu_set_t *srcset2)					
	{					
	cpu_set_word_t *wdest = &destset->__bits[0];					
	const cpu_set_word_t *wsrcl = &srcset1->__bits[0];					
	const cpu_set_word_t *wsrcl2 = &srcset2->__bits[0];					
	size_t n = setsize / sizeof(*wdest);					
	size_t i;					
	for (i = 0; i < n; ++i)					
	wdest[i] = ~(wsrcl[i] & wsrcl2[i]);					
	}					
#3036	2 years ago	fixed	tool/newlib	Sebastian Huber	joel.sherrill@...	2 years ago
Summary	CPU_CMP() implementation is not in line with FreeBSD					
Description	According to the FreeBSD man page we have:					
	https://www.freebsd.org/cgi/man.cgi?query=cpuset&sektion=9&apropos=0&manpath=FreeBSD+11.0-RELEASE+and+Ports					
	The CPU_CMP() macro returns true if cpuset1 is NOT equal to cpuset2.					
	However, in Newlib we had:					
	/* return 1 if the sets set1 and set2 are equal, otherwise return 0 */					
	static __inline int CPU_CMP(const cpu_set_t *set1, const cpu_set_t *set2)					
	{					
	return CPU_EQUAL(set1, set2);					
	}					
#3040	2 years ago	invalid	tool/website	Sebastian Huber	Amar Takhar	13 months ago
Summary	Cannot use RTEMS mailing list archive for patches					
Description	The RTEMS mailing list archive has no option to get the raw e-mail via the web interface, e.g.					
	https://lists.rtems.org/pipermail/devel/2017-June/018101.html					
	For example the Newlib mailing list archive:					
	https://sourceware.org/cgi-bin/get-raw-msg?listname=newlib&date=2017&msgid=20170612064218.11969-1-sebastian.huber%40embedded-brains.de					
#3043	2 years ago	fixed	unspecified	Chris Johns		2 years ago
Summary	4.11/rtems-nios2 does not build on Windows.					

<https://devel.rtems.org/wiki/Release//5/5.1>

```
../gdb-7.12/gdb/record-btrace.c:2445:1: warning: unused function 'VEC_tp_t_merge' [-Wunused-function]
../gdb-7.12/gdb/common/vec.h:429:27: note: expanded from macro 'DEF_VEC_P'
DEF_VEC_FUNC_P(T)
      ^
      |
      v
../gdb-7.12/gdb/common/vec.h:784:23: note: expanded from macro '\
DEF_VEC_ALLOC_FUNC_P'
static inline VEC(T) *VEC_OP (T,merge) (VEC(T) *vec1_, VEC(T) *vec2_)
      ^
      |
      v
../gdb-7.12/gdb/common/vec.h:399:22: note: expanded from macro 'VEC_OP'
#define VEC_OP(T,OP) VEC_##T##_##OP
      ^
      |
      v
<scratch space>:187:1: note: expanded from here
VEC_tp_t_merge
^
../gdb-7.12/gdb/record-btrace.c:2445:1: warning: unused function 'VEC_tp_t_safe_grow' [-Wunused-function]
../gdb-7.12/gdb/common/vec.h:429:27: note: expanded from macro 'DEF_VEC_P'
DEF_VEC_FUNC_P(T)
      ^
      |
      v
../gdb-7.12/gdb/common/vec.h:817:20: note: expanded from macro '\
DEF_VEC_ALLOC_FUNC_P'
static inline void VEC_OP (T,safe_grow)
      ^
      |
      v
../gdb-7.12/gdb/common/vec.h:399:22: note: expanded from macro 'VEC_OP'
#define VEC_OP(T,OP) VEC_##T##_##OP
      ^
      |
      v
<scratch space>:205:1: note: expanded from here
VEC_tp_t_safe_grow
^
../gdb-7.12/gdb/record-btrace.c:2445:1: warning: unused function 'VEC_tp_t_safe_insert' [-Wunused-function]
../gdb-7.12/gdb/common/vec.h:429:27: note: expanded from macro 'DEF_VEC_P'
DEF_VEC_FUNC_P(T)
      ^
      |
      v
../gdb-7.12/gdb/common/vec.h:835:18: note: expanded from macro '\
DEF_VEC_ALLOC_FUNC_P'
static inline T *VEC_OP (T,safe_insert)
      ^
      |
      v
../gdb-7.12/gdb/common/vec.h:399:22: note: expanded from macro 'VEC_OP'
#define VEC_OP(T,OP) VEC_##T##_##OP
      ^
      |
      v
<scratch space>:225:1: note: expanded from here
VEC_tp_t_safe_insert
^
2 warnings generated.
/usr/bin/c++ -O2 -pipe -fbracket-depth=1024 -I/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems/~rtems/4.12/include -g -O2 -I../gdb-7.12/gdb -I../gdb-7.12/gdb/common -I../gdb-7.12/gdb/config -DLOCALEDIR="" -I/rtems-source-builder/rtems/~rtems/4.12/share/locale/ -DHAVE_CONFIG_H -I../gdb-7.12/gdb/.include/opcode -I../gdb-7.12/gdb/.opcodes/.. -I../gdb-7.12/gdb/.readline/.. -I../gdb-7.12/gdb/.zlib -I../bfd -I../gdb-7.12/gdb/.bfd -I../gdb-7.12/gdb/.include -I../libdecnumber -I../gdb-7.12/gdb/.libdecnumber -I../gdb-7.12/gdb/gnulib/import -Ibuild-gnulib/import -DTUI=1 -I/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems/~rtems/4.12/include -I/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -I/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -Wall -Wpointer-arith -Wno-unused -Wunused-value -Wunused-function -Wno-switch -Wno-char-subscripts -Wempty-body -Wunused-but-set-parameter -Wunused-but-set-variable -Wno-sign-compare -Wno-write-strings -Wno-narrowing -Wformat-nonliteral -c -o debug.o -MT debug.o -MMD -MP -MF .deps/debug.Tpo ../gdb-7.12/gdb/debug.c
/usr/bin/c++ -O2 -pipe -fbracket-depth=1024 -I/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems/~rtems/4.12/include -g -O2 -I../gdb-7.12/gdb -I../gdb-7.12/gdb/common -I../gdb-7.12/gdb/config -DLOCALEDIR="" -I/rtems-source-builder/rtems/~rtems/4.12/share/locale/ -DHAVE_CONFIG_H -I../gdb-7.12/gdb/.include -I../libdecnumber -I../gdb-7.12/gdb/.libdecnumber -I../gdb-7.12/gdb/gnulib/import -Ibuild-gnulib/import -DTUI=1 -I/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems/~rtems/4.12/include -I/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -I/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -Wall -Wpointer-arith -Wno-unused -Wunused-value -Wunused-function -Wno-switch -Wno-char-subscripts -Wempty-body -Wunused-but-set-parameter -Wunused-but-set-variable -Wno-sign-compare -Wno-write-strings -Wno-narrowing -Wformat-nonliteral -c -o common-exceptions.o -MT common-exceptions.o -MMD -MP -MF .deps/common-exceptions.Tpo ../gdb-7.12/gdb/common/common-exceptions.c
/usr/bin/c++ -O2 -pipe -fbracket-depth=1024 -I/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems/~rtems/4.12/include -g -O2 -I../gdb-7.12/gdb -I../gdb-7.12/gdb/common -I../gdb-7.12/gdb/config -DLOCALEDIR="" -I/rtems-source-builder/rtems/~rtems/4.12/share/locale/ -DHAVE_CONFIG_H -I../gdb-7.12/gdb/.include/opcode -I../gdb-7.12/gdb/.opcodes/.. -I../gdb-7.12/gdb/.readline/.. -I../gdb-7.12/gdb/.zlib -I../bfd -I../gdb-7.12/gdb/.bfd -I../gdb-7.12/gdb/.include -I../libdecnumber -I../gdb-7.12/gdb/.libdecnumber -I../gdb-7.12/gdb/gnulib/import -Ibuild-gnulib/import -DTUI=1 -I/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems/~rtems/4.12/include -I/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -I/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -Wall -Wpointer-arith -Wno-unused -Wunused-value -Wunused-function -Wno-switch -Wno-char-subscripts -Wempty-body -Wunused-but-set-parameter -Wunused-but-set-variable -Wno-sign-compare -Wno-write-strings -Wno-narrowing -Wformat-nonliteral -c -o btrace-common.o -MT btrace-common.o -MMD -MP -MF .deps/btrace-common.Tpo ../gdb-7.12/gdb/common/btrace-common.c
/usr/bin/c++ -O2 -pipe -fbracket-depth=1024 -I/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems/~rtems/4.12/include -g -O2 -I../gdb-7.12/gdb -I../gdb-7.12/gdb/common -I../gdb-7.12/gdb/config -DLOCALEDIR="" -I/rtems-source-builder/rtems/~rtems/4.12/share/locale/ -DHAVE_CONFIG_H -I../gdb-7.12/gdb/.include/opcode -I../gdb-7.12/gdb/.opcodes/.. -I../gdb-7.12/gdb/.readline/.. -I../gdb-7.12/gdb/.zlib -I../bfd -I../gdb-7.12/gdb/.bfd -I../gdb-7.12/gdb/.include -I../libdecnumber -I../gdb-7.12/gdb/.libdecnumber -I../gdb-7.12/gdb/gnulib/import -Ibuild-gnulib/import -DTUI=1 -I/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems/~rtems/4.12/include -I/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -I/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -Wall -Wpointer-arith -Wno-unused -Wunused-value -Wunused-function -Wno-switch -Wno-char-subscripts -Wempty-body -Wunused-but-set-parameter -Wunused-but-set-variable -Wno-sign-compare -Wno-write-strings -Wno-narrowing -Wformat-nonliteral -c -o fileio.o -MT fileio.o -MMD -MP -MF .deps/fileio.Tpo ../gdb-7.12/gdb/common/fileio.c
clang: warning: treating 'c' input as 'c++' when in C++ mode, this behavior is deprecated
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warning: unknown warning option '-Wunused-but-set-parameter'; did you mean '-Wunused-parameter'? [-Wunknown-warning-option]
warning: unknown warning option '-Wunused-but-set-variable'; did you mean '-Wunused-const-variable'? [-Wunknown-warning-option]
warning: unknown warning option '-Wunused-but-set-parameter'; did you mean '-Wunused-parameter'? [-Wunknown-warning-option]
warning: unknown warning option '-Wunused-but-set-variable'; did you mean '-Wunused-const-variable'? [-Wunknown-warning-option]
2 warnings generated.
warning: unknown warning option '-Wunused-but-set-parameter'; did you mean '-Wunused-parameter'? [-Wunknown-warning-option]
warning: unknown warning option '-Wunused-but-set-parameter'; did you mean '-Wunused-parameter'? [-Wunknown-warning-option]
warning: unknown warning option '-Wunused-but-set-variable'; did you mean '-Wunused-const-variable'? [-Wunknown-warning-option]
warning: unknown warning option '-Wunused-but-set-variable'; did you mean '-Wunused-const-variable'? [-Wunknown-warning-option]
2 warnings generated.
2 warnings generated.
2 warnings generated.
2 warnings generated.
/usr/bin/c++ -O2 -pipe -fbracket-depth=1024 -I/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems/~rtems/4.12/include -g -O2 -I../gdb-7.12/gdb -I../gdb-7.12/gdb/common -I../gdb-7.12/gdb/config -DLOCALEDIR="" -I/rtems-source-builder/rtems/~rtems/4.12/share/locale/ -DHAVE_CONFIG_H -I../gdb-7.12/gdb/.include/opcode -I../gdb-7.12/gdb/.opcodes/.. -I../gdb-7.12/gdb/.readline/.. -I../gdb-7.12/gdb/.zlib -I../bfd -I../gdb-7.12/gdb/.bfd -I../gdb-7.12/gdb/.include -I../libdecnumber -I../gdb-7.12/gdb/.libdecnumber -I../gdb-7.12/gdb/gnulib/import -Ibuild-gnulib/import -DTUI=1 -I/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems/~rtems/4.12/include -I/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -I/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -Wall -Wpointer-arith -Wno-unused -Wunused-value -Wunused-function -Wno-switch -Wno-char-subscripts -Wempty-body -Wunused-but-set-parameter -Wunused-but-set-variable -Wno-sign-compare -Wno-write-strings -Wno-narrowing -Wformat-nonliteral -c -o common-regcache.o -MT common-regcache.o -MMD -MP -MF .deps/common-regcache.Tpo ../gdb-7.12/gdb/common/common-regcache.c
clang: warning: treating 'c' input as 'c++' when in C++ mode, this behavior is deprecated
warning: unknown warning option '-Wunused-but-set-parameter'; did you mean '-Wunused-parameter'? [-Wunknown-warning-option]
warning: unknown warning option '-Wunused-but-set-variable'; did you mean '-Wunused-const-variable'? [-Wunknown-warning-option]
2 warnings generated.
2 warnings generated.
2 warnings generated.
```

<https://devel.rtems.org/wiki/Release//5/5.1>

```
99 warnings generated.
Making init.c
/usr/bin/c++ -O2 -pipe -fbracket-depth=1024 -I/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems/~ /rtems/4.12/include -g -O2 -I.
-I./../gdb-7.12/gdb -I./../gdb-7.12/gdb/common -I./../gdb-7.12/gdb/config -DLOCALEDIR="" /rtems-source-builder/rtems/~ /rtems/4.12/share/locale/"" -DHAVE_CONFIG_H -
I./../gdb-7.12/gdb/. /include/opcode -I./../gdb-7.12/gdb/. /opcodes/. -I./../gdb-7.12/gdb/. /readline/. -I./../gdb-7.12/gdb/. /zlib -I./bfd -I./../gdb-7.12/gdb/. /bfd -I./../gdb-
7.12/gdb/. /include -I./libdecnumber -I./../gdb-7.12/gdb/. /libdecnumber -I./../gdb-7.12/gdb/gnulib/import -Ibuild-gnulib/import -DTUI=1 -I/rtems-source-
builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems/~ /rtems/4.12/include -
I/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -I/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -Wall -
Wpointer-arith -Wno-unused -Wunused-value -Wunused-function -Wno-switch -Wno-char-subscripts -Wempty-body -Wunused-but-set-parameter -Wunused-but-set-variable -
Wno-sign-compare -Wno-write-strings -Wno-narrowing -Wformat-nonliteral -c -o init.o -MT init.o -MMD -MP -MF .deps/init.Tpo init.c
clang: warning: treating 'c' input as 'c++' when in C++ mode, this behavior is deprecated
warning: unknown warning option '-Wunused-but-set-parameter'; did you mean '-Wunused-parameter'? [-Wunknown-warning-option]
warning: unknown warning option '-Wunused-but-set-variable'; did you mean '-Wunused-const-variable'? [-Wunknown-warning-option]
2 warnings generated.
rm -f gdb
/usr/bin/c++ -O2 -pipe -fbracket-depth=1024 -I/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems/~ /rtems/4.12/include -g -O2 -
Wl,-no_pie -I/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems/~ /rtems/4.12/lib \
-o gdb gdb.o rs6000-tdep.o ppc-sysv-tdep.o solib-svr4.o ravenscar-thread.o ppc-ravenscar-thread.o ser-base.o ser-unix.o ser-pipe.o ser-tcp.o remote.o dcache.o
tracepoint.o ax-general.o ax-gdb.o remote-fileio.o remote-notif.o ctf.o tracefile.o tracefile-tfile.o remote-sim.o cli-dump.o cli-decode.o cli-script.o cli-cmds.o cli-setshow.o cli-
logging.o cli-interp.o cli-utils.o mi-out.o mi-console.o mi-cmds.o mi-cmd-catch.o mi-cmd-env.o mi-cmd-var.o mi-cmd-break.o mi-cmd-stack.o mi-cmd-file.o mi-cmd-disas.o mi-
symbol-cmds.o posix-hdep.o posix-target.o mi-cmd-info.o mi-interp.o mi-main.o mi-parse.o mi-getopt.o mi-command.o mi-data.o mi-disasm.o mi-file.o mi-hooks.o mi-interp.o mi-io.o mi-
layout.o mi-out.o mi-regs.o mi-source.o mi-stack.o mi-win.o mi-windata.o mi-wingeneral.o mi-winsource.o mi-python.o py-arch.o py-auto-load.o py-block.o py-bpevent.o py-
breakpoint.o py-cmd.o py-continueevent.o py-xmethods.o py-event.o py-evtregistry.o py-evts.o py-exitedevent.o py-finishbreakpoint.o py-frame.o py-framefilter.o py-
function.o py-gdb-readline.o py-inferior.o py-infevents.o py-inftthread.o py-lazy-string.o py-linetable.o py-newobjfileevent.o py-objfile.o py-prettyprint.o py-
progspace.o py-signalevent.o py-stopevent.o py-symbol.o py-symtab.o py-threadevent.o py-type.o py-unwind.o py-utils.o py-value.o py-param.o py-prettyprint.o py-
dtrace-probe.o posix-hdep.o posix-trerror.o c-exp.o cp-name-parser.o ada-exp.o jv-exp.o d-exp.o f-exp.o go-exp.o m2-exp.o p-exp.o rust-exp.o version.o annotate.o
addrmap.o auto-load.o auxv.o agent.o bfd-target.o blockframe.o breakpoint.o break-catch-sig.o break-catch-throw.o break-catch-syscall.o findvar.o regcache.o cleanups.o
charset.o continuations.o corelow.o disasm.o disasm.o dummy-frame.o dfp.o source.o value.o eval.o valops.o valarith.o valprint.o printcmd.o block.o symtab.o psymtab.o symfile.o
symfile-debug.o symmisc.o linespec.o dictionary.o namespace.o location.o infcall.o infcmd.o infrun.o expprint.o environ.o stack.o tid-parse.o thread.o thread-fsm.o
exceptions.o extension.o filesystem.o filestuff.o inf-child.o interps.o minidebug.o main.o macrotab.o macrocmd.o macroexp.o macroscope.o mi-common.o event-loop.o event-
top.o inf-loop.o completer.o gdbarch.o arch-utils.o gdbtypes.o gdb_bfd.o gdb_obstack.o osabi.o copying.o memattr.o mem-break.o target.o target-dcache.o parse.o
language.o build-id.o buildsym.o findcmd.o std-regs.o signals-state-save-restore.o signals.o exec.o reverse.o bcache.o objfiles.o observer.o minsyms.o maint.o demangle.o
dbxread.o coffread.o coff-p-read.o dwarf2read.o mipsread.o stabsread.o corefile.o dwarf2expr.o dwarf2loc.o dwarf2-frame.o dwarf2-frame-tailcall.o ada-lang.o c-lang.o d-
lang.o f-lang.o objc-lang.o ada-tasks.o ada-varobj.o c-varobj.o ui-out.o cli-out.o varobj.o vec.o go-lang.o go-valprint.o go-typeprint.o jv-lang.o jv-valprint.o jv-typeprint.o jv-
varobj.o m2-lang.o opencpl-lang.o p-lang.o p-typeprint.o p-valprint.o selftest.o sentinel-frame.o complaints.o typeprint.o ada-typeprint.o c-typeprint.o f-typeprint.o m2-
typeprint.o ada-valprint.o c-valprint.o cp-valprint.o d-valprint.o f-valprint.o m2-valprint.o ser-event.o serial.o mdebugread.o top.o utils.o ui-file.o user-regs.o frame.o frame-
unwind.o doublest.o frame-base.o inline-frame.o gnu-v2-abi.o gnu-v3-abi.o cp-abi.o cp-support.o cp-namespace.o d-namespace.o reggroups.o rust-lang.o trad-frame.o tramp-
frame.o solib.o solib-target.o prologue-value.o memory-map.o memrange.o xml-support.o xml-syscall.o xml-utils.o xml-target-descriptions.o target-memory.o xml-tdesc.o xml-
builtin.o inferior.o osdata.o gdb_usleep.o record.o record-full.o gcore.o gdb_vecs.o jit.o progspace.o skip.o probe.o common-utils.o buffer.o ptid.o gdb-dlfcn.o common-agent.o
format.o registry.o btrace.o record-btrace.o waitstatus.o print-utils.o rsp-low.o errors.o common-debug.o debug.o common-exceptions.o btrace-common.o fileio.o common-
regcache.o compile.o compile-c-symbols.o compile-c-types.o compile-object-load.o compile-object-run.o compile-loc2c.o compile-c-support.o inflow.o init.o \
../sim/ppc/libsim.a ../readline/libreadline.a ../opcodes/libopcodes.a ../bfd/libbfd.a -L./../zlib -lz ../libiberty/libiberty.a ../libdecnumber/libdecnumber.a -lncurses -lm -
L/System/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/config-lld /rtems-source-builder/rtems/build/powerpc-rtems4.12-gdb-7.12-x86_64-apple-darwin14.5.0-1/PyMac_Error
/System/Library/Frameworks/Python.framework/Versions/2.7/Python-lexpat ../libiberty/libiberty.a build-gnulib/import/libgnu.a -liconv
Undefined symbols for architecture x86_64:
"__error", referenced from:
    _sim_io_printf_filtered in libsim.a(sim_calls.o)
    _sim_load in libsim.a(sim_calls.o)
    _sim_create_inferior in libsim.a(sim_calls.o)
    _sim_io_read_stdin in libsim.a(sim_calls.o)
    _sim_io_write_stdout in libsim.a(sim_calls.o)
    _sim_io_write_stderr in libsim.a(sim_calls.o)
    _sim_io_flush_stdoutoutput in libsim.a(sim_calls.o)
...
(maybe you meant: __device_error, __Z20host_to_fileio_errori, __bfd_get_error_handler, __bfd_default_error_handler, __bfd_set_error_handler,
__bfd_set_error_program_name, __Z28dwarf_reg_to_regnum_or_errorP7gdbarchm, __Z29observer_detach_command_errorP8observer, __sim_io_error,
__deprecated_error_begin_hook, __Z35throw_max_completions_reached_errorv, __Z25type_name_no_tag_or_errorP4type, __Z12memory_error18target_xfer_statusm,
__bfd_error_handler, __Z20annotate_error_beginv, __Z19compile_rx_or_errorP17re_pattern_bufferPKcS2, __Z12catch_errorsPfIPvES_Pc11return_mask,
__Z20memory_error_message18target_xfer_statusP7gdbarchm, __Z11range_errorPKcz, __Z13gdb_xml_errorP14gdb_xml_parserPKcz,
__Z29observer_notify_command_errorv, __gdbpy_gdb_memory_error, __bfd_set_error, __Z23invalid_thread_id_errorPKc, __Z11throw_error6errorsPKcz, __gdbpy_gdb_error,
__Z14gdb_bfd_ermmsg9bfd_errorPPc, __Z29observer_attach_command_errorPFvvE, __Z27gdbpy_print_python_errors_pv, __bfd_get_error, __Z14internal_errorPKciS0_z,
__Z17get_regcomp_errorP17re_pattern_buffer, __Z14annotate_errorv)
ld: symbol(s) not found for architecture x86_64
clang: error: linker command failed with exit code 1 (use -v to see invocation)
make[2]: *** [gdb] Error 1
make[1]: *** [all-gdb] Error 2
make: *** [all] Error 2
shell cmd failed: /bin/sh -ex /rtems-source-builder/rtems/build/powerpc-rtems4.12-gdb-7.12-x86_64-apple-darwin14.5.0-1/doi
error: building powerpc-rtems4.12-gdb-7.12-x86_64-apple-darwin14.5.0-1
```

#3054	2 years ago	fixed	unspecified	AndiK	Andreas Kölbl <andreas.koelbl@...>	2 years ago
Summary	gdb 7.12.1 on RSB 4.12 branch fail to build on Archlinux					
Description	7.12.1 does not compile with latest guile As already stated here: https://sourceware.org/bugzilla/show_bug.cgi?id=21104 GDB in version 7.12.1 fails when trying to compile on Archlinux. GDB uses deprecated functions of libguile which were gone in version 2.2 of libguile. As GDB states in its configure script to support version 2.2 of libguile it fails compiling. Tested with the latest rtems source builder on master.					
#3056	2 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Add EDF SMP scheduler					
Description	The current SMP schedulers are all fixed-priority schedulers. Add a job-level fixed priority scheduler (EDF).					
#3057	2 years ago	fixed	tool/gcc	Sebastian Huber	Daniel Hellstrom	2 years ago
Summary	Add a workaround for the LEON3FT store-store errata					
Description	GCC needs support to provide a workaround for the LEON3FT store-store errata, e.g. https://gcc.gnu.org/ml/gcc-patches/2017-06/msg01577.html and follow up versions.					
#3059	2 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Add a simple processor affinity support to the EDF SMP scheduler					
Description	Add support to the EDF SMP scheduler to honour one-to-one and one-to-all thread processor affinities. Use one ready queue for threads with a one-to-all affinity. Use one ready queue for each of the one-to-one threads for each processor. Since a red-black tree is used for the ready queues, the space overhead of one pointer per ready queue is small.					
#3061	2 years ago	invalid	tool	Chris Johns	chrisj@...	2 years ago
Summary	including 'unistd.h' in C++ does not build.					
	Including <code>unistd.h</code> in a C++ program does not compile with the RSB for today:					

Descripti
on

```
$ /opt/work/rtems/4.12/bin/arm-rtems4.12-g++ -B/opt/work/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib -B/opt/work/si/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib -
specs bsp_specs -qrtems -march=armv7-a -mthumb -mcpu=neon -mfloat-abi=hard -mtune=cortex-a9 -g -O2 u.cpp
In file included from /opt/work/rtems/4.12/arm-rtems4.12/include/sys/_pthreadtypes.h:24:0,
      from /opt/work/rtems/4.12/arm-rtems4.12/include/sys/types.h:239,
      from /opt/work/rtems/4.12/arm-rtems4.12/include/sys/unistd.h:12,
      from /opt/work/rtems/4.12/arm-rtems4.12/include/unistd.h:4,
      from u.cpp:6:
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h: In function 'void CPU_AND_S(size_t, cpu_set_t*, const cpu_set_t*, const cpu_set_t*)':
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h:147:3: error: 'BIT_AND2' was not declared in this scope
  BIT_AND2(_cpu_set_bits(setsize), destset, srcset1, srcset2);
  ^~~~~~
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h:147:3: note: suggested alternative: 'BIT_AND'
  BIT_AND2(_cpu_set_bits(setsize), destset, srcset1, srcset2);
  ^~~~~~
  BIT_AND
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h: In function 'void CPU_OR_S(size_t, cpu_set_t*, const cpu_set_t*, const cpu_set_t*)':
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h:159:3: error: 'BIT_OR2' was not declared in this scope
  BIT_OR2(_cpu_set_bits(setsize), destset, srcset1, srcset2);
  ^~~~~~
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h:159:3: note: suggested alternative: 'BIT_OR'
  BIT_OR2(_cpu_set_bits(setsize), destset, srcset1, srcset2);
  ^~~~~~
  BIT_OR
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h: In function 'void CPU_XOR_S(size_t, cpu_set_t*, const cpu_set_t*, const cpu_set_t*)':
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h:171:3: error: 'BIT_XOR2' was not declared in this scope
  BIT_XOR2(_cpu_set_bits(setsize), destset, srcset1, srcset2);
  ^~~~~~
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h:171:3: note: suggested alternative: 'BIT_OR'
  BIT_XOR2(_cpu_set_bits(setsize), destset, srcset1, srcset2);
  ^~~~~~
  BIT_OR
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h: In function 'void CPU_NAND_S(size_t, cpu_set_t*, const cpu_set_t*, const cpu_set_t*)':
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h:183:3: error: 'BIT_NAND2' was not declared in this scope
  BIT_NAND2(_cpu_set_bits(setsize), destset, srcset1, srcset2);
  ^~~~~~
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h:183:3: note: suggested alternative: 'BIT_NAND'
  BIT_NAND2(_cpu_set_bits(setsize), destset, srcset1, srcset2);
  ^~~~~~
  BIT_NAND
In file included from /opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h:46:0,
      from /opt/work/rtems/4.12/arm-rtems4.12/include/sys/_pthreadtypes.h:24,
      from /opt/work/rtems/4.12/arm-rtems4.12/include/sys/types.h:239,
      from /opt/work/rtems/4.12/arm-rtems4.12/include/sys/unistd.h:12,
      from /opt/work/rtems/4.12/arm-rtems4.12/include/unistd.h:4,
      from u.cpp:6:
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h: In function 'int CPU_COUNT_S(size_t, const cpu_set_t*)':
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h:194:10: error: ' __bitcountl' was not declared in this scope
  return BIT_COUNT(_cpu_set_bits(setsize), set);
         ^
/opt/work/rtems/4.12/arm-rtems4.12/include/sys/cpuset.h:194:10: note: suggested alternative: ' __count'
```

#3063	2 years ago	fixed	config	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Make the EDF scheduler the default SMP scheduler					
Description	The EDF SMP scheduler supports simple thread processor affinities (see #3059) with a small run-time overhead. The current default SMP scheduler lacks support for thread processor affinities at all. The EDF SMP scheduler offers a good feature set for most applications. So, use it by default. Run-time libraries like libgomp, MTAPI, work stealing schedulers, language interpreters (e.g. Erlang virtual machine), etc. use a one-to-one thread processor affinity for example.					
#3069	2 years ago	fixed	rtems	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Add rtems_scheduler_ident_by_processor()					

Descripti
on

```
/**
 * @brief Identifies a scheduler by a processor index.
 *
 * @param[in] cpu_index The processor index.
 * @param[out] id The scheduler identifier associated with the processor index.
 *
 * @retval RTEMS_SUCCESSFUL Successful operation.
 * @retval RTEMS_INVALID_ADDRESS The @a id parameter is @c NULL.
 * @retval RTEMS_INVALID_NAME Invalid processor index.
 * @retval RTEMS_INCORRECT_STATE The processor index is valid, however, this
 * processor is not owned by a scheduler.
 */
```

#3070	2 years ago	fixed	rtems	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Add rtems_scheduler_ident_by_processor_set()					

Descripti
on

#3088	2 years ago	fixed	shell	likangbei	chrisj@...	2 years ago
Summary	Shell test in testsuites(samples)/fileio many COMMANDs is Lost					
Description	testsuites(samples)/fileio test on atsam BSP[] init.c[] #define CONFIGURE_SHELL_COMMANDS_INIT #define CONFIGURE_SHELL_COMMANDS_ALL but when press s -> start shell[]l only find three COMMANDs[]help[]alias[]time[]Other COMMANDs is Lost[] I remember that the previous version was normal[] Sorry[] My English is bad[]					
#3089	2 years ago	fixed	fs	Fan Deng	Fan Deng	19 months ago
Summary	Inconsistent blocking addressing in RFS					
Description	Background There are two ways to address a block in RFS:					
	1. Via a single 32bit block number (bno) 2. Via a group number(gno) and a bit offset (bit)					
	They should be fully convertible (1-1 mapping). In other words, the equation to convert 1 to 2 should be unique within the RFS implementation.					
	The bug The RFS implementation contains two different conversions between 1 and 2.					
	Details					
	1. In rtems_rfs_group_bitmap_alloc (rtems-rfs-group.c, line 172)					
	<pre>bno = gno * group_blocks + bit</pre>					
	2. In rtems_rfs_group_bitmap_alloc (rtems-rfs-group.c, line 228)					
	<pre>bno = gno * group_blocks + bit + 1 (via rtems_rfs_group_block() function)</pre>					
	3. In rtems_rfs_group_bitmap_free (rtems-rfs-group.c, line 283)					
	<pre>bno = gno * group_blocks + bit + 1 (RTEMS_RFS_SUPERBLOCK_SIZE)</pre>					
	4. In rtems_rfs_group_bitmap_test (rtems-rfs-group.c, line 332)					
	<pre>bno = gno * group_blocks + bit</pre>					
	To summarize, the implementation contains two ways of converting a bno to a (gno, bit) pair:					
	Either:					
	<pre>bno = gno * group_blocks + bit</pre>					
	Or:					
	<pre>bno = gno * group_blocks + bit + 1</pre>					
	The Fix The RFS implementation should consistently convert a bno to a (gno, bit) pair with:					
	<pre>bno = gno * group_blocks + bit + RTEMS_RFS_SUPERBLOCK_SIZE</pre>					
	This is because the superblock is not accounted for in the block bitmaps. So places to change:					
	1. rtems-rfs-group.c: all references to the conversion must be updated to use RTEMS_RFS_SUPERBLOCK_SIZE explicitly. 2. rtems_rfs_group_block converts the pair to bno via:					
	<pre>#define rtems_rfs_group_block(_g, _b) (((_g)->base) + (_b))</pre>					
	(_g)->base is calculated via rtems-rfs-format.c from:					
	<pre>#define rtems_rfs_block(_fs, _grp, _blk) \ (((_fs)->group_blocks) * (_grp)) + (_blk) + 1)</pre>					
	The "+ 1" part should really be "+ RTEMS_RFS_SUPERBLOCK_SIZE" to be logically correct. As RTEMS_RFS_SUPERBLOCK_SIZE itself has a comment saying:					
	<pre>/** * Number of blocks in the superblock. Yes I know it is a superblock and not * superblocks but if for any reason this needs to change it is handled. */ #define RTEMS_RFS_SUPERBLOCK_SIZE (1)</pre>					
#3090	2 years ago	fixed	bsps	Sebastian Huber	Sebastian Huber	21 months ago
Summary	Add BSP for i.MX 7					
#3091	2 years ago	fixed	tool	Joel Sherrill	Sebastian Huber	2 years ago
Summary	Core Dump in powerpc-rtems4.12-ld					
Description	This appears to have been introduced by the new binutils. Impacts qemu prep and qemu prep-altivec BSPs. gmake[8]: Entering directory `/data/home/joel/rtems-work/rtems-testing/rtems/build-powerpc-qemu prep-rtems/powerpc-rtems4.12/c/qemu prep/lib/libbsp/powerpc/motorola_powerpc/qemu_fakerom' powerpc-rtems4.12-ld -o qemu_fakerom.bin qemu_fakerom.o qemu_fakeres.o --oformat binary -nostdlib -Ttext 0xffff0000 --section-start=.romentry=0xfffffff gmake[8]: * [qemu_fakerom.bin] Segmentation fault					
#3096	2 years ago	fixed	shell	Chris Johns	Chris Johns	2 years ago
Summary	Shell internal commands should be public.					
Description	A few of the functions held in cpukit/libmisc/shell/internal.h are useful in building system. For example rtems_shell_register_monitor_commands() and rtems_shell_execute_cmd(). The shell commands are important and systems may provide other scripting mechanisms, for example sequences in YAML files. Providing public access lets users know the functions are supported.					
#3098	2 years ago	fixed	admin	Chris Johns	Amar Takhar	13 months ago
Summary	Add new RTEMS repos to github.					
Description	Please add: 1. rtems-docs.git 2. rtems-release.git to our github repos.					
#3099	2 years ago	fixed	unspecified	Chris Johns	Chris Johns	2 years ago
Summary	Add RTEMS FDT wrapper and shell command to libmisc					
Description	Provide a wrapper to the FDT library for use on RTEMS. The wrapper provides a simplified interface suitable for applications. The shell command provides access to registered FDT blobs so a user can search the tree like a file system and optionally read and write from device addresses.					
#3100	2 years ago	fixed	arch/arm	Chris Johns	Chris Johns	2 years ago
Summary	Add Xilinx AXI I2C driver					

Descripti on	Add a Xilinx AXI I2C driver.					
#3101	2 years ago	fixed	score	Chris Johns	Chris Johns	2 years ago
Summar y	Add I2C Drivers for LM25066A, TMP112, ADS1113 and ADS1115					
Descripti on	Add drivers for:					
	1. LM25066A 2. TMP112 3. ADS1113 4. ADS1115					
#3102	2 years ago	fixed	tool	Chris Johns	Chris Johns	2 years ago
Summar y	rtems-exeinfo does not decode ARM static constructors.					
Descripti on	The sections for ARM are not the same as other architectures.					
#3103	2 years ago	fixed	tool	Joel Sherrill	chrisj@...	2 years ago
Summar y	rtems-tools on CentOS 7 Build Failure					

```
A build failure for rtems-tools on the master has been reported on CentOS 7. This is my notes as I try to reproduce it.

[joel@localhost rtems-tools]$ ./waf configure Setting top to : /home/joel/rtems-work/rtems-tools Setting out to : /home/joel/rtems-work/rtems-tools/build Version : 4.12.78bbe4c1a31d
(4.12) Checking for program 'python' : /usr/bin/python Checking for python version >= 2.6.6 : 2.7.5 Checking for 'gcc' (C compiler) : /usr/bin/gcc Checking for 'g++' (C++ compiler) :
/usr/bin/g++ Checking for header alloca.h : yes Checking for header fcntl.h : yes Checking for header stdlib.h : not found Checking for header string.h : yes Checking for header
sys/types.h : yes Checking for header sys/wait.h : yes Checking for headerunistd.h : yes Checking for header vfork.h : not found Checking for function getsrusage : yes Checking for
program 'm4' : /usr/bin/m4 Checking for header sys/wait.h : yes Checking for function kill : yes Checking for 'gcc' (C compiler) : /usr/bin/gcc Checking for 'g++' (C++ compiler) :
/usr/bin/g++ Checking for 'g++' (C++ compiler) : /usr/bin/g++ Checking for function open64 : not found Checking for function stat64 : not found 'configure' finished successfully
(0.786s)
===== [joel@localhost rtems-tools]$ ./waf -j 1 --verbose Waf: Entering directory
`/home/joel/rtems-work/rtems-tools/build' [ 88/151] Compiling rtemstoolkit/rld-process.cpp 11:58:16 runner [/usr/bin/g+++, '-pipe', '-g', '-O2', '-Wall', '-Wextra', '-pedantic', '-
Irtemstoolkit', '-I../rtemstoolkit', '-Irtemstoolkit/elftoolchain/libelf', '-I../rtemstoolkit/elftoolchain/libelf', '-Irtemstoolkit/elftoolchain/common', '-I../rtemstoolkit/elftoolchain/common', '-
Irtemstoolkit/libiberty', '-I../rtemstoolkit/libiberty', '-DHAVE_CONFIG_H=1', '-DRTEMS_VERSION="4.12"', '-DRTEMS_RELEASE="4.12.78bbe4c1a31d"', '-DFASTLZ_LEVEL=1',
'../rtemstoolkit/rld-process.cpp', '-c', '-o/home/joel/rtems-work/rtems-tools/build/rtemstoolkit/rld-process.cpp.7.o'] In file included from ../rtemstoolkit/libiberty/libiberty.h:42:0,
from ../rtemstoolkit/rld-process.cpp:64:

../rtemstoolkit/libiberty/ansidecl.h:169:64: error: new declaration 'char* basename(const char*)'

    # define ATTRIBUTE_NONNULL(m) attribute ((nonnull) (m))

../rtemstoolkit/libiberty/libiberty.h:112:64: note: in expansion of macro 'ATTRIBUTE_NONNULL'

    extern char *basename (const char *) ATTRIBUTE_RETURNS_NONNULL ATTRIBUTE_NONNULL(1);

In file included from ../rtemstoolkit/rld-process.cpp:24:0: /usr/include/string.h:599:26: error: ambiguates old declaration 'const char* basename(const char*)'

    extern "C++" const char *basename (const char *filename)

In file included from ../rtemstoolkit/libiberty/libiberty.h:42:0,
from ../rtemstoolkit/rld-process.cpp:64:

../rtemstoolkit/libiberty/ansidecl.h:169:64: error: declaration of 'int vasprintf(char, const char*, va_list tag*)' has a different exception specifier

    # define ATTRIBUTE_NONNULL(m) attribute ((nonnull) (m))

../rtemstoolkit/libiberty/ansidecl.h:198:80: note: in expansion of macro 'ATTRIBUTE_NONNULL'

    #define ATTRIBUTE_PRINTF(m, n) attribute ((format (printf, m, n))) ATTRIBUTE_NONNULL(m)

../rtemstoolkit/libiberty/libiberty.h:651:55: note: in expansion of macro 'ATTRIBUTE_PRINTF'

    extern int vasprintf (char , const char *, va_list) ATTRIBUTE_PRINTF(2,0);

In file included from ../rtemstoolkit/rld-process.cpp:23:0: /usr/include/stdio.h:399:12: error: from previous declaration 'int vasprintf(char, const char*, va_list tag*)
throw ()'

    extern int vasprintf (char restrict ptr, const char *restrict f,

Waf: Leaving directory `/home/joel/rtems-work/rtems-tools/build' Build failed

-> task in 'rld' failed with exit status 1:

    {task 23048432: cxx rld-process.cpp -> rld-process.cpp.7.o}

[/usr/bin/g+++, '-pipe', '-g', '-O2', '-Wall', '-Wextra', '-pedantic', '-Irtemstoolkit', '-I../rtemstoolkit', '-Irtemstoolkit/elftoolchain/libelf', '-
I../rtemstoolkit/elftoolchain/libelf', '-Irtemstoolkit/elftoolchain/common', '-I../rtemstoolkit/elftoolchain/common', '-Irtemstoolkit/libiberty', '-
I../rtemstoolkit/libiberty', '-DHAVE_CONFIG_H=1', '-DRTEMS_VERSION="4.12"', '-DRTEMS_RELEASE="4.12.78bbe4c1a31d"', '-DFASTLZ_LEVEL=1',
'../rtemstoolkit/rld-process.cpp', '-c', '-o/home/joel/rtems-work/rtems-tools/build/rtemstoolkit/rld-process.cpp.7.o']
===== Looking down into libiberty.h, I picked on basename()

/* HAVE_DECL_* is a three-state macro: undefined, 0 or 1. If it is

    undefined, we haven't run the autoconf check so provide the declaration without arguments. If it is 0, we checked and failed to find the declaration
    so provide a fully prototyped one. If it is 1, we found it so don't provide any declaration at all. */

#if !HAVE_DECL_BASENAME

# if defined (GNU LIBRARY)
defined (linux) \
    defined (FreeBSD)    defined (OpenBSD)    defined (NetBSD) \
    defined (CYGWIN)    defined (CYGWIN32)    defined (MINGW32) \
    defined (DragonFly)  defined (HAVE_DECL_BASENAME)

extern char *basename (const char *) ATTRIBUTE_RETURNS_NONNULL ATTRIBUTE_NONNULL(1); #else /* Do not allow basename to be used if there is no prototype
seen. We

    either need to use the above prototype or have one from autoconf which would result in HAVE_DECL_BASENAME being set. */

#define basename basename_cannot_be_used_without_a_prototype #endif #endif ===== The native
CentOS 7 has this definition of basename:

# ifndef basename /* Return the file name within directory of FILENAME. We don't

    declare the function if the 'basename' macro is available (defined in <libgen.h>) which makes the XPG version of this function available. */

# ifdef CORRECT_ISO_CPP_STRING_H_PROTO extern "C++" char *basename (char *filename)

    THROW_asm ("basename") nonnull (1);

extern "C++" const char *basename (const char *filename)

    THROW_asm ("basename") nonnull (1);

# else extern char *basename (const char *filename) THROW nonnull (1); # endif # endif #endif
```

===== I think we are getting the C++ prototype from string.h and a conflicting C prototype from libiberty.h						
#3109	2 years ago	fixed	arch/riscv	Sebastian Huber	Hesham Almatary	14 months ago
Summary	Add RISC-V support					
Description	Add RISC-V 32-bit tool chain to RSB consisting of Binutils, GCC, Newlib and GDB. Add CPU port and a basic simulator BSP.					
#3111	2 years ago	fixed	tool/newlib	Sebastian Huber	Sebastian Huber	21 months ago
Summary	Newlib: Change time_t and clock_t integer types to 64-bit					
#3112	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	POSIX: Make pthread_mutex_t self-contained					
Description	Change the POSIX mutex into a self-contained object using <sys/lock.h>, e.g. <pre>typedef struct { struct _Mutex_recursive_Control _mutex; unsigned int _flags; struct _Scheduler_Control *_scheduler; _uint64_t _priority_ceiling; } pthread_mutex_t;</pre>					
#3113	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	POSIX: Make pthread_cond_t self-contained					
Description	Change the POSIX condition variable into a self-contained object using <sys/lock.h>, e.g. <pre>typedef struct { struct _Condition_Control _condition; pthread_mutex_t *_mutex; clockid_t _clock; } pthread_cond_t;</pre>					
#3114	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	POSIX: Make pthread_barrier_t self-contained					
Description	Change the POSIX barrier into a self-contained object using <sys/lock.h>, e.g. <pre>typedef struct { struct _Thread_queue_Queue _queue; unsigned int _flags; unsigned int _count; } pthread_barrier_t;</pre>					
#3115	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	POSIX: Make pthread_rwlock_t self-contained					
Description	Change the POSIX read-write lock into a self-contained object using <sys/lock.h>, e.g. <pre>typedef struct { struct _Thread_queue_Queue _queue; unsigned int _flags; unsigned int _readers; } pthread_rwlock_t;</pre>					
#3116	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	POSIX: Make sem_t self-contained					
Description	Change the POSIX semaphore into a self-contained object using <sys/lock.h>, e.g. <pre>typedef struct { struct _Semaphore_Control _sem; } sem_t;</pre>					
#3117	2 years ago	fixed	score	Sebastian Huber	Sebastian Huber	20 months ago
Summary	score: Optimize _Thread_queue_Enqueue() timeout handling					
Description	Use the Thread_queue_Context::enqueue_callout to do the timeout handling. This avoids the switch statement in _Thread_queue_Timeout(). It removes the thread queue dependency to _Thread_Timeout().					
#3121	2 years ago	fixed	tool/newlib	Sebastian Huber	Sebastian Huber	2 years ago
Summary	clock() implementation in Newlib is broken					
Description	Newlib uses _times_r() in clock(). The problem is that the _times_r() clock frequency is defined by sysconf(_SC_CLK_TCK). The clock frequency of clock() is the constant CLOCKS_PER_SEC. FreeBSD uses getusage() for clock().					
#3122	2 years ago	fixed	bsps	Sebastian Huber	Sebastian Huber	7 months ago
Summary	Simplify and unify BSP_output_char					
Description	The BSP_output_char should output a char and not mingle with high level processing, e.g. '\n' to '\r\n' translation. Move this translation to rtems_putc(). Remove it from all the BSP_output_char implementations.					
#3123	2 years ago	wontfix	tool/gdb	Sebastian Huber	Sebastian Huber	2 years ago
Summary	GDB 8.0.1 is broken on FreeBSD 11					
Description	I tried to add the patches for 7.11, but this results in: <pre>----- --- gdb/gnulib/import/stddef.in.h.orig 2016-10-07 23:33:10.529558000 -0700 +++ gdb/gnulib/import/stddef.in.h 2016-10-07 23:33:23.824676000 -0700 ----- Patching file gdb/gnulib/import/stddef.in.h using Plan A... Hunk #1 failed at 82. 1 out of 1 hunks failed--saving rejects to gdb/gnulib/import/stddef.in.h.rej</pre>					
#3124	2 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Ignore pshared attribute for POSIX semaphores					
Description	Since we have only one process, sharing between processes is trivial.					
#3125	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago

Summary	Accept PTHREAD_PROCESS_SHARED for POSIX mutexes					
Description	Since we have only one process, sharing between processes is trivial.					
#3126	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Accept PTHREAD_PROCESS_SHARED for POSIX barriers					
Description	Since we have only one process, sharing between processes is trivial.					
#3127	2 years ago	fixed	tool/gcc	Chris Johns	Chris Johns	13 months ago
Summary	MIPS tool build on Darwin (MacOS) fails.					
Description	This is the same bug that effects FreeBSD. For details see: https://gcc.gnu.org/bugzilla/show_bug.cgi?id=66032 https://gcc.gnu.org/bugzilla/show_bug.cgi?id=62097					
#3128	2 years ago	fixed	tool	Chris Johns	chrisj@...	2 years ago
Summary	RTEMS Tools covoar does not build on Windows.					
Description	The following error has appeared on Windows:					
	<pre>In file included from ../rtemstoolkit/elftoolchain/libelf/gelf.h:34:0, from ../rtemstoolkit/rld-elf-types.h:29, from ../rtemstoolkit/rld.h:72, from ../rtemstoolkit/rld-process.h:31, from ../tester/covoar/ObjdumpProcessor.h:16, from ../tester/covoar/DesiredSymbols.h:18, from ../tester/covoar/app_common.h:6, from ../tester/covoar/app_common.cc:40: ../rtemstoolkit/elftoolchain/libelf/libelf.h:33:23: fatal error: sys/queue.h: No such file or directory #include <sys/queue.h> ^ compilation terminated. Waf: Leaving directory `D:/opt/rtems/rsb.git/rtems/build/rth/rtems-tools.git/build'</pre>					
#3129	2 years ago	fixed	tool	Chris Johns	joel	2 years ago
Summary	RTEMS Tools covoar build fails on Windows					
Description	The following warnings and errors are present so the RSB tools do not finish and install:					
	<pre>[97/150] Compiling linkers/rtems-syms.cpp [98/150] Compiling linkers/rtems-rapper.cpp [99/150] Compiling linkers/rtems-exeinfo.cpp In file included from ../rtemstoolkit/rld-files.cpp:30:0: ../rtemstoolkit/rld-files.cpp: In destructor 'virtual rld::files::image::~image()': ../rtemstoolkit/rld.h:111:75: warning: throw will always call terminate() [-Wterminate] rld::error(_what, std::string(__FILE__) + ":" + to_string(__LINE__)) ^ ../rtemstoolkit/rld-files.cpp:256:15: note: in expansion of macro 'rld_error_at' throw rld_error_at("references when destructing image"); ^~~~~~ ../rtemstoolkit/rld.h:111:75: note: in C++11 destructors default to noexcept rld::error(_what, std::string(__FILE__) + ":" + to_string(__LINE__)) ^ ../rtemstoolkit/rld-files.cpp:256:15: note: in expansion of macro 'rld_error_at' throw rld_error_at("references when destructing image"); ^~~~~~ [100/150] Compiling tester/covoar/app_common.cc [101/150] Compiling tester/covoar/CoverageFactory.cc [102/150] Compiling tester/covoar/CoverageMap.cc [103/150] Compiling tester/covoar/CoverageMapBase.cc [104/150] Compiling tester/covoar/CoverageRanges.cc [105/150] Compiling tester/covoar/CoverageReaderBase.cc [106/150] Compiling tester/covoar/CoverageReaderQEMU.cc [107/150] Compiling tester/covoar/CoverageReaderRTEMS.cc [108/150] Compiling tester/covoar/CoverageReaderSkyeye.cc [109/150] Compiling tester/covoar/CoverageReaderTSIM.cc [110/150] Compiling tester/covoar/CoverageWriterBase.cc [111/150] Compiling tester/covoar/CoverageWriterRTEMS.cc [112/150] Compiling tester/covoar/CoverageWriterSkyeye.cc [113/150] Compiling tester/covoar/CoverageWriterTSIM.cc [114/150] Compiling tester/covoar/DesiredSymbols.cc [115/150] Compiling tester/covoar/ExecutableInfo.cc [116/150] Compiling tester/covoar/Explanations.cc [117/150] Compiling tester/covoar/GcovData.cc [118/150] Compiling tester/covoar/GcovFunctionData.cc [119/150] Compiling tester/covoar/ObjdumpProcessor.cc ../tester/covoar/DesiredSymbols.cc: In member function 'void Coverage::DesiredSymbols::determineSourceLines(Coverage::CoverageRanges*, Coverage::ExecutableInfo)': ../tester/covoar/DesiredSymbols.cc:517:36: error: 'realpath' was not declared in this scope realpath(inputBuffer, rpath); ^ Waf: Leaving directory `D:/opt/rtems/rtems-tools.git/build' Build failed -> task in 'ccovoar' failed with exit status 1 (run with -v to display more information)</pre>					
#3130	2 years ago	fixed	doc	Chris Johns	chrisj@...	2 years ago
Summary	RTEMS Doxygen.in latex output does not build					
Description	Doxygen latex output on sync.rtems.org does not build.					
	Does latex output build on any host? If so which hosts and what tool combination.					
	If it does not build we should consider defaulting the setting for latex output to "no".					
#3132	2 years ago	fixed	fs	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Add reference counting to file descriptors					

The use of a file descriptor after or during a close() operation may result in a **use after free**. Finding such errors in applications is difficult. Especially in SMP systems using the highly dynamic libbsd network stack.

The file descriptor objects reside in a table with a application configuration defined size. So, the storage of a file descriptor object is always present, only the referenced file system node may change over time. The file system nodes may use an internal reference counting, which is independent of the file descriptors.

To implement reference counting for the file descriptors add a bit field for the reference count to the rtems_libio_t::flags and use atomic operations to maintain the flags.

Each operation using a file descriptor should perform a sequence like this:

```
int op( int fd, ... )
{
    rtems_libio_t *iop;
    unsigned int  flags;

    if ( (uint32_t) fd >= rtems_libio_number_iops ) {
        rtems_set_errno_and_return_minus_one( EBADF );
    }

    iop = rtems_libio_iop( fd );
    flags = rtems_libio_iop_hold( iop );

    if ( ( flags & LIBIO_FLAGS_OPEN ) == 0 ) {
        rtems_libio_iop_drop( _iop );
        rtems_set_errno_and_return_minus_one( EBADF );
    }

    do_op( iop, ... );
    rtems_libio_iop_drop( iop );
    return 0;
}
```

Descripti
on

#3133	2 years ago	fixed	fs	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Remove rtems_libio_t::driver					
Description	Remove unused rtems_libio_t::driver member.					

#3134	2 years ago	fixed	fs	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Remove LIBIO_FLAGS_CREATE					
Description	Remove unused LIBIO_FLAGS_CREATE flag.					

#3135	2 years ago	fixed	admin	Sebastian Huber	amar@...	2 years ago
Summary	Devel mailing list doesn't work and Git push impossible due to disk full					

I got this:

```
git push
Counting objects: 18, done.
Delta compression using up to 12 threads.
Compressing objects: 100% (17/17), done.
Writing objects: 100% (18/18), 1.68 KiB | 0 bytes/s, done.
Total 18 (delta 16), reused 0 (delta 0)
remote: error: file write error (No space left on device)
remote: fatal: unable to write sha1 file
error: remote unpack failed: unpack-objects abnormal exit
To ssh://dispatch.rtems.org/data/git/rtems.git
! [remote rejected]      upstream -> master (unpacker error)
error: failed to push some refs to 'ssh://sebh@dispatch.rtems.org/data/git/rtems.git'
```

Descripti
on

We have on dispatch.rtems.org:

```
Filesystem      Size  Used Avail Capacity  Mounted on
/dev/gpt/root0  88G   82G  -600M   101%   /
```

#3136	2 years ago	fixed	fs	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Use FIFO for file descriptor free list					

Currently, the free list of file descriptors is organized as a LIFO. In erroneous systems which use a file descriptor after a call to close(), this increases the likelihood that this error is undetected due to the prompt re-use of the file descriptor. The use of a FIFO has the benefit that free file descriptors remain on the free list as long as possible. This increases the time frame in which an invalid use of a closed file descriptor returns an error status.

#3137	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Accept PTHREAD_PROCESS_SHARED for POSIX condition variables					

Since we have only one process, sharing between processes is trivial.

#3139	2 years ago	fixed	bsps	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Remove old ISR parameter from Clock_driver_support_install_isr() and make it optional					

The old ISR is not used by the clock driver shell.

#3140	2 years ago	fixed	score	Chris Johns	joel.sherrill@...	2 years ago
Summary	CPU Kit broken with --enable-rtems-debug					

Building with:

```
.../rtems.git/configure --target=arm-rtems4.12 --prefix=/opt/work/chris/rtems/kernel/4.12 --disable-networking --enable-rtemsbsp=beagleboneblack --enable-maintainer-mode --enable-rtems-debug
```

results in an error:

Descripti
on

	<pre>gmake[5]: Entering directory '/opt/work/chris/rtems/kernel/bsps/beagleboneblack/arm-rtems4.12/c/beagleboneblack/cpukit/score' arm-rtems4.12-gcc --pipe -DHAVE_CONFIG_H -I. -I../cpukit/./././beagleboneblack/lib/include -mcpu=cortex-a8 -O2 -g -ffunction-sections -fdata-sections -Wall -Wmissing- prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -MT src/libscore_a-semaphore.o -MD -MP -MF src/.deps/libscore_a-semaphore.Tpo -c -o src/libscore_a-semaphore.o `test -f 'src/semaphore.c'    echo 'opt/work/chris/rtems/kernel/rtems.git/c/src/././cpukit/score/'` src/semaphore.c In file included from /opt/work/chris/rtems/kernel/rtems.git/c/src/././cpukit/score/src/semaphore.c:21:0: /opt/work/chris/rtems/kernel/rtems.git/c/src/././cpukit/score/src/semaphore.c: In function '_Semaphore_Post': /opt/work/chris/rtems/kernel/rtems.git/c/src/././cpukit/score/src/semaphore.c:134:27: error: 'UINT_MAX' undeclared (first use in this function); did you mean 'UINT8_MAX'? _Assert(sem->count < UINT_MAX); ^ ././cpukit/./././beagleboneblack/lib/include/rtems/score/assert.h:67:12: note: in definition of macro '_Assert' ((_e) ? \ ^~ /opt/work/chris/rtems/kernel/rtems.git/c/src/././cpukit/score/src/semaphore.c:134:27: note: each undeclared identifier is reported only once for each function it appears in _Assert(sem->count < UINT_MAX); ^</pre>					
#3141	2 years ago	fixed	doc	Chris Johns	Chris Johns	2 years ago
Summary	Change the BSP Howto's name to something smaller.					
Description	<pre>gmake[5]: *** [Makefile:4571: src/libscore_a-semaphore.o] Error 1 The BSP Howto's current name is: \$ /opt/rtems-bsp-and-device-driver-guides4.12-gcc --version arm-rtems4.12-gcc (GCC) 7.2.0 20170814 (RTEMS 4.12, RSB e6d0a8bae6d16eba605370ca11a5928b797820bb-modified, Newlib 2.5.0.20170818)</pre>					
#3142	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	POSIX: Reduce size of pthread_once_t and make it zero-initialized					
Description	A zero-initialized pthread_once_t reduces the ROM usage of RTEMS applications, since the global pthread_once_t objects may reside in the BSS section.					
#3148	2 years ago	fixed	posix	Chris Johns	joel.sherrill@...	2 years ago
Summary	PSXRDWRV Test failure on Beaglebone Black					
Description	Running <code>rtems-test</code> with a recent u-boot and a current master this failure is reported: <pre>] RTEMS Beagleboard: am335x-based]]] *** BEGIN OF TEST PSXRDWRV ***] writew bad file descriptor -- EBADF] writew error 1: 22=Invalid argument] Error during error test!!!!</pre>					
#3152	2 years ago	wontfix	arch/arm	Chris Johns	Chris Johns	13 months ago
Summary	Beaglebone Black crashes on u-boot master build.					
Description	The crash with a Linux type image and no FDT is: <pre>] ## Booting kernel from Legacy Image at 82000000 ...] Image Name: RTEMS] Image Type: ARM Linux Kernel Image (gzip compressed)] Data Size: 60886 Bytes = 59.5 KiB] Load Address: 80000000] Entry Point: 80000000] Verifying Checksum ... OK] Uncompressing Kernel Image ... OK]] Starting kernel ...]] data abort]] MAYBE you should read doc/README.arm-unaligned-accesses]] pc : [<8000010c>] lr : [<800000ac>]] sp : 80101000 ip : 0000000c fp : 9f35ac28] r10: 9f3ad0f4 r9 : 00000000 r8 : 9f238f40] r7 : 00000000 r6 : 80000100 r5 : 00000e05 r4 : 60000193] r3 : 9f238fe0 r2 : 80000100 r1 : 00000e05 r0 : 60000193] Flags: nzcw IRQs off FIQs on Mode SVC_32] Resetting CPU ...</pre> and the code is: <pre>BSP_START_TEXT_SECTION void bsp_start_hook_0(void) { } 80000104: e12fff1e bx lr 80000108 <bsp_start_hook_1>: BSP_START_TEXT_SECTION static inline arm_a8core_start_set_vector_base(void) { } /* * Do not use bsp_vector_table_begin == 0, since this will get optimized away. */ if (bsp_vector_table_end != bsp_vector_table_size) { 80000108: e3002040 movw r2, #64 ; 0x40 8000010c: e3003040 movw r3, #64 ; 0x40 80000110: e3482000 movt r2, #32768 ; 0x8000 80000114: e3403000 movt r3, #0 80000118: e1520003 cmp r2, r3</pre>					
#3153	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Accept PTHREAD_PROCESS_SHARED for POSIX rwlocks					
Description	Since we have only one process, sharing between processes is trivial.					
#3157	2 years ago	fixed	unspecified	Jeff Mayes	Joel Sherrill	2 years ago
Summary	PowerPC tools don't build on 32-bit hosts					
Description	Using RSB and trying to build PowerPC. Updated RSB just a few days ago. i386 and arm build successfully, but PowerPC fails. configure:3662: checking for suffix of object files configure:3684: /opt/rtems-tools/rsb/rtems/build/powerpc-rtems4.12-gcc-7.2.0-newlib-2.5.0.20170818-i686-pc-cygwin-1/build/.gcc/xgcc -B/opt/rtems-tools/rsb/rtems/build/powerpc-rtems4.12-gcc-7.2.0-newlib-2.5.0.20170818-i686-pc-cygwin-1/build/.gcc/ -nostdinc -B/opt/rtems-					

Descripti on	tools/rsb/rtems/build/powerpc-rtems4.12-gcc-7.2.0-newlib-2.5.0.20170818-i686-pc-cygwin-1/build/powerpc-rtems4.12/me6500/m64/newlib/ -isystem /opt/rtems-tools/rsb/rtems/build/powerpc-rtems4.12-gcc-7.2.0-newlib-2.5.0.20170818-i686-pc-cygwin-1/build/powerpc-rtems4.12/me6500/m64/newlib/targ-include -isystem /opt/rtems-tools/rsb/rtems/build/powerpc-rtems4.12-gcc-7.2.0-newlib-2.5.0.20170818-i686-pc-cygwin-1/gcc-7.2.0/newlib/libc/include -B/desk/rtems/powerpc-rtems4.12/bin/ -B/desk/rtems/powerpc-rtems4.12/lib/ -isystem /desk/rtems/powerpc-rtems4.12/include -isystem /desk/rtems/powerpc-rtems4.12/sys-include -mcpu=e6500 -m64 -c -g -O2 conftest.c >&5 Assembler messages: Fatal error: -a64 unsupported configure:3688: \$? = 1 configure: failed program was: /* confdefs.h */ #define PACKAGE_NAME "GNU C Runtime Library" #define PACKAGE_TARNAME "libgcc" #define PACKAGE_VERSION "1.0" #define PACKAGE_STRING "GNU C Runtime Library 1.0" #define PACKAGE_BUGREPORT "" #define PACKAGE_URL " http://www.gnu.org/software/libgcc/ " /* end confdefs.h. */ int main () { ; return 0; } configure:3702: error: in `opt/rtems-tools/rsb/rtems/build/powerpc-rtems4.12-gcc-7.2.0-newlib-2.5.0.20170818-i686-pc-cygwin-1/build/powerpc-rtems4.12/me6500/m64/libgcc': configure:3705: error: cannot compute suffix of object files: cannot compile					
#3158	2 years ago	fixed	unspecified	Chris Johns	Chris Johns	2 years ago
Summar y	Examples v2 does not build					
Descripti on	Updating waf breaks the rootfs. Add rootfs support to rtems-waf.git .					
#3159	2 years ago	fixed	unspecified	Chris Johns	Chris Johns	2 years ago
Summar y	Examples v2 trace linker ini files reference non-existing dump-on-error					
Descripti on	Remove the dump-on-error option.					
#3160	2 years ago	fixed	unspecified	Chris Johns	Chris Johns	2 years ago
Summar y	Trace linker score support is broken					
The trace linker needs to be updated to build. I am not sure which bit is broken. Building the tools gives:						
<pre>[7/15] Compiling build/arm-rtems4.12-beagleboneblack/hello/both_hello/test.c.2.o /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:134:13: error: 'Thread_queue_Flush_callout' undeclared here (not in a function); did you mean 'Thread_queue_Flush_filter'? /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: { sizeof (Thread_queue_Flush_callout), "Thread_queue_Flush_callout" }, ^~~~~~ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: Thread_queue_Flush_filter /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:140:13: error: 'CORE_mutex_Status' undeclared here (not in a function); did you mean 'CORE_mutex_Control'? /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: { sizeof (CORE_mutex_Status), "CORE_mutex_Status" }, ^~~~~~ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: CORE_mutex_Control /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:143:19: error: unknown type name 'CORE_mutex_Attributes' { sizeof (const CORE_mutex_Attributes*), "const CORE_mutex_Attributes*" }, ^~~~~~ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:160:13: error: 'CORE_mutex_API_mp_support_callout' undeclared here (not in a function) { sizeof (CORE_mutex_API_mp_support_callout), "CORE_mutex_API_mp_support_callout" }, ^~~~~~ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:321:13: error: 'Objects_Locations' undeclared here (not in a function); did you mean 'Objects_Information'? /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: { sizeof (Objects_Locations*), "Objects_Locations*" }, ^~~~~~ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: Objects_Information /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:321:31: error: expected expression before ')' token { sizeof (Objects_Locations*), "Objects_Locations*" }, ^ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:342:31: error: expected expression before ')' token { sizeof (Objects_Locations*), "Objects_Locations*" }, ^ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:359:31: error: expected expression before ')' token { sizeof (Objects_Locations*), "Objects_Locations*" }, ^ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:368:31: error: expected expression before ')' token { sizeof (Objects_Locations*), "Objects_Locations*" }, ^ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:443:31: error: expected expression before ')' token { sizeof (Objects_Locations*), "Objects_Locations*" }, ^ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:548:13: error: 'Thread_Start_types' undeclared here (not in a function); did you mean 'Thread_Start'? /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: { sizeof (Thread_Start_types), "Thread_Start_types" }, ^~~~~~ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: _Thread_Start /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:570:13: error: 'Thread_blocking_operation_States' undeclared here (not in a function); did you mean 'Thread_queue_Operations'? /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: { sizeof (Thread_blocking_operation_States), "Thread_blocking_operation_States" }, ^~~~~~ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: Thread_queue_Operations /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c: In function 'rtld_pg_printk_entry': /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:678:3: warning: implicit declaration of function 'printf'; did you mean 'printf'? [-Wimplicit-function- declaration] /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: printf (">>> %s (0x%08x)\n", func_name, func_addr); ^~~~~~ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: printf /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c: At top level: /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:742:48: error: expected declaration specifiers or '...' before 'Thread_queue_Flush_callout' void _CORE_mutex_Flush(CORE_mutex_Control* a1, Thread_queue_Flush_callout a2, uint32_t a3); ^~~~~~ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:743:55: error: expected declaration specifiers or '...' before 'Thread_queue_Flush_callout' void __real__CORE_mutex_Flush(CORE_mutex_Control* a1, Thread_queue_Flush_callout a2, uint32_t a3); ^~~~~~ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:744:55: error: expected declaration specifiers or '...' before 'Thread_queue_Flush_callout' void __wrap__CORE_mutex_Flush(CORE_mutex_Control* a1, Thread_queue_Flush_callout a2, uint32_t a3) ^~~~~~ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:757:1: error: unknown type name 'CORE_mutex_Status'; did you mean 'CORE_mutex_Control'? CORE_mutex_Status _CORE_mutex_Initialize(CORE_mutex_Control* a1, Thread_Control* a2, const CORE_mutex_Attributes* a3, bool a4); /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: ^~~~~~ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: CORE_mutex_Control</pre>						
Descripti on						
This is a snip of the errors.						
#3163	2 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago

Summary	Add I2C device driver for temperature sensor LM75A					
#3166	2 years ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	2 years ago
Summary	New default ticket assignee: NeedsReview?					
Description	We have to many tickets with an unclear state if someone is working on them. One problem is that the tickets are assigned to a real person by default. Assign the tickets to a virtual person NeedsReview? to make it clear that this ticket has nobody assigned which can resolve it.					
#3167	2 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Internal status codes must not depend on RTEMS_POSIX_API					
Description	The internal status codes encode a Classic rtems_status_code and error codes used by the POSIX and C11/C++11 APIs. In case the POSIX API is disabled, the C11/C++11 support must still work.					
#3168	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Simplify POSIX_API_Control					
Description	There is no need to have a copy of the thread attributes used for the pthread_create() in POSIX_API_Control::Attributes. This is at least in line with Linux.					
#3170	2 years ago	fixed	unspecified	Chris Johns	Chris Johns	21 months ago
Summary	Use BSP_output_char via RTEMS printer or simple console driver for test output by default					
Description	Test runs with a interrupt driven console driver result in unreliable test outcomes.					
	Problem was noticed with test runs on Microzed, for example libtest/block08:					
	The test prints:					
	<pre>** END OF TEST BLOCK 8 ***</pre>					
	The <code>rtems-test</code> command marks the result as a failure. There is a single <code>*</code> missing from the start of the line. I attach the full test trace.					
#3171	2 years ago	fixed	tool/gcc	Chris Johns	Chris Johns	13 months ago
Summary	RSB GCC does not build on High Sierra and APFS					
Description	The issue has been reported upstream as https://gcc.gnu.org/bugzilla/show_bug.cgi?id=81797					
#3172	2 years ago	fixed	arch/i386	Chris Johns	Chris Johns	2 years ago
Summary	i386 PC BSP does not reset when bsp_reset is called.					
Description	Removal of the Edison support removed the standard PC reset using the keyboard controller rather then the specific Edison support.					
#3173	2 years ago	fixed	arch/arm	Chris Johns	Chris Johns	21 months ago
Summary	Xilinx AXI I2C driver IP race condition causes clock glitch.					
Description	The Xilinx AXI I2C IP has a race condition when the PIRQ read FIFO level is reached and the clock is throttling.					
#3174	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Remove rtems_pthread_attribute_compare()					
Description	The rtems_pthread_attribute_compare() function is undocumented and used only in one test. Move it to the test.					
#3175	2 years ago	fixed	score	Sebastian Huber	Sebastian Huber	13 months ago
Summary	Merge FreeBSD timecounter changes from 2015-01-20 to now					
#3176	2 years ago	fixed	tool/newlib	Joel Sherrill	Joel Sherrill	14 months ago
Summary	getreent in libc.a and generated by confdefs.h					
Description	Some applications are getting duplicate symbol definitions for <code>getreent()</code> . One of the examples-v2 programs is doing this. It is because there are two bodies for this method -- one from <code>confdefs.h</code> and another from <code>newlib</code> .					
	https://sourceware.org/ml/newlib/2017/msg01020.html addresses the issues and needs to be incorporated by the RSB.					
	https://sourceware.org/ml/newlib/2017/msg01019.html is a cleanup that was spotted at the same time. It can be picked up by a newlib snapshot.					
#3177	2 years ago	fixed	doc	Joel Sherrill	Chris Johns	2 years ago
Summary	Replace/update POSIX Compliance Guide					
Description	The POSIX Compliance Guide was never converted from texinfo. Beyond that, it is out of date and follows the outline of the printed version of the POSIX standard which no one sees anymore. This ticket proposes:					
	1. new Sphinx document 2. contents generated from POSIX API tracking spreadsheet (CSV) 3. outline per .h file, not functional area 4. use bullets, not tables so easier to format					
#3178	2 years ago	fixed	tool/gcc	Joel Sherrill	Joel Sherrill <joel@...>	2 years ago
Summary	Update sh-rtems4.12 bset to use rtems-default (using old gcc)					
Description	I built a toolset and all BSPs on Centos 7 after switching this to rtems-default.bset again. There was no comment indicating why it was using an older gcc so I assume something has been fixed.					
#3179	2 years ago	fixed	posix	Joel Sherrill	Sebastian Huber	2 years ago
Summary	New warnings from Time Changes					
	New warnings after picking up your recent commits. How are you checking for warnings?					

<https://devel.rtems.org/wiki/Release//5/5.1>

				<pre>\$./build/tester/covovar/covovar error missing option: target -T Usage: ./build/tester/covovar/covovar [-v] -T TARGET -f FORMAT [-E EXPLANATIONS] -1 EXECUTABLE coverage1 ... coverageN --OR-- Usage: ./build/tester/covovar/covovar [-v] -T TARGET -f FORMAT [-E EXPLANATIONS] -e EXE_EXTENSION -c COVERAGEFILE_EXTENSION EXECUTABLE1 ... EXECUTABLE2 -v - verbose at initialization -T TARGET - target name -f FORMAT - coverage file format (RTEMS, QEMU, TSIM or Skyeeye) -E EXPLANATIONS - name of file of explanations -s SYMBOLS_FILE - name of file with symbols of interest -i EXECUTABLE - name of executable to get symbols from -e EXE_EXTENSION - extension of the executables to analyze -c COVERAGEFILE_EXTENSION - extension of the coverage files to analyze -g GCNOS_LIST - name of file with list of *.gcno files</pre>			
#3198	2 years ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	2 years ago	
Summary	Add lazy update of line control and baud divisor to NS16550 serial driver						
Description	Updated the baud control and baud divisor while transfers are in progress may lead to unpredictable behaviour on some chips. Perform the updates only if necessary.						
#3200	2 years ago	fixed	unspecified	Joel Sherrill	Sebastian Huber	2 years ago	
Summary	m32c tests don't build -- test context too large						
Description	libc++abi.dylib: terminating with uncaught exception of type std::__1::basic_string<char, std::__1::char_traits<char>, std::__1::allocator<char> > : Aborted (core dumped) .././lib/rtems/c/src/./../testsuites/tmtests/tmfine01/init.c:58:21: error: size of variable 'test_instance' is too large static test_context test_instance; FWIW I marked this as unspecified because this is just a generic small target issue.						
#3201	2 years ago	fixed	arch/epiphany	Joel Sherrill	Joel Sherrill <joel@...>	2 years ago	
Summary	epiphany tools checksum error						
Description	I assume this is a side-effect of the recent checksum changes. If that's the case, it just needs to be updated. Otherwise, it is a more serious error. download: (full) https://github.com/adapteva/epiphany-gcc/archive/f7051762470c42ce7f01baa7edeb113d51c7dd72.zip -> sources/f7051762470c42ce7f01baa7edeb113d51c7dd72.zip download: https://github.com/adapteva/epiphany-gcc/archive/f7051762470c42ce7f01baa7edeb113d51c7dd72.zip -> sources/f7051762470c42ce7f01baa7edeb113d51c7dd72.zip redirect: https://codeload.github.com/adapteva/epiphany-gcc/zip/f7051762470c42ce7f01baa7edeb113d51c7dd72 redirect: https://codeadload.github.com/adapteva/epiphany-gcc/zip/f7051762470c42ce7f01baa7edeb113d51c7dd72 checksums: f7051762470c42ce7f01baa7edeb113d51c7dd72.zip: 4d911e7bff4f1827dd7712669d20e4a1bf02806df0fae113ff0e7d13466bef2e ==> 2b2034fd12f2fd5108205ade66400c175ede8cef8141a38ae03fc78bf2d65325 warning: checksum error: f7051762470c42ce7f01baa7edeb113d51c7dd72.zip error: checksum failure file: sources/f7051762470c42ce7f01baa7edeb113d51c7dd72.zip						
#3202	2 years ago	fixed	arch/or1k	Joel Sherrill	Joel Sherrill <joel@...>	2 years ago	
Summary	or1k tools build error						
Description	I assume this is a side-effect of recent checksum changes. Otherwise, there is a serious problem. ownload: (full) https://git.rtems.org/rtems-tools/plain/tools/4.12/gdb/gdb-7.11-sis-leon2-leon3.diff -> patches/gdb-7.11-sis-leon2-leon3.diff download: https://git.rtems.org/rtems-tools/plain/tools/4.12/gdb/gdb-7.11-sis-leon2-leon3.diff -> patches/gdb-7.11-sis-leon2-leon3.diff checksums: gdb-7.11-sis-leon2-leon3.diff: 0b8b2a23c7d1592315fe0130188f457c80f8b1e26645535bed091a5e0671682dc44a1987d00e6939a1b1c562c7579404db43183e666c29c2b479446aa61ca4f6 ==> 4c44afec9c00a45b9322d787da3796f3294f207ddae9fe9faab3327b6991ac75 warning: checksum error: gdb-7.11-sis-leon2-leon3.diff error: checksum failure file: patches/gdb-7.11-sis-leon2-leon3.diff						
#3203	2 years ago	fixed	admin	Amar Takhar	Amar Takhar	13 months ago	
Summary	Upgrade trac to fix numerous problems.						
Description	There are a ton of issues going on with trac that need to be resolved. The two major ones are: - The ticket commenter emails people who aren't a trac user. This may require a custom modification. - The always_email setting is taking things too literally and always sending emails even if it shouldn't. - The Git plug-in consistently spins, floods the jail with processes then the site dies. - Frequent, strange and random crashes. - This one is not a huge deal since it's just that request process users won't even notice when this happens. Upgrading trac is a weeklong project usually I will start preparing for it and update here. If anyone has any feature requests now is the time to do it!						
#3205	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago	
Summary	Relative timespec timeouts are subject to integer overflows						
Description	As a best-effort approach, a very large relative timeout should result in the maximum monotonic watchdog value and not in an undefined integer overflow.						
#3207	2 years ago	fixed	doc	Joel Sherrill		2 years ago	
Summary	Supported Architectures Page is out of date						
Description	https://devel.rtems.org/wiki/TBR/UserManual/SupportedCPUs is out of date. I have the information to update it if that's what we want to do.						
#3209	2 years ago	fixed	tool/rsb	Joel Sherrill	Chris Johns	19 months ago	
Summary	RSB should fail on this error						
Description	I was updating the md5's to sha512's on qemu and made a typo which resulted in this message: reporting: devel/qemu-git-1.cfg -> qemu-42d58e7c6760cb9c55627c28ae538e27dcf2f144-x86_64-linux-gnu-1.xml error: qemu-git-1.cfg:57: invalid number of hash args loading: vdeplug get: requires () The error message did not result in the build aborting. Perhaps this should be a fatal error. The broken RSB fragment was in qemu-git-1.cfg: %patch add qemu %{"rtems_http_git"}/rtems-tools/plain/tools/qemu/0001-openrisc-terminate-qemu-process-upon-receiving-a-hal.patch %hash md5 0001-openrisc-terminate-qemu-process-upon-receiving-a-hal.patch 6aa9dfc4522466ab4a463129b3b9cb1d +%hash md5 376ea9e07c4c8077b345af02856549843dff2ad73b5da5886c71e859c4a0849522c59dc05724270756763438aecdb70211ea2ae8cac28056cb17da53c3981e1						
#3210	2 years ago	fixed	tool/rsb	Chris Johns	Chris Johns	2 years ago	
Summary	Improve the RSB build email message						
Description	The message needs more detail to provide a suitable archive.						
#3211	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago	
Summary	Fix pthread_create() with user provided stack						
Description	In case the user provides a stack with address and size, then do not alter the stack size.						
#3215	2 years ago	fixed	doc	Joel Sherrill	Joel Sherrill	2 years ago	
Summary	Configuring a System Still Includes Notepads and Has Wrong Heading						

This section has the wrong heading and needs to be deleted anyway.

Descripti on	24.8.2. Specify Maximum Classic API Timers CONSTANT: CONFIGURE_ENABLE_CLASSIC_API_NOTEPADS					
#3216	2 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summar y	Replace vprintk() implementation					
Descripti on	The current vprintk() implementation has a questionable licence header, lacks support for the 'z' and 'j' format specifiers, is not robust against invalid format specifiers, uses a global variable for output. Replace it with a stripped down version of the FreeBSD kernel kvprintf() function.					
#3217	2 years ago	fixed	lib	Chris Johns	Chris Johns	19 months ago
Summar y	Add RTEMS version, build and tools details to tests					
Descripti on	Published test results need the RTEMS version, how it is built and the tools used to build the kernel and tests.					
#3218	2 years ago	fixed	dev/serial	Sebastian Huber	Sebastian Huber	2 years ago
Summar y	Termios canonical mode (ICANON) does not return input line by line					
Descripti on	In canonical mode, input is made available line by line. We must stop the canonical buffer filling upon reception of an end-of-line character.					
#3219	2 years ago	fixed	bsps	Chris Johns	Chris Johns	14 months ago
Summar y	Zynq BSP missing linker option --gc-sections					
Descripti on	This Zynq BSP is missing this option.					
#3220	2 years ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	20 months ago
Summar y	Change RTEMS release number scheme from 4.12 to 5					
Descripti on	As discussed here https://lists.rtems.org/pipermail/devel/2017-October/019169.html it was agreed to use version 5.1 with the new number scheme for the next RTEMS release. Most important items of this release:					
	• SMP support • 64-bit time_t (year 2038 problem) • the network stack header consolidation and the move to Newlib • self-contained POSIX synchronization objects (impacting the configuration) • improved Ada support (however, not all Ada tests pass currently)					
	The following steps are necessary to carry out the number change:					
	1. Change version of RTEMS tools. 2. Change version of RSB. 3. Change version of RTEMS. 4. Documentation repo. Easy. 5. Documentation website repo. Easy. 6. Release procedure repo. Easy. 7. Trac tickets. Not sure. 8. Trac wiki. Medium(?). A wiki search of 4.12 gives 21 hits. 9. rtems.org website. That needs Joel. 10. Make announcement on the devel and user mailing list					
	#3224	2 years ago	fixed	tool/binutils	Sebastian Huber	Sebastian Huber
Summar y	Upgrade or1k and m32c to Binutils 2.29					
#3225	2 years ago	fixed	tool/gdb	Sebastian Huber	Sebastian Huber	2 years ago
Summar y	Upgrade m32c to GDB 8.0.1					
#3226	2 years ago	fixed	tool/gdb	Sebastian Huber	Sebastian Huber	2 years ago
Summar y	gdb: pr 16827, fix sim on Mavrick					
#3227	2 years ago	workforme	admin	Joel Sherrill	Chris Johns	2 years ago
Summar y	sb-check fails on Msys2 64-bit					
Descripti on	There must be a recent change to msys2 which is breaking things. I installed the 64-bit version from https://msys2.github.io/ per the instructions at https://docs.rtems.org/branches/master/user/hosts/index.html#microsoft-windows					
	<pre>\$./source-builder/sb-check error: no hosts defaults found; please add</pre>					
	After adding some prints, I learned this:					
	<pre>\$./source-builder/sb-check posix made it MSYS_NT-10.0 error: no hosts defaults found; please add</pre>					
	I filled in options.py and windows.py to recognize this as MSYS2. I was then able to run sb-check. But it wasn't happy. Apparently the pacman command in the User's Guide is missing some packages based on newer versions:					
	<pre>\$./source-builder/sb-check posix MSYS_NT-10.0 RTEMS Source Builder - Check, 5 (8b30eb3f440a modified) error: exe: not found: (__ar) ar error: exe: not found: (__as) as error: exe: not found: (__cc) x86_64-w64-mingw32-gcc error: exe: not found: (__cxx) x86_64-w64-mingw32-g++ error: exe: not found: (__ld) ld error: exe: not found: (__nm) nm error: exe: not found: (__objcopy) objcopy error: exe: not found: (__objdump) objdump error: exe: not found: (__ranlib) ranlib Environment is not correctly set up</pre>					
	I installed binutils explicitly with pacman and then sb-check is complaining about gcc. I did a find to locate the gcc's installed:					

	<pre>\$ find / -name "*gcc.*" /home/jrs007/.ssh/id_rsa_gcc.pub /mingw64/bin/gcc.exe /mingw64/bin/x86_64-w64-mingw32-gcc.exe /mingw64/lib/gcc/x86_64-w64-mingw32/6.2.0/include/stdint-gcc.h /mingw64/lib/gcc/x86_64-w64-mingw32/6.2.0/libgcc.a /mingw64/share/info/gcc.info.gz /mingw64/share/man/man1/gcc.1.gz /usr/share/vim/vim80/compiler/gcc.vim find: failed to read file names from file system at or below '/': No such file or directory jrs007@JRS-OAR-Laptop MINGW64 /c/opt/rtems/rsb/source-builder \$ /mingw64/bin/x86_64-w64-mingw32-gcc.exe --version x86_64-w64-mingw32-gcc.exe (Rev2, Built by MSYS2 project) 6.2.0 Copyright (C) 2016 Free Software Foundation, Inc. This is free software; see the source for copying conditions. There is NO warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.</pre>					
#3228	2 years ago	fixed	tool/rsb	Chris Johns		2 years ago
Summary	aarch64 missing from 5/rtems-all build set					
Description	This arch needs to be added to the all build set.					
#3229	2 years ago	fixed	doc	Chris Johns	Chris Johns	13 months ago
Summary	Add index to all documents.					
Description	Indexes currently do not work. Fix this adding them to all documents. Add index entries where possible.					
#3232	2 years ago	fixed	doc	Chris Johns	Chris Johns	2 years ago
Summary	Use of <code>.. include::</code> in the User Manual should be changed.					
Description	This trick for Sphinx highlights an issue when using <code>.. include::</code> , we should be using <code>.. toctree::</code> : https://github.com/sphinx-doc/sphinx/issues/3432					
#3234	2 years ago	invalid	doc	Joel Sherrill	Joel Sherrill	2 years ago
Summary	Quick Start Instructions Inconsistent					
Description	In section 5 of the User's Manual, the clone of rtems-source-builder has you clone it into rsb but the sb-bootstrap command is based on cloning it into the rsb subdirectory.					
#3235	2 years ago	fixed	rtems	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Fix rtems_semaphore_flush() for priority inheritance semaphores					
Description	The _Semaphore_Get_operations() must return the proper operations for priority inheritance semaphores. Add a test case for rtems_semaphore_flush() with priority inheritance.					
#3236	2 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Fix thread queue owner priority update in _Thread_queue_Flush_critical()					
Description	The thread queue extract operations performed by the _Thread_queue_Flush_critical() may result in a priority change of the thread queue owner. Carry out the scheduler priority update operation. This is especially important in SMP configurations.					
#3237	2 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Fix priority ceiling updates					
Description	We must not clear the priority updates in _Thread_queue_Extract_locked() since this function is used by the priority ceiling surrender operations after the ceiling priority handover from the previous owner to the new owner. This is especially important in SMP configurations. Move the _Thread_queue_Context_clear_priority_updates() invocation to the callers.					
#3238	2 years ago	fixed	admin	Chris Johns	Amar Takhar	13 months ago
Summary	Git push to Trac with more than one commit does not update tickets.					
Description	The git push to trac hook does not queue or handle a number of commits in a push. As a result updates to tickets can be missed.					
#3239	2 years ago	fixed	dev	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Add getentropy() implementation provided by each BSP					
Description	The getentropy() system call was introduced by OpenBSD and is now also available on glibc 2.25 and later. It is used for example by arc4random_buf(). Which in turn is used by various cryptographic functions.					
#3240	2 years ago	fixed	lib	Andrei Chichak	Chris Johns	2 years ago
Summary	cpukit/libmisc/stackchk/check.c stack addresses formatted incorrectly.					
Description	The function Stack_check_Dump_threads_usage displays the stack high, low, and current pointers incorrectly. Instead of displaying these pointers in conventional hex format, the values have a proper prefix of 0x, but the pointer value is displayed in decimal. The incorrect inttypes.h formatting define was used.					
#3242	2 years ago	fixed	tool/gcc	Sebastian Huber	Sebastian Huber	23 months ago
Summary	Workarounds for UT699, UT700, and GR712RC errata					
Description	https://gcc.gnu.org/ml/gcc-patches/2017-11/msg01751.html This patch series adds workarounds for the newly discovered errata for UT699, UT700, and GR712RC. The errata and possible workarounds are described in the following documents available at http://www.gaisler.com/index.php/information/app-tech-notes : GRLIB-TN-0010 - LEON3/FT AHB Deadlock After Sequence of Load and Atomic Instructions GRLIB-TN-0011 - LEON3/FT AHB Lock Release during Atomic Operation GRLIB-TN-0012 - GR712RC Incorrect Annulation of Floating-point Operation on Instruction Cache Parity Error GRLIB-TN-0013 - GRFPU Floating-point controller: Missing FDIV/FSQRT Result Daniel Cederman (4): [SPARC] Errata workaround for GRLIB-TN-0012 [SPARC] Errata workaround for GRLIB-TN-0011 [SPARC] Errata workaround for GRLIB-TN-0010 [SPARC] Errata workaround for GRLIB-TN-0013					
#3243	2 years ago	fixed	score	Sebastian Huber	Sebastian Huber	13 months ago
Summary	Simplify global construction					
Description	For the SMP support the global construction was changed to use an approach with a thread restart after global construction. With this implementation thread-local objects and POSIX keys initialized during global construction are not present in the initialization thread (main thread). This is not in line with what users familiar with GNU/Linux or FreeBSD would expect. See for example: https://lists.rtems.org/pipermail/users/2017-July/031525.html					
#3244	2 years ago	fixed	rtems	Sebastian Huber	Sebastian Huber	17 months ago

Summary	Change rtems_panic() implementation and document this function					
Description	The current rtems_panic() implementation is quite heavy weight. It depends on _exit() which calls the global destructors. It uses fprintf(stderr, ...) for output which depends on an initialized console device and the complex fprintf(). Introduce a new fatal source RTEMS_FATAL_SOURCE_PANIC for rtems_panic() and output via printk(). Document this function in Fatal Manager chapter. Replace all BSP_panic() with rtems_panic().					
#3245	2 years ago	fixed	arch/powerpc	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Replace BSP_panic() with rtems_panic()					
Description	Due to a new rtems_panic() implementation, it is possible to replace the PowerPC-specific BSP_panic() with rtems_panic(). Remove BSP_panic() implementations.					
#3246	2 years ago	fixed	arch/powerpc	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Remove _BSP_Fatal_error()					
Description	BSPs can use the bsp_fatal_extension() to provide BSP-specific fatal error handling. There is no need for a _BSP_Fatal_error().					
#3247	2 years ago	fixed	build	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Remove BSP-specific defaults for RTEMS_BSP_CLEANUP_OPTIONS()					
Description	Remove BSP-specific defaults for RTEMS_BSP_CLEANUP_OPTIONS() to simplify the BSP configuration and documentation. Change default to: BSP_PRESS_KEY_FOR_RESET=0 BSP_RESET_BOARD_AT_EXIT=1 BSP_PRINT_EXCEPTION_CONTEXT=1					
#3248	2 years ago	fixed	build	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Add BSP_VERBOSE_FATAL_EXTENSION to RTEMS_BSP_CLEANUP_OPTIONS					
Description	Add BSP_VERBOSE_FATAL_EXTENSION to RTEMS_BSP_CLEANUP_OPTIONS to optionally print the RTEMS version, the fatal source and the fatal code in the shared bsp_fatal_extension().					
#3249	2 years ago	fixed	arch/arm	Joel Sherrill	Sebastian Huber	2 years ago
Summary	imx7 does not link getentropy01 test on master					
Description	arm-rtems5-gcc -B./.././../imx7/lib/ -specs bsp_specs -qrtems -march=armv7-a -mthumb -mcpu=neon -mfloat-abi=hard -mtune=cortex-a7 -O2 -g -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -Wl,--gc-sections -march=armv7-a -mthumb -mcpu=neon -mfloat-abi=hard -mtune=cortex-a7 -Wl,--wrap=printf -Wl,--wrap=puts -Wl,--wrap=putchar -o getentropy01.exe init.o In function `test_getentropy': /home/joel/rtems-work/rtems-testing/rtems/build-arm-imx7-rtems/arm-rtems5/c/imx7/testsuites/libtests/getentropy01/./.././.././../rtems/c/src/./../testsuites/libtests/getentropy01/init.c:57: undefined reference to `getentropy' /home/joel/rtems-work/rtems-testing/rtems/build-arm-imx7-rtems/arm-rtems5/c/imx7/testsuites/libtests/getentropy01/./.././.././../rtems/c/src/./../testsuites/libtests/getentropy01/init.c:59: undefined reference to `getentropy'					
#3254	2 years ago	fixed	build	Sebastian Huber		11 months ago
Summary	Reorganize header files to avoid "make preinstall"					
#3255	2 years ago	duplicate	arch/powerpc	Joel Sherrill	Sebastian Huber	2 years ago
Summary	Warnings on 64-bit targets					
Description	This occurred on the 64 bit PowerPC and SPARC64 targets. log/powerpc-qoriq_e6500_64.log:./.././.././../rtems/c/src/./../cpukit/libmisc/rtems-fdt/rtems-fdt-shell.c:57:27: warning: cast to pointer from integer of different size [-Wint-to-pointer-cast] log/powerpc-qoriq_e6500_64.log:./.././.././../rtems/c/src/./../cpukit/libmisc/rtems-fdt/rtems-fdt-shell.c:64:27: warning: cast to pointer from integer of different size [-Wint-to-pointer-cast] log/powerpc-qoriq_e6500_64.log:./.././.././../rtems/c/src/./../cpukit/libmisc/rtems-fdt/rtems-fdt-shell.c:488:11: warning: format '%u' expects argument of type 'unsigned int', but argument 5 has type 'long int' [-Wformat=] log/powerpc-qoriq_e6500_64.log:./.././.././../rtems/c/src/./../cpukit/libmisc/rtems-fdt/rtems-fdt-shell.c:536:13: warning: format '%u' expects argument of type 'unsigned int', but argument 2 has type 'long int' [-Wformat=]					
#3256	2 years ago	fixed	tool/gcc	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Ada run-time needs support for self-contained POSIX synchronization objects					
Description	Object types are hard coded in gcc/ada/s-osinte-rtems.ads.					
#3260	23 months ago	fixed	arch/sparc	Sebastian Huber	Sebastian Huber	22 months ago
Summary	libpci depends on BSP-specific header files					
Description	The libpci is currently only used on SPARC. It is in cpukit, so BSP-specific header files are not allowed. Unfortunately this is not the case for libpci. However, it seems the the routines depending on BSP_PCI_BIG_ENDIAN are not used: <pre>grep -r 'pci_lldst[12]_'. /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE uint16_t pci_id_le16(volatile uint16_t *addr) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE void pci_st_le16(volatile uint16_t *addr, uint16_t val) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE uint32_t pci_id_le32(volatile uint32_t *addr) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE void pci_st_le32(volatile uint32_t *addr, uint32_t val) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE uint16_t pci_id_be16(volatile uint16_t *addr) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE void pci_st_be16(volatile uint16_t *addr, uint16_t val) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE uint32_t pci_id_be32(volatile uint32_t *addr) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE void pci_st_be32(volatile uint32_t *addr, uint32_t val) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE uint16_t pci_id_le16(volatile uint16_t *addr) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE void pci_st_le16(volatile uint16_t *addr, uint16_t val) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE uint32_t pci_id_le32(volatile uint32_t *addr) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE void pci_st_le32(volatile uint32_t *addr, uint32_t val) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE uint16_t pci_id_be16(volatile uint16_t *addr) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE void pci_st_be16(volatile uint16_t *addr, uint16_t val) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE uint32_t pci_id_be32(volatile uint32_t *addr) /cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE void pci_st_be32(volatile uint32_t *addr, uint32_t val)</pre> Is this dead code and can I remove BSP_PCI_BIG_ENDIAN? Another issue is the use of a BSP-specific interrupt API in cpukit/libpci/pci/access.h:RTEMS_INLINE_ROUTINE void pci_st_le16(volatile uint16_t *addr, uint16_t val). The missing functions should be added to <rtems/irq-extension.h>.					
#3261	23 months ago	fixed	doc	Frédéric Jouault	Frédéric Jouault <f.jouault@...>	10 months ago
Summary	A couple of documentation typos					
Description	This patch includes a couple of typo corrections in the C User Manual.					
#3264	23 months ago	fixed	score	Sebastian Huber	Sebastian Huber	21 months ago
Summary	Add monotonic watchdog based on uptime					
Description	The CLOCK_MONOTONIC time services use currently the clock tick based watchdog. This is a problem in case the uptime (measured via the timercounter) and the ticks since boot drift away (measured via the clock ticks). Introduce a new watchdog which uses the uptime. The memory overhead is quite small (two pointers per processor).					
#3265	23 months ago	fixed	posix	Sebastian Huber	Sebastian Huber	21 months ago
Summary	Use second one based uptime for CLOCK_MONOTONIC for FreeBSD compatibility					
Description	This simplifies the CLOCK_MONOTONIC based time services. It is potentially important for libbsd.					
#3266	23 months ago	duplicate	lib	Chris Johns		22 months ago
Summary	cpukit/libpci references BSP headers.					

On the `no-preinstall` branch of <https://git.rtems.org/chrisj/rtems.git/> the build fails with:

Description

```
sparc-rtems5-gcc --pipe -DHAVE_CONFIG_H -I. -I/opt/work/chris/rtems/kernel/bsp/beagleboneblack/sparc-rtems5/c/erc32/include -
I/opt/work/chris/rtems/kernel/rtems.git/cpukit/include -I/opt/work/chris/rtems/kernel/rtems.git/cpukit/score/cpu/sparc/include -mcpu=cypress -O2 -g -ffunction-sections -fdata-
sections -MT pci_access.o -MD -MP -MF $debase.Tpo -c -o pci_access.o /opt/work/chris/rtems/kernel/rtems.git/c/src/./../cpukit/libpci/pci_access.c &&\n
mv -f $debase.Tpo $debase.Po\n
In file included from /opt/work/chris/rtems/kernel/rtems.git/cpukit/include/pci.h:23:0,\n
from /opt/work/chris/rtems/kernel/rtems.git/c/src/./../cpukit/libpci/pci_access.c:10:\n
/opt/work/chris/rtems/kernel/rtems.git/cpukit/include/pci/access.h:16:10: fatal error: libcpu/byteorder.h: No such file or directory\n
#include <libcpu/byteorder.h>\n
^~~~~~
```

This header is found under:

```
$ find . -name byteorder.h\n
./bsp/powerpc/include/libcpu/byteorder.h\n
./bsp/sparc/include/libcpu/byteorder.h\n
./bsp/i386/include/libcpu/byteorder.h
```

#3267	22 months ago	fixed	lib	Chris Johns	20 months ago
Summary	rtems/status-checks.h calls printk without including the needed header.				

Description

```
/opt/work/chris/rtems/kernel/rtems.git/cpukit/include/rtems/status-checks.h:74:7: warning: implicit declaration of function 'printk'; did you mean 'printf'? [-Wimplicit-function-
declaration]\n
printk( fmt, ##__VA_ARGS__)\n
^~\n
/opt/work/chris/rtems/kernel/rtems.git/cpukit/include/rtems/status-checks.h:86:3: note: in expansion of macro 'RTEMS_SYSLOG_PRINT'\n
RTEMS_SYSLOG_PRINT( "%s: " fmt, __func__, ##__VA_ARGS__)\n
^~\n
/opt/work/chris/rtems/kernel/rtems.git/cpukit/include/rtems/status-checks.h:107:3: note: in expansion of macro 'RTEMS_SYSLOG'\n
RTEMS_SYSLOG( "Error: " fmt, ##__VA_ARGS__)\n
^~\n
/opt/work/chris/rtems/kernel/rtems.git/cpukit/include/rtems/status-checks.h:113:3: note: in expansion of macro 'RTEMS_SYSLOG_ERROR'\n
RTEMS_SYSLOG_ERROR( "SC = %i: %s\n", (int) sc, msg);\n
^~\n
/opt/work/chris/rtems/kernel/rtems.git/cpukit/include/rtems/status-checks.h:152:5: note: in expansion of macro 'RTEMS_SYSLOG_ERROR_WITH_SC'\n
RTEMS_SYSLOG_ERROR_WITH_SC( sc, msg); \n
^~\n
/opt/work/chris/rtems/kernel/rtems.git/c/src/lib/libbsp/lm32/milkymist/./../lm32/shared/milkymist_gpio/gpio.c:57:5: note: in expansion of macro 'RTEMS_CHECK_SC'\n
RTEMS_CHECK_SC(sc, "create GPIO device");\n
^~~~~~
```

#3268	22 months ago	fixed	arch/powerpc	Chris Johns	22 months ago
Summary	PowerPC BSP include naming mess.				

The PowerPC BSP family headers need some refactoring for the RTEMS 5 release. The BSP family relies on the preinstall process to get suitable headers installed to work and removing `preinstall` exposes this. The specific issue appears with `irq.h` when building the `no-preinstall` branch. There is a PowerPC BSP family header and a number of BSPs also have an `irq.h` which overrides families header. The code has `#include <bsp/irq.h>` and the header used depends on the include order on the GCC command line. This is fragile for any user. These headers needs to be moved to BSP specific paths, for example `#include <mvm3100/irq.h>`.

#3270	22 months ago	fixed	arch/powerpc	Sebastian Huber	21 months ago
Summary	Remove unused support for MPC505				

There is some support for MPC505 in libcpu, however, I cannot find a BSP for this code. Remove this apparently dead code.

#3277	22 months ago	fixed	network/libbsd	Sebastian Huber	21 months ago
Summary	QorIQ: Add MAC-less DPAA driver to libbsd				

The SDK Linux DPAA driver supports a so called MAC-less interface driver. This driver allows Ethernet communication between guest systems of a hypervisor.

#3278	22 months ago	fixed	tool	Joel Sherrill	Chris Johns	21 months ago
Summary	bsp-builder has incorrect print (%s in output)					

I don't think the tools have branches so only impacts master.

Description

Notice the "run: %s:"
[1114/1565] powerpc/mpc5674fevb (profiling) Configuring run: %s: powerpc/mpc5674fevb.profiling\
/home/joel/rtems-work/rtems/configure --target=powerpc-rtems5\ --enable-rtemsbsp=mpc5674fevb --prefix=/home/joel/rtems-work/bsp\ --enable-profiling

#3281	21 months ago	wontfix	tool/gdb	Sebastian Huber	Sebastian Huber	21 months ago
Summary	Add epiphany support to GDB 8.0.0					

#3283	21 months ago	fixed	doc	Joel Sherrill	Chris Johns	21 months ago
Summary	Bad URL in OpenOCD/Xilinx_Zynq Wiki Page					

https://devel.rtems.org/wiki/Debugging/OpenOCD/Xilinx_Zynq has a link to the Zedboard Processor Debug Adapter. I think the URL has changed to this but would like someone more knowledgeable to confirm that before it is changed.
<http://zedboard.org/accessories/zedboard-processor-debug-adapter>

#3284	21 months ago	fixed	tool/rsb	Sebastian Huber	Sebastian Huber <sebastian.huber@...>	21 months ago
Summary	RSB uses hard coded GCC binary paths					

In order to build a tool chain with Ada support you need a native GCC with Ada support of the same version as the cross compiler. The RSB uses hard coded paths for the gcc and g++ programs:

```
source-builder/defaults.mc: __cc:      exe,      required, '/usr/bin/gcc'\n
source-builder/defaults.mc: __cxx:    exe,      required, '/usr/bin/g++'
```

So, the RSB user must change the main GCC installation of the machine to build a particular RTEMS tool chain. This is undesired/infeasible in most situations.

#3285	21 months ago	fixed	build	Sebastian Huber	Sebastian Huber	15 months ago
Summary	Reorganize BSP source directory					

Now, that all BSP header files are in

- `bsp/include`
- `bsp/@RTEMS_CPU@/include`
- `bsp/@RTEMS_CPU@/@RTEMS_BSP_FAMILY@/include`

we should also move the BSP sources to this new directory tree. How do we want to organize the BSP sources in `bsp/@RTEMS_CPU@/@RTEMS_BSP_FAMILY@`?

- include (this is already there, see [#3254](#))

Description	• config ◦ somebsp.cfg • start (everything required to run a minimal application without devices) ◦ start.S ◦ bspstart.c ◦ bspsmp.c ◦ linkcmds • cache (everything for the cache controller support) • irq (everything for the interrupt controller support) • console (everything for the console driver) • clock (everything for the clock driver) • i2c (everything for the I2C driver) • spi (everything for the SPI driver) • net (legacy network stack drivers) • mpci (RTEMS_MULTIPROCESSING support) • rtc (everything for the RTC driver) • ata (everything for the ATA driver) • contrib (import of external sources) ◦ The layout of external sources should be used as is if possible.						
	#3290	21 months ago	fixed	arch/arm	Sebastian Huber	Sebastian Huber	21 months ago
Summary	Add device tree support to Altera/Intel? Cyclone V BSP						
Description	#3294	21 months ago	fixed	tool/rsb	Chris Johns	Chris Johns	21 months ago
	gcc version report for released tools is wrong.						
Description	The release gcc version string has the RTEMS release and not the actual release.						
	#3298	21 months ago	fixed	lib/dl	Chris Johns	Chris Johns	9 months ago
Summary	dlerror non-conformance						
Description	This is a port of the 4.11 patches from #2747 to master. Please refer to that ticket for details.						
	#3305	21 months ago	fixed	arch/arm	Joel Sherrill	Joel Sherrill	20 months ago
Summary	Add paravirtualization support to ARM						
Description	The Arm port does not currently have paravirtualization support.						
	#3306	21 months ago	fixed	arch/powerpc	Joel Sherrill	Joel Sherrill <joel@...>	20 months ago
Summary	Add paravirtualization support to PowerPC						
Description	The PowerPC port does not currently have paravirtualization support.						
	#3307	21 months ago	fixed	arch/powerpc	Joel Sherrill	Joel Sherrill	14 months ago
Summary	PowerPC linkcmds.base missing wildcards on some sections						
Description	Some sections were missing sections. Wildcards needed to be added.						
	#3309	21 months ago	fixed	doc	Chris Johns		13 months ago
Summary	rtems_task_create's initial_mode SMP update						
Description	The initial_mode cannot have the non-preempt flag or an interrupt level set or an RTEMS_UNSATISFIED error is returned. This is not documented in the directive.						
	#3312	21 months ago	fixed	tool/rsb	Chris Johns	Chris Johns	20 months ago
Summary	RSB macro calls such as define fail on unicode keys.						
Description	The define call in macros.py checks for a str while the _setitem_ call can convert a unicode string to str. Remove the check.						
	Remove the other places in macros.py a key str check is made and see if they can be improved.						
Description	The following has been reported to me:						
	<pre>cd rtems-source-builder-4.11.3/rtems ../source-builder/sb-set-builder --prefix=/home/user/rtems/4.11 --log=arm.txt --without-rtems 4.11/rtems-arm Traceback (most recent call last): File "../source-builder/sb-set-builder", line 29, in <module> setbuilder.run() File "../source-builder/sb/setbuilder.py", line 526, in run opts = options.load(sys.argv, optargs) File "../source-builder/sb/options.py", line 668, in load version.load_release_settings(o.defaults) File "../source-builder/sb/version.py", line 123, in load_release_settings sources.hash((hs[0], hash[0], hs[1]), macros, setting_error) File "../source-builder/sb/sources.py", line 105, in hash macros.define(_file, '%s %s' % (args[0], args[2])) File "../source-builder/sb/macros.py", line 439, in define raise TypeError('bad key type: %s' % (type(key))) TypeError: bad key type: <type 'unicode'></pre>						
#3315	20 months ago	fixed	tool/rsb	Chris Johns	Chris Johns	20 months ago	
Summary	Move expat's home site to github from SF.						
Description	Move expat's home site from SF to github:						
	https://libexpat.github.io/						
#3318	20 months ago	fixed	bsps	mletcher	Sebastian Huber	20 months ago	
Summary	Improve INTERNAL_ERROR_THREAD_EXITED to show the id and thread name						
Description	It might be more helpful i the case of a thread exit to output some information about that thread to make tracking it down simpler.						
	This example works ok.						
Description	static void thread_exitted_print_info(rtems_tcb *tcb) {						
	printf("Thread exited: %s (id %d)\n", tcb->Object.name, tcb->Object.id)						
Description	}						
	/* In your configuration: */ #define CONFIGURE_INITIAL_EXTENSIONS \						
Description	{ .thread_exitted = thread_exitted_print_info }						

#3320	20 months ago	fixed	dev/serial	Sebastian Huber	Sebastian Huber <sebastian.huber@...>	16 months ago
Summary	Add a simple task console driver					
Description	The default console driver for tests is the simple console driver. It uses a polled output via <code>rtems_putc()</code> done directly in the context of the executing thread. This is a problem for timing sensitive tests. Add a simple task console driver.					
	<pre>.. index:: CONFIGURE_APPLICATION_NEEDS_SIMPLE_TASK_CONSOLE_DRIVER .. _CONFIGURE_APPLICATION_NEEDS_SIMPLE_TASK_CONSOLE_DRIVER: CONFIGURE_APPLICATION_NEEDS_SIMPLE_TASK_CONSOLE_DRIVER ----- CONSTANT: ``CONFIGURE_APPLICATION_NEEDS_SIMPLE_TASK_CONSOLE_DRIVER`` DATA TYPE: Boolean feature macro. RANGE: Defined or undefined. DEFAULT VALUE: This is not defined by default. DESCRIPTION: ``CONFIGURE_APPLICATION_NEEDS_SIMPLE_TASK_CONSOLE_DRIVER`` is defined if the application wishes to include the Simple Task Console Device Driver. NOTES: This device driver is responsible for providing the :file:`/dev/console` device file. This device is used to initialize the standard input, output, and error file descriptors. This device driver reads via ``getchar()``. This device driver writes into a write buffer. The count of characters written into the write buffer is returned. It might be less than the requested count, in case the write buffer is full. The write is non-blocking and may be called from interrupt context. A dedicated task reads from the write buffer and outputs the characters via ``rtems_putc()``. This task runs with the least important priority. The write buffer size is 2047 characters and it is not configurable. Use ``fsync(STDOUT_FILENO)`` or ``fdatsync(STDOUT_FILENO)`` to drain the write buffer. The Termios framework is not used. There is no support to change device settings, e.g. baud, stop bits, parity, etc. The * ``CONFIGURE_APPLICATION_NEEDS_CONSOLE_DRIVER``, * ``CONFIGURE_APPLICATION_NEEDS_SIMPLE_CONSOLE_DRIVER``, and * ``CONFIGURE_APPLICATION_NEEDS_SIMPLE_TASK_CONSOLE_DRIVER`` configuration options are mutually exclusive.</pre>					

#3323	20 months ago	fixed	lib	Chris Johns	Chris Johns	19 months ago
Summary	mhttpd's http etag can result in invalid caching in a browser.					
Description	The mhttp's http etag uses the mtime and file length and this can cause subtle issues if a target has no RTC or it is incorrect and files are being copied without preserving the mtime or changes happen that do not change the length.					

on	The <code>cp</code> and <code>untar</code> code do not update a file's time.				
#3325	20 months ago	fixed	config	Sebastian Huber	Sebastian Huber20 months ago
Summary	Simplify clustered scheduler configuration				
Description	Improve the scheduler configuration documentation according to user review.				
	Do not use names derived from scheduler implementation details. Instead use names derived from the scheduler configuration or documentation. Provide defines for backward compatibility.				
#3327	20 months ago	fixed	score	Joel Sherrill	20 months ago
Summary	Eliminate <code>score/cpu/*/.../types.h</code>				
Description	Each port contains a <code>types.h</code> file. It universally defines one type (<code>CPU_Uint32ptr</code>) that is required. Some of the <code>types.h</code> files define a CPU specific simple vectored ISR handler prototype.				
	- Move the <code>CPU_Uint32ptr</code> typedef to <code>cpu.h</code> - If unused, delete the ISR handler prototype. If used, move to <code>cpu.h</code>				
#3328	20 months ago	fixed	build	Amaan Cheval	20 months ago
Summary	<code>bootstrap</code> uses non-POSIX compliant <code>echo -e</code>				
Description	On certain shells, the <code>"-e"</code> option is not supported, and causes <code>echo</code> to output the flag along with the quoted text.				
	<pre>-> % sh \$ echo -e "foo bar" -e foo bar \$</pre>				
Description	This varies by shell, and is not even consistent between <code>sh</code> or <code>bash</code> .				
	It was introduced while removing the make preinstall stage here , and may still work on most shells, though it didn't for me on <code>sh</code> on Ubuntu 16.04 LTS (4.4.0-78-generic x86_64 GNU/Linux) - as far as I can tell, this bug hasn't made it to any releases yet, so just fixing it on master should be enough.				
Description	A patch is attached.				
	Reference to the POSIX standard which confirms that <code>-n</code> is the only argument supported.				
Description	http://pubs.opengroup.org/onlinepubs/9699919799/utilities/echo.html				
	Link to POSIX for <code>printf(1)</code> :				
Description	http://pubs.opengroup.org/onlinepubs/9699919799/utilities/printf.html				
	#3329	20 months ago	fixed	tool/website	Joel SherrillAmar Takhar13 months ago
Summary	Trac Login Failure (bad password) Causes Internal Error				
Description	Behavior is as expected with a bad user name.				
	Try to login to Trac with a bad password:				
Description	Oops... Trac detected an internal error: <code>ProgrammingError?: (1064, "You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'sid='joel.sherrill' AND authenticated=1 AND name='failed_logins_count at line 1'")</code> There was an internal error in Trac. It is recommended that you notify your local Trac administrator with the information needed to reproduce the issue. To that end, you could anonymous <code>ProgrammingError?: (1064, "You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'sid='joel.sherrill' AND authenticated=1 AND name='failed_logins_count at line 1'")</code> === How to Reproduce ===				
	While doing a POST operation on <code>/login</code> , Trac issued an internal error.				
Description	(please provide additional details here)				
	Request parameters:				
Description	{ <code>u'__FORM_TOKEN': u'0dc25ae350c181046ceae015'</code> , <code>u'password': u'XXX'</code> , <code>u'referer': u'https://devel.rtems.org/ticket/3328'</code> , <code>'user_locked': False</code> , <code>u'username': u'joel.sherrill'</code> }				
	User agent: <code>Mozilla/5.0 (X11; Linux x86_64) KHTML/4.14.8 (like Gecko) Konqueror/4.14 Fedora/4.14.8-6.el7_3</code>				
Description	System Information				
	System information not available				
Description	Enabled Plugins				
	Plugin information not available				
Description	Interface Customization				
	Interface customization information not available				
Description	Python Traceback				

				Traceback (most recent call last): File "/data/src/trac/trac/web/main.py", line 620, in _dispatch_request dispatcher.dispatch(req) File "/data/src/trac/trac/web/main.py", line 220, in dispatch chosen_handler = self._pre_process_request(req, chosen_handler) File "/data/src/trac/trac/web/main.py", line 429, in _pre_process_request chosen_handler = filter_pre_process_request(req, chosen_handler) File "/data/trac/plugins/TracAccountManager-0.5.dev0-py2.7.egg/acct_mgr/api.py", line 478, in pre_process_request if not req.session.authenticated or \ File "/data/src/trac/trac/web/api.py", line 491, in __getattr__ value = self.callbacks[name](self) File "/data/src/trac/trac/web/main.py", line 354, in _get_session return Session(self.env, req) File "/data/src/trac/trac/web/session.py", line 243, in __init__ if req.authname == 'anonymous': File "/data/src/trac/trac/web/api.py", line 491, in __getattr__ value = self.callbacks[name](self) File "/data/src/trac/trac/web/main.py", line 172, in authenticate authname = authenticator.authenticate(req) File "/data/trac/plugins/TracAccountManager-0.5.dev0-py2.7.egg/acct_mgr/util.py", line 81, in wrap return func(self, *args, **kwds) File "/data/trac/plugins/TracAccountManager-0.5.dev0-py2.7.egg/acct_mgr/web_ui.py", line 395, in authenticate guard.failed_count(f_user, req.remote_addr) File "/data/trac/plugins/TracAccountManager-0.5.dev0-py2.7.egg/acct_mgr/guard.py", line 107, in failed_count set_user_attribute(self.env, user, key, count) File "/data/trac/plugins/TracAccountManager-0.5.dev0-py2.7.egg/acct_mgr/model.py", line 509, in set_user_attribute (value, username, attribute)) File "/data/src/trac/trac/db/util.py", line 72, in execute cursor.execute(query, params if params is not None else []) Investigating deeper, seems like this happens if std::async executes before std::future gets scheduled to run. Both of these create a pthread_once instance. File "/data/src/trac/trac/db/util.py", line 72, in execute once(self.cursor, self.cursor.execute(query, params if params is not None else []) After this, std::async blocks until the pthread_once instance is ready to run. Since the pthread_once instance is already taken, it also blocks, causing a deadlock. Attached you can find a test application that reproduces the deadlock. File "/data/trac/plugins/TracAccountManager-0.5.dev0-py2.7.egg/acct_mgr/web_ui.py", line 36, in defaulterrorhandler class, fixed value arch/powerpc Joel Sherrill Sebastian Huber		9 months ago	
Summary	#3334	20 months ago	fixed	posix	Stavros Passas	Sebastian Huber	
Description	RTEMS is not getting locked by pthread_once. Issue happens for example when std::future is combined with std::async. cursor.execute(query, params if params is not None else []) Investigating deeper, seems like this happens if std::async executes before std::future gets scheduled to run. Both of these create a pthread_once instance. File "/data/src/trac/trac/db/util.py", line 72, in execute once(self.cursor, self.cursor.execute(query, params if params is not None else []) After this, std::async blocks until the pthread_once instance is ready to run. Since the pthread_once instance is already taken, it also blocks, causing a deadlock. Attached you can find a test application that reproduces the deadlock. File "/data/trac/plugins/TracAccountManager-0.5.dev0-py2.7.egg/acct_mgr/web_ui.py", line 36, in defaulterrorhandler						
Summary	#3340	20 months ago	fixed	arch/powerpc	Joel Sherrill	Sebastian Huber	20 months ago
Description	899 warning error: (1064, "You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'sid='joel.sherrill' AND authenticated=1 AND name='failed_logins_count' at line 1") }}}. Create a ticket. log/powerpc-hsc_cm01.log:/home/joel/rtems-work/rtems-testing/rtems/rtems/bsps/powerpc/gen83xx/include/bsp/hwreg_vals.h:244:0: warning: "FPGA_START" redefined log/powerpc-hsc_cm01.log:/home/joel/rtems-work/rtems-testing/rtems/rtems/bsps/powerpc/gen83xx/include/bsp/hwreg_vals.h:246:0: warning: "FPGA_SIZE" redefined Looking at the code, it is pretty clear that the macros are redefined. Unfortunately one of the three has a different value the second time: TracGuide — The Trac User and Administration Guide ===== #define FPGA_START 0x00000000 #define FPGA_SIZE 0x00000000 #define FPGA_END (FPGA_START+FPGA_SIZE-1) /* • working values for various registers, used in start/start.S */ /* fpga config 16 MB size */ #define FPGA_CONFIG_START 0x00000000 #define FPGA_CONFIG_SIZE 0x00000000 /* fpga register 8 MB size */ #define FPGA_REGISTER_START 0x00000000 #define FPGA_REGISTER_SIZE 0x00000000 /* fpga fifo 8 MB size */ #define FPGA_FIFO_START 0x00000000 #define FPGA_FIFO_SIZE 0x00000000 #define FPGA_START (FPGA_CONFIG_START) fpga window size 32 MByte #define FPGA_SIZE (0x00000000) #define FPGA_END (FPGA_START+FPGA_SIZE-1) =====						
Summary	#3341	20 months ago	fixed	arch/sparc64	Joel Sherrill	Gedare Bloom	20 months ago
Description	log/sparc64-usiii.log:/home/joel/rtems-work/rtems-testing/rtems/rtems/bsps/sparc64/include/arch/stack.h:56:0: warning: "STACK_BIAS" redefined This is defined in two header files with the same value. Not sure what the proper fix is.						
Summary	#3342	20 months ago	fixed	posix	Joel Sherrill	Joel Sherrill	15 months ago
Description	We are missing the const on the third parameter. This requires a change to newlib and RTEMS. The correct prototype is: int pthread_setschedparam(pthread_t thread, int policy, const struct sched_param *param)						
Summary	#3343	20 months ago	fixed	posix	Joel Sherrill	Joel Sherrill	15 months ago
Description	We are missing the const and restrict on the first parameter. This requires a change to newlib and RTEMS. The correct prototype is: int pthread_mutex_getprioceiling(const pthread_mutex_t *restrict mutex, int *prioceiling)						
Summary	#3344	20 months ago	fixed	arch/m68k	Joel Sherrill	Joel Sherrill	20 months ago
Description	This .h file uses the same macro names for two blocks of INT macros. My assumption given that the second looks to be a different INT, is that it should not be INT3 again but INT3. --- a/bsps/m68k/include/mcf5272/mcf5272.h +++ b/bsps/m68k/include/mcf5272/mcf5272.h @@ -88,9 +88,9 @@ #define MCF5272_ICR1_INT3_PL (bit(23)) #define MCF5272_ICR1_INT3_IPL(x) ((x) << 20) #define MCF5272_ICR1_INT3_MASK ((7) << 20) -#define MCF5272_ICR1_INT3_PL (bit(19)) -#define MCF5272_ICR1_INT3_IPL(x) ((x) << 16) -#define MCF5272_ICR1_INT3_MASK ((7) << 16) +#define MCF5272_ICR1_INT4_PL (bit(19)) +#define MCF5272_ICR1_INT4_IPL(x) ((x) << 16) +#define MCF5272_ICR1_INT4_MASK ((7) << 16)						
Summary	#3345	20 months ago	fixed	arch/powerpc	Joel Sherrill	Joel Sherrill	20 months ago
Description	Various BSP_I2c_XXX_DEV_NAME macros have a stray " at the end of the first parameter.						
Summary	#3346	20 months ago	fixed	arch/bfin	Joel Sherrill	Joel Sherrill	20 months ago
Description	TIMER_STATUS, TIMER< DISABLE, and TIMER_ENABLE are defined in bf52x.h and in bf533.h. Disable second definition in full bf533 register set list and add a sanity check to ensure it stays the same. In file included from /home/joel/rtems-work/rtems-testing/rtems/rtems/bsps/bfin/TLL6527M/include/bsp.h:28:0, from .././../rtems/c/src/libchip/display/disp_hcms29xx.c:26: /home/joel/rtems-work/rtems-testing/rtems/rtems/bsps/bfin/include/bf52x.h:43:0: warning: "TIMER_STATUS" redefined						

#define TIMER_STATUS 0xffc00648						
#3348	20 months ago	fixed	arch/powerpc	Joel Sherrill	Joel Sherrill	20 months ago
Summary	beatnick:spaces needed around quote in macro definitions in bsp.h					
Description	Macros need spaces around " , "					
#3349	20 months ago	fixed	arch/i386	Joel Sherrill	Joel Sherrill	20 months ago
Summary	pc386 edid.h invalid macro names					
Description	Minus sign not underbar in macro name.					
	-#define DVS_HDMI-a 0x2 -#define DVS_HDMI-b 0x3 +#define DVS_HDMI_a 0x2 +#define DVS_HDMI_b 0x3					
#3350	20 months ago	fixed	rtems	Joel Sherrill	Sebastian Huber	20 months ago
Summary	sptimecounter02 warning due to defining _KERNEL and disabling part of <sys/time.h>					
Description	The bottom of <sys/time.h> is protected by ifndef _KERNEL where gettimeofday() is prototyped. sptimecounter02 is the only test which trips this. In file included from /home/joel/rtems-work/rtems-testing/rtems/rtems/cpukit/include/rtems/confdefs.h:323:0, from .././.././.././../rtems/c/src/./../testsuites/sptests/sptimecounter02/init.c:268: /home/joel/rtems-work/rtems-testing/rtems/rtems/cpukit/include/rtems/imfs.h: In function 'IMFS_update_atime': /home/joel/rtems-work/rtems-testing/rtems/rtems/cpukit/include/rtems/imfs.h:345:3: warning: implicit declaration of function 'gettimeofday' [-Wimplicit-function-declaration] gettimeofday(&now, 0);					
#3352	20 months ago	fixed	arch/arm	Joel Sherrill	Sebastian Huber	20 months ago
Summary	Warning in all ipc176x variants					
Description	bsps/arm/ipc176x/include/bsp.h defines OPERATION_COUNT in an attempt to override the autoconf generated constant. This conflicts and results in this warning: /home/joel/rtems-work/rtems-testing/rtems/rtems/bsps/arm/ipc176x/include/bsp.h:42:0: warning: "OPERATION_COUNT" redefined I understand why this is lowered by the BSP but the mechanism used is not good. And if the include file order is different between tests, you could get the BSP value or the autoconf generated value based on the order. This warning needs to be fixed and a safer mechanism for a BSP to override OPERATION_COUNT defined. My first suggestion is to use BSP_OPERATION_COUNT and add logic to one of the common test .h files to undef OPERATION_COUNT and redefine it to BSP_OPERATION_COUNT if it is defined. A safer option might be to change the name of the autoconf generated variable to OPERATION_COUNT_DEFAULT and rely on logic in a common test support .h to define OPERATION_COUNT to OPERATION_COUNT_DEFAULT or BSP_OPERATION_COUNT.					
#3354	20 months ago	fixed	arch/powerpc	Joel Sherrill	Joel Sherrill	19 months ago
Summary	PowerPC BSPs duplicate PAGE_MASK, etc redefinition					
Description	The following BSPs: powerpc-beatnik powerpc-mcp750 powerpc-mtx603e powerpc-mvme2100 powerpc-mvme2307 powerpc-mvme5500 powerpc-qemuprep-altivec powerpc-qemuprep use bsp/powerpc/include/libcpu/page.h which defines _ALIGN, PAGE_MASK, and PAGE_SIZE. These are defined by <machine/param.h>. I think the solution is to delete the versions in libcpu/page.h. Comments appreciated. ===== In file included from .././.././.././../rtems/c/src/lib/libbsp/powerpc/mvme5500/./../powerpc/shared/startup/pgtbl_setup.c:3:0: /home/joel/rtems-work/rtems-testing/rtems/rtems/bsps/powerpc/include/libcpu/page.h:22:0: warning: "PAGE_MASK" redefined #define PAGE_MASK (~ (PAGE_SIZE-1)) In file included from /data/home/joel/rtems-work/tools/5/powerpc-rtems5/include/sys/_cpuset.h:36:0, from /data/home/joel/rtems-work/tools/5/powerpc-rtems5/include/sys/cpuset.h:45, from /data/home/joel/rtems-work/tools/5/powerpc-rtems5/include/sys/_pthreadtypes.h:24, from /data/home/joel/rtems-work/tools/5/powerpc-rtems5/include/sys/types.h:239, from /data/home/joel/rtems-work/tools/5/powerpc-rtems5/include/sys/time.h:43, from /home/joel/rtems-work/rtems-testing/rtems/rtems/cpukit/include/rtems/score/thread.h:36, from /home/joel/rtems-work/rtems-testing/rtems/rtems/cpukit/include/rtems/score/heap.h:22, from /home/joel/rtems-work/rtems-testing/rtems/rtems/cpukit/include/rtems/rtems/types.h:26, from /home/joel/rtems-work/rtems-testing/rtems/rtems/cpukit/include/rtems.h:31, from .././.././.././../rtems/c/src/lib/libbsp/powerpc/mvme5500/./../powerpc/shared/startup/pgtbl_setup.c:1: /data/home/joel/rtems-work/tools/5/powerpc-rtems5/include/machine/param.h:70:0: note: this is the location of the previous definition #define PAGE_MASK (PAGE_SIZE - 1)					
#3358	20 months ago	fixed	lib/block	Sebastian Huber	Sebastian Huber	11 months ago
Summary	Deprecate rtems_disk_create_phys(), etc.					
Description	There are currently two implementations of a block device (disk). Deprecate the legacy rtems_disk_create_phys(), etc. implementation. Remove all RTEMS internal uses except in the block01 test. Add RTEMS_DEPRECATED attribute to API.					
#3374	19 months ago	fixed	tool	Joel Sherrill	Chris Johns	13 months ago
Summary	rtems-test does not honor --mail-from argument					
Description	This is on the master but may apply to other branches. \$ /home/joel/rtems-work/rtems-tooltester/rtems-test --rtems-tools=/home/joel/rtems-work/tools/5 --rtems-bsp=erc32 --log=run.log --mail --mail-from=joel@... --mail-to=build@... ./sparc-rtems5/c/erc32/testsuites/samples/base_sp/base_sp.exe error: no valid from address for mail The rtems-test command will work if you have a ~/.mailrc with something like this: set from="Joel Sherrill <joel@...>"					
#3375	19 months ago	fixed	build	Sebastian Huber	Sebastian Huber	13 months ago
Summary	Remove command line pre-processor defines					
Description	Command line defines defined by the build system make it difficult get a consistent view of the sources from other entities, e.g. static code analysis, code editors and reviews. Command line defines are currently used here:					

				c/src/lib/libbsp/mips/hurricane/Makefile.am:libbsp_a_CPPFLAGS = \$(AM_CPPFLAGS) -DRM52XX c/src/lib/libbsp/mips/rbt4938/Makefile.am:libbsp_a_CPPFLAGS = \$(AM_CPPFLAGS) -DTX49 c/src/lib/libbsp/mips/jmr3904/Makefile.am:libbsp_a_CPPFLAGS = \$(AM_CPPFLAGS) -DTX39 c/src/lib/libbsp/mips/mr3904/Makefile.am:libpppd_a_CPPFLAGS = \$(AM_CPPFLAGSebastian Huber Remove rtems-bin2c program	Sebastian Huber	17 months ago
Summary						
Description	The bin2c program (tools/build/bin2c.c) has no license information and is unused in the RTEMS build. General usability is questionable, for example a csrc/lib/libbsp/mips/mr3904/Makefile.am:libmhttpd_a_CPPFLAGS += -DNO_SSL -DNO_POPEN -DNO_CGI -DUSE_WEBSOCKET csrc/lib/libbsp/mips/mr3904/Makefile.am:libbrpc_CPPFLAGS = -D_RPC_read=read -D_RPC_write=write -D_RPC_close=close \ csrc/lib/libbsp/mips/mr3904/Makefile.am:libnetworking_CPPFLAGS = -DINET -DNFS \ csrc/lib/libbsp/mips/mr3904/Makefile.am:libc_CPPFLAGS = -DNO_POLL -DNOSELECT -D_BSD_VISIBLE -D_THREAD_SAFE csrc/lib/libbsp/mips/mr3904/Makefile.am:lib_CPPFLAGS = -DNO_POLL -DNOSELECT csrc/lib/libbsp/mips/mr3904/Makefile.am:lib_a_CPPFLAGS = \$(AM_CPPFLAGS) \$(lib_CPPFLAGS) -D_BSD_VISIBLE Remove rtems-eolstrip program					
Summary						
Description	The eolstrip program (tools/build/eolstrip.c) has no license information and is unused in the RTEMS build. General usability is questionable, for example a sed -i 's/[[:space:]]*\$/ ' file performs a similar task. Remove it.					
#3378	19 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	17 months ago
Summary	Remove unhex program					
Description	The unhex program (tools/build/unhex.c) has no license information and is unused in the RTEMS build. Users of HEX files should consider to use ELF instead. Remove it.					
#3379	19 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	17 months ago
Summary	Remove packhex program					
Description	The packhex program (tools/build/packhex.c) is exported to the standard RTEMS build infrastructure via the PACKHEX variable. It is used by some legacy BSPs. It as unclear license information: <pre>/* **** P A C K H E X . C **** */ * * Packhex is a hex-file compaction utility. It attempts to concatenate * hex records to produce more size-efficient packaging. * * Limitations: Input files must be correctly formatted. This utility * is not robust enough to detect hex-record formatting * errors. * * Published: May 1993 Embedded Systems Programming magazine * "Creating Faster Hex Files" * * URL: ESP magazine: http://www.embedded.com * Source Code: ftp://ftp.mfi.com/pub/espmag/1993/pakhex.zip * * Author: Mark Gringrich * * Compiler: Microsoft C 6.0 * cl /F 1000 packhex.c * *****/</pre> Move it to rtems-tools.					
#3380	19 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	17 months ago
Summary	Move rtems-bin2c program to rtems-tools					
Description	The rtems-bin2c program (tools/build/rtems-bin2c.c) is exported to the standard RTEMS build infrastructure via the BIN2C variable. Move it to rtems-tools.					
#3382	19 months ago	fixed	build	Chris Johns	Chris Johns	13 months ago
Summary	Testsuite Makefile merge to one per group of tests					
Description	Merge the nested Makefile.am files into a single file per group of tests. A single Makefile.am for all tests is not practical at this point in time because a test is an estimated 7 lines and with over 750 tests this means the file would be too big and a conflict hot spot.					
#3383	19 months ago	fixed	build	Chris Johns	Chris Johns	19 months ago
Summary	Require --enable-rtemsbsp with --enable-smp or --enable-multiprocessor					
Description	There is a limited number of BSPs that support SMP or MP so using the BSP wildcard will result in a failed build. Require the user provide a BSP.					
#3385	19 months ago	fixed	build	Chris Johns	Chris Johns	19 months ago
Summary	Generate an error if RTEMS's gcc is not found when the user runs configure					
Description	Generate an error when the user runs configure if one cannot be found in the path.					
#3386	19 months ago	invalid	admin	Chris Johns	Amar Takhar	13 months ago
Summary	Trac's git changeset browsing is suspect.					
Description	It is critical this interface works because we have moved to Trac for release notes and the release notes contain links to the changesets because we reference the tickets in the commits. Some requests work: 1. 900c40730dbec34cd7a6f1c03c80896951bf1b9c/rtems 2. d8de6b9dbe4ab1ef375ecce55e8bfb1028c5dd13/rtems 3. 9704efb4ec088a472842c9bc9bc46392685ebc806/rtems and others do not: a. 2afb22b7e1ebcbe40373ff7e0efae7d207c655a9/rtems Notes: • items 2. and 3. are either side of the changeset a. in the commit history of RTEMS. • Clicking on 3. and then the Next Changeset link also fails.					
#3389	19 months ago	fixed	config	Joel Sherrill		13 months ago
Summary	Warning flags have disappeared with recent autoconf changes					
Description	As of March 30, the compiler invocations had warnings flags. As of today (4/11), there are no warnings flag on most of the compiler invocations. Something has been lost in the updates.					
#3390	19 months ago	fixed	network/legacy	Sebastian Huber	Sebastian Huber	19 months ago

Summary	NFS: Remove support for cexp					
Description	There is some support for cexp and tests in the NFS client directory: cpukit/libfs/src/nfsclient/src/cexphep.c cpukit/libfs/src/nfsclient/src/dirutils.c cpukit/libfs/src/nfsclient/src/nfs.modini.c cpukit/libfs/src/nfsclient/src/nfsTest.c cpukit/libfs/src/nfsclient/src/rpcio.modini.c					
	There are also some *.rel files installed. This stuff is probably unused. If it is still in use it should move elsewhere, e.g. some general cexp support outside of the main RTEMS sources. Dead/untested code should not be present in the RTEMS code base.					
	See also: https://lists.rtems.org/pipermail/users/2018-April/032182.html					
Summary	#3392	19 months ago	fixed	tool/rsb	Chris Johns	Chris Johns 19 months ago
Summary	infinite loop in RSB's path when a prefix path is not writable					
Description	The code gets the <code>dirname()</code> of the path stepping up until there is no path however <code>dirname("/")</code> is <code>/</code> so the path never has a length of <code>0</code> .					
Summary	#3395	19 months ago	fixed	tool	Chris Johns	Chris Johns 19 months ago
Summary	rtems-ld does not remove executable when there is an output error					
Description	An error when outputting an executable does not clean up the file and leaves an incorrect format file.					
	This is happening with the beagle bone black BSP and test dl06.					
Summary	#3396	19 months ago	fixed	tool	Chris Johns	Chris Johns 19 months ago
Summary	rtems-ld does not handle R_ARM_V4BX relocation records					
Description	The R_ARM_V4BX does not have a symbol and this raised an error with dl06 with a ARMv7 instruction set when merging sections when creating a RAP image.					
	Ignore this relocation record.					
Summary	#3397	19 months ago	fixed	unspecified	Sebastian Huber	Sebastian Huber 19 months ago
Summary	The register keyword is deprecated in C++11					
Description	The following code gives a warning with GCC and -std=c++17:					
	<pre>void f(void) { register int i; }</pre>					
	<pre>test.cc: In function 'void f()': test.cc:3:15: warning: ISO C++1z does not allow 'register' storage class specifier [-Wregister] register int i; ^</pre>					
	Remove the use of the register keyword at least in the public header files for C++ compatibility.					
Summary	#3401	19 months ago	fixed	tool	Joel Sherrill	chrisj@... 13 months ago
Summary	dl06: tms570* Mixed LSB/MSB Error					
Description	ld-arm-tms570ls3137_hdk-rtems/arm-rtems5/c/tms570ls3137_hdk/testsuites/libtests' rtems-ld -r /home/joel/rtems-work/rtems-testing/rtems/build-arm-tms570ls3137_hdk-rtems/arm-rtems5/c/tms570ls3137_hdk -O rap -b dl06.pre -e rtems_main -s \ -o dl06.rap dl06-o1.o dl06-o2.o -lm					
	error: elf.check_file: /data/home/joel/rtems-work/tools/5/bin/./lib/gcc/arm-rtems5/7.3.0/./../././arm-rtems5/lib/libc.a:lib_a-_Exit.o@23760: Mixed data types not allowed (LSB/MSB).					
Summary	#3402	19 months ago	fixed	tool	Joel Sherrill	chrisj@... 13 months ago
Summary	dl06: mips hurricane Mixed Endian Error					
Description	Also occurs on rbt4925 and rbt4938					
	rtems-ld -r /home/joel/rtems-work/rtems-testing/rtems/build-mips-hurricane-rtems/mips-rtems5/c/hurricane -O rap -b dl06.pre -e rtems_main -s \ -o dl06.rap dl06-o1.o dl06-o2.o -lm					
	error: elf.check_file: /data/home/joel/rtems-work/tools/5/bin/./lib/gcc/mips-rtems5/7.3.0/./../././mips-rtems5/lib/libc.a:lib_a-_Exit.o@23298: Mixed data types not allowed (LSB/MSB).					
Summary	#3403	19 months ago	fixed	tool/rsb	Sebastian Huber	Sebastian Huber 19 months ago
Summary	RSB RTEMS tool set build is irreproducible					
Description	The RTEMS 5 tool set contains the RTEMS tools (rtems-tools). The version of the RTEMS tools is determined by the tool set build time since the current Git master branch is fetched. Instead use an explicit RTEMS tools version (similar to all other tools, e.g. Binutils, Newlib, GCC, GDB) to make the RTEMS tool set independent of the arbitrary build time.					
Summary	#3407	19 months ago	fixed	tool	Joel Sherrill	12 months ago
Summary	Move Gaisler.org and Gaisler.se hosted RSB patches to rtems.org					
Description	Jiri has suggested that the patches used in the RSB that are hosted by him be moved to rtems.org and the RSB patches link be changed.					
	This impacts at least qemu.					
Summary	#3410	18 months ago	fixed	arch/i386	Sebastian Huber	Sebastian Huber 18 months ago
Summary	Remove bin2boot program used by i386 BSPs					
Description	For which boot loader is this? Can it be removed?					
	The sources have no copyright information.					
Summary	#3411	18 months ago	fixed	arch/powerpc	Joel Sherrill	Sebastian Huber 18 months ago
Summary	qemuappc does not install linkcmds.base					
Description	examples-v2 fail to compile qemuappc because linkcmds.base is not installed.					
	They build OK for sparc/erc32. This must be a minor glitch from the build system changes.					
Summary	#3415	18 months ago	fixed	admin	Joel Sherrill	Chris Johns 13 months ago
Summary	Add examples and tests as components					
Description	It seems as if we should have tests and examples as components.					
Summary	#3417	18 months ago	fixed	tool	Chris Johns	Chris Johns 13 months ago
Summary	Add libdwarf to elftoolchain and provide a C++ wrapper					
Description	Update the elftoolchain and add libdwarf.					
	Provide a C++ framework to create reusable access to libdwarf.					
Summary	#3418	18 months ago	fixed	tool	Sebastian Huber	Sebastian Huber 18 months ago
Summary	Remove difftest and sorttimes test tools					

Description	Evaluation of test results and report generation should move to somewhere else, e.g. the RTEMS tester.					
#3419	18 months ago	fixed	network/legacy	Sebastian Huber	Sebastian Huber	18 months ago
Summary	Always build network services (tftps, ftpfs, ftpd, telnetd, libdebugger)					
Description	Always build network services (tftps, ftpfs, ftpd, telnetd, libdebugger) which only depend on the POSIX socket API (provided by Newlib header files) as support libraries. Remove them from libbsd. The network services must reside in dedicated libraries to avoid a cyclic dependency between libbsd.a and librtmscpu.a.					
#3421	18 months ago	wontfix	admin	Joel Sherrill	chrisj@...	13 months ago
Summary	New Trac components for Coverage and Trace					
Description	Both coverage and tracing are large enough areas that lumping them into tools or other random categories makes work on them harder to trac. Please add coverage and tracing. Coverage could be a subcategory of tools.T Tracing could be a standalone component. It has target and tool components.					
#3423	18 months ago	duplicate	admin	Joel Sherrill		18 months ago
Summary	examples-v2: m68k/powerpc BSPs undefined reference to _Thread_Life_action_handler					
Description	fat_ramdisk is failing to link on multiple m68k and powerpc BSPs. Errors below the list of BSPs m68k-av5282 m68k-gen68340 m68k-gen68360 m68k-gen68360_040 m68k-mcf5206elite m68k-mcf52235 m68k-mcf5225x m68k-mcf5235 m68k-mcf5329 m68k-mrm332 m68k-pgh360 m68k-uC5282 powerpc-mpc8260ads powerpc-qemuppc powerpc-qoriq_e6500_64 powerpc-ss555 [20/20] Processing rtrace: build/m68k-rtems5-av5282/filesystem/fat_ramdisk/init.c.4.o build/m68k-rtems5-av5282/filesystem/fat_ramdisk/fs-root-tar.c.4.o -> build/m68k-rtems5-av5282/filesystem/fat_ramdisk/fat_ramdisk.texe /home/joel/rtems-work/tools/5/bin/m68k-rtems5-gcc: /tmp/ccRjaaa.o: In function `__wrap__Thread_Life_action_handler': /home/joel/rtems-work/tools/5/bin/m68k-rtems5-gcc: /tmp/cckrhaaa.c:1248: undefined reference to `__Thread_Life_action_handler' /home/joel/rtems-work/tools/5/bin/m68k-rtems5-gcc: collect2: error: ld returned 1 exit status error: linking: Linker error					
#3424	18 months ago	fixed	examples	Joel Sherrill	Joel Sherrill	13 months ago
Summary	examples-v2: no MIPS BSPs pass configuration step					
Description	Checking for program 'ar' : /home/joel/rtems-work/tools/5/bin/mips-rtems5-ar Checking for program 'g++, c++' : /home/joel/rtems-work/tools/5/bin/mips-rtems5-g++ Checking for program 'ar' : /home/joel/rtems-work/tools/5/bin/mips-rtems5-ar Checking for program 'gas, gcc' : /home/joel/rtems-work/tools/5/bin/mips-rtems5-gcc Checking for program 'ar' : /home/joel/rtems-work/tools/5/bin/mips-rtems5-ar Compiler version (mips-rtems5-gcc) : 7.3.0 20180125 (RTEMS 5, RSB 6d9c77c77d271d1fc2dfe8493d6713930b52a6dd, Newlib 3.0.0) Checking for RTEMS CPU options header : started -> processing test results : 1 test failed One of the tests has failed, read config.log for more information (complete log in /data/home/joel/rtems-work/examples-v2/build/config.log) + check_fatal 1 'failed waf configure - examples-v2 on rbt4925'					
#3425	18 months ago	fixed	unspecified	Joel Sherrill		17 months ago
Summary	examples-v2: PowerPC fails to build fat_ramdisk					
Description	beatnik, gwlcfm, haleakala, mpc5566evb, mpc5566evb_spe, mpc5566evb_spe, mpc5643l_evb, mpc5668g, mpc5674f_ecu508_app, mpc5674f_ecu508_boot, mpc5674fevb, mpc5674fevb_spe, mpc5674f_rsm6, mvme3100, mvme3100, phycore_mpc5554, qemuprep-altivec, qemuprep [5/7] Compiling build/powerpc-rtems5-beatnik/filesystem/fat_ramdisk/fs-root.tar In file included from /home/joel/rtems-work/bsp-install//powerpc-rtems5/beatnik/lib/include/libcpu/powerpc-utility.h:40:0, from /home/joel/rtems-work/bsp-install//powerpc-rtems5/beatnik/lib/include/bsp/vectors.h:40, from /home/joel/rtems-work/bsp-install//powerpc-rtems5/beatnik/lib/include/bsp.h:27, from ../gdb/overwrite/rtems_init.c:7: /home/joel/rtems-work/bsp-install//powerpc-rtems5/beatnik/lib/include/rtems/powerpc/powerpc.h:283:2: error: #error "Unsupported CPU Model" #error "Unsupported CPU Model" ^~~~~~ In file included from /home/joel/rtems-work/bsp-install//powerpc-rtems5/beatnik/lib/include/libcpu/powerpc-utility.h:40:0, from /home/joel/rtems-work/bsp-install//powerpc-rtems5/beatnik/lib/include/bsp/vectors.h:40, from /home/joel/rtems-work/bsp-install//powerpc-rtems5/beatnik/lib/include/bsp.h:27, from ../hello/hello_world_c/test.c:21: /home/joel/rtems-work/bsp-install//powerpc-rtems5/beatnik/lib/include/rtems/powerpc/powerpc.h:283:2: error: #error "Unsupported CPU Model" #error "Unsupported CPU Model" ^~~~~~ Waf: Leaving directory `/data/home/joel/rtems-work/examples-v2/build/powerpc-rtems5-beatnik' Build failed					
#3432	18 months ago	wontfix	score	Joel Sherrill		14 months ago
Summary	Remove Simple SMP Priority Scheduler					
Description	This scheduler was the first SMP scheduler added. It was created to have an easy SMP scheduler to debug. This was especially important when all of the SMP modifications and support were new. A Simple Scheduler has a use case as a low resource alternative for small uniprocessor systems. But the SMP variant just doesn't seem to have a good use case. If you have an SMP system, the application is almost certain to have enough resources where the more complicated data structures used by the other schedulers wouldn't be a burden. The Deterministic Priority Scheduler uses ~3K for FIFO with 256 priorities. This should not be an issue for an SMP system. This ticket is a proposal to remove this as no longer having a use case.					
#3433	17 months ago	fixed	arch/riscv	Sebastian Huber	Sebastian Huber	10 months ago
Summary	Add SMP support for RISC-V					
Description	The project includes the following tasks: • add CPU counter support • add context validation code • add BSP support for Qemu • add support for device tree provided by Qemu • fix all unexpected test suite failures running on Qemu • add build system support to enable an SMP build • add SMP implementation					
#3434	17 months ago	fixed	config	Sebastian Huber	Sebastian Huber	15 months ago
Summary	Add CONFIGURE_MINIMUM_POSIX_THREAD_STACK_SIZE configuration option					
#3435	17 months ago	fixed	config	Sebastian Huber	Sebastian Huber	14 months ago
Summary	Add test case for CONFIGURE_BSP_PREREQUISITE_DRIVERS configuration option					
Description	This configuration option is untested					

#3436	17 months ago	fixed	dev	Sebastian Huber	Sebastian Huber	16 months ago
Summary	Remove clock driver Clock_driver_support_shutdown_hardware() hook					
Description	Most applications use a clock driver and most BSPs use the clock driver framework provided by clockimpl.h. This framework offers a Clock_driver_support_shutdown_hardware() hook which is used like this. <pre>#ifndef Clock_driver_support_shutdown_hardware /** * @brief Clock_exit * * This routine allows the clock driver to exit by masking the interrupt and * disabling the clock's counter. */ void Clock_exit(void) { Clock_driver_support_shutdown_hardware(); /* do not restore old vector */ } #endif ... #endif Clock_driver_support_shutdown_hardware atexit(Clock_exit); #endif</pre> The aim is to stop clock tick interrupts at some late point in the exit() procedure. The use of atexit() pulls in malloc() which pulls in errno. It is incompatible with the intention of the CONFIGURE_DISABLE_NEWLIB_REENTRANCY configuration option. The exit() function must be called from thread context, so accompanied clock tick interrupts should cause no harm. On the contrary, someone may assume a normal operating system operation, e.g. working timeouts. Remove the superfluous Clock_driver_support_shutdown_hardware() hook.					
#3437	17 months ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	17 months ago
Summary	Replace use of printk() in free() with a fatal error					
Description	An invalid heap usage such as a double free is usually a fatal error. Replace the use of printk() in free() with a fatal error. Introduce a new fatal error source for heap errors.					
#3443	17 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	17 months ago
Summary	Remove shgen program					
Description	Rename it to rtems-shgen.					
#3444	17 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	16 months ago
Summary	Remove nios2gen program					
Description	Rename it to rtems-nios2gen					
#3445	17 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	17 months ago
Summary	Remove multigen script					
Description	This script is unused and out dated.					
#3446	17 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	17 months ago
Summary	Remove cvsignore-add.sh script					
Description	This script is obsolete since moving to Git.					
#3447	17 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	17 months ago
Summary	Remove rtems-testsuite-autostuff script					
Description	It is not used.					
#3451	17 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	17 months ago
Summary	Remove size_rtems script					
Description	This script is horribly out of date. A new version could be placed in RTEMS tools if necessary.					
#3452	17 months ago	fixed	arch/riscv	Sebastian Huber	Sebastian Huber	15 months ago
Summary	Update RISC-V tool chain to support standard 64-bit chips					
Description	First step is to include this bug fix in Binutils: https://sourceware.org/bugzilla/show_bug.cgi?id=23244 Second step is a multilib update. Third step is a merge of the riscv32 and riscv64 tool chains into a single riscv tool chain.					
#3453	17 months ago	fixed	arch/riscv	Sebastian Huber	Sebastian Huber	17 months ago
Summary	Add RISC-V GDB					
#3454	17 months ago	fixed	doc	Vidushi Vashishth	Vidushi Vashishth	8 months ago
Summary	Tracing Framework Documentation in User Manual					
Description	1) Write up a new chapter in the user manual regarding the existing tracing framework in RTEMS. Include a description of the components of the tracing framework and the various techniques used to generate traces currently. Add explanatory demonstrations and samples. 2) Expand the chapter to include CTF generation (currently under development) as it evolves.					
#3455	17 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	17 months ago
Summary	Remove install-if-change script					
Description	The last installed tool in RTEMS repository is the install-if-change script. This script does the same as the standard "install" program with an additional feature to install variants via the -V command line option. This script is used by the standard Makefile support: <pre>c/src/make/host.cfg.in:INSTALL_CHANGE=\$(PROJECT_BIN)/install-if-change</pre> The INSTALL_CHANGE is used by: <pre>c/src/make/host.cfg.in:ifndef INSTALL_CHANGE c/src/make/host.cfg.in:INSTALL_CHANGE=\$(PROJECT_BIN)/install-if-change c/src/make/host.cfg.in:INSTALL_CHANGE=\$(INSTALL_CHANGE) -V "\$(LIB_VARIANT)"</pre>					

	Is the variant stuff still supported?					
	I would remove the support for it and replace the "install-if-change" script with the standard "install" program.					
#3458	17 months ago	fixed	tool	Chris Johns	Chris Johns <chrisj@...>	17 months ago
Summary	rtems-test should not use the env PATH to find covoar					
Description	The <code>rtems-test</code> command should know where <code>covoar</code> is when invoking it. It cannot use the environment's path. The path can contain invalid or outdated versions with subtle issues that could be hard to find.					
	There should be no need to run install to use and test <code>rtems-test</code> with coverage.					
	The <code>rtems-test</code> python code for running the tests knows where it is and adjusts. For example using an absolute path to <code>rtems-tests</code> in a build directly results in it being able to find the development tree <code>rtemstoolkit</code> and configuration data. The command needs to be taught to find the development version of <code>covoar</code> .					
	Note, currently <code>covoar</code> needs external tools and this is currently using the environment's path however there is work underway to remove this dependence so there case does not need to be handled.					
#3459	17 months ago	fixed	score	Sebastian Huber	Sebastian Huber	8 months ago
Summary	Rework initialization and interrupt stack support					
Description	We need an initialization stack to run the sequential system initialization before multitasking is enabled. The system initialization is done with interrupts disabled.					
	We need an interrupt stack for interrupt processing. This helps to avoid a per thread stack overhead for interrupt processing. The size for interrupt stack is application dependent, e.g. maximum interrupt nest level, stack demands of interrupt handlers.					
	The initialization and interrupt stacks are needed for each processor in the system.					
	Since interrupts are disabled during the sequential system initialization we can re-use the interrupt stack for the initialization stack. This is important for low end targets, with very limited RAM sizes. We need the initialization stack before a proper C run-time environment is set up e.g. we cannot assume that the access to global data is available. The stack memory area begin and size should be available via global symbols (named addresses). On some BSPs, e.g. ARM, this is done via the linker command file.					
	It should be possible to set the stack size via the CONFIGURE_INTERRUPT_STACK_SIZE configuration option and not via some magic stuff in linker command files.					
	Many BSPs set the BSS area to zero during system initialization. Thus, the initialization stack must not be contained in the BSS area.					
	The interrupt stack implementation is currently controlled by the following CPU port defines:					
	<pre>/** * Does RTEMS manage a dedicated interrupt stack in software? * * If TRUE, then a stack is allocated in @ref _ISR_Handler_initialization. * If FALSE, nothing is done. * * If the CPU supports a dedicated interrupt stack in hardware, * then it is generally the responsibility of the BSP to allocate it * and set it up. * * If the CPU does not support a dedicated interrupt stack, then * the porter has two options: (1) execute interrupts on the * stack of the interrupted task, and (2) have RTEMS manage a dedicated * interrupt stack. * * If this is TRUE, @ref CPU_ALLOCATE_INTERRUPT_STACK should also be TRUE. * * Only one of @ref CPU_HAS_SOFTWARE_INTERRUPT_STACK and * @ref CPU_HAS_HARDWARE_INTERRUPT_STACK should be set to TRUE. It is * possible that both are FALSE for a particular CPU. Although it * is unclear what that would imply about the interrupt processing * procedure on that CPU. * * Port Specific Information: * * XXX document implementation including references if appropriate */ #define CPU_HAS_SOFTWARE_INTERRUPT_STACK FALSE</pre>					
	<pre>/** * Does this CPU have hardware support for a dedicated interrupt stack? * * If TRUE, then it must be installed during initialization. * If FALSE, then no installation is performed. * * If this is TRUE, @ref CPU_ALLOCATE_INTERRUPT_STACK should also be TRUE. * * Only one of @ref CPU_HAS_SOFTWARE_INTERRUPT_STACK and * @ref CPU_HAS_HARDWARE_INTERRUPT_STACK should be set to TRUE. It is * possible that both are FALSE for a particular CPU. Although it * is unclear what that would imply about the interrupt processing * procedure on that CPU. * * Port Specific Information: * * XXX document implementation including references if appropriate */ #define CPU_HAS_HARDWARE_INTERRUPT_STACK TRUE</pre>					
	<pre>/** * Does RTEMS allocate a dedicated interrupt stack in the Interrupt Manager? * * If TRUE, then the memory is allocated during initialization. * If FALSE, then the memory is allocated during initialization. * * This should be TRUE is CPU_HAS_SOFTWARE_INTERRUPT_STACK is TRUE. * * Port Specific Information: * * XXX document implementation including references if appropriate */ #define CPU_ALLOCATE_INTERRUPT_STACK TRUE</pre>					
	Do the following steps to unify and simplify the initialization and interrupt stack support.					
	1. Add RTEMS_DECLARE_GLOBAL_SYMBOL() and RTEMS_DEFINE_GLOBAL_SYMBOL() macros to basedefs.h, to allow a global symbol definition via C code, e.g. in confdefs.h, to make the interrupt stack size available to the low level initialization code. 2. Add a special input section ".rtemsstack" to the linker command files to allow a placement of the interrupt stacks. The BSPs can provide the optimal memory location for this section, e.g. on-chip RAM, tightly-coupled memory.					
	This makes the CPU_HAS_SOFTWARE_INTERRUPT_STACK and CPU_HAS_HARDWARE_INTERRUPT_STACK CPU port defines superfluous, since the low level initialization code has all information available via global symbols.					
	This makes the CPU_ALLOCATE_INTERRUPT_STACK CPU port define superfluous, since the interrupt stacks are allocated by confdefs.h for all architectures. There is no need for BSP-specific linker command file magic.					

The optional <code>_CPU_Interrupt_stack_setup()</code> is still useful to customize the registration of the interrupt stack area in the per-CPU information.						
#3460	17 months ago	fixed	tool/gdb	Chris Johns	Chris Johns	9 months ago
Summary	GDB 8 SIS LEON2 LEON3 Patches					
Description	Jiri patch for gdb-8.0.1.					
#3461	17 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	17 months ago
Summary	Canadian cross compilation of RTEMS tools not supported for x86_64-w64-mingw32					
#3463	17 months ago	fixed	tool	Chris Johns		13 months ago
Summary	Convert covoar to use DWARF function data					
Description	Convert covoar to use DWARF function data for the executable symbol table. Objdump is still needed for the instruction decode which is needed to find the instruction address boundaries.					
#3465	16 months ago	fixed	fs/jffs2	Sebastian Huber	Sebastian Huber	13 months ago
Summary	Integrate all changes from Linux v3.11 to v4.17 made in the JFFS2 sources					
Description	The original import version of the JFFS2 sources was Linux v3.11 (September 2013). Update the JFFS2 sources to Linux v4.17.					
	The Git command to generate the patches is:					
	<pre>git format-patch v3.11..v4.17 -- include/uapi/linux/jffs2.h fs/jffs2/LICENCE fs/jffs2/acl.h fs/jffs2/build.c fs/jffs2/compr.c fs/jffs2/compr.h fs/jffs2/compr_rtime.c fs/jffs2/compr_rubin.c fs/jffs2/compr_zlib.c fs/jffs2/debug.c fs/jffs2/debug.h fs/jffs2/erase.c fs/jffs2/gc.c fs/jffs2/jffs2_fs_i.h fs/jffs2/jffs2_fs_sb.h fs/jffs2/nodelist.c fs/jffs2/nodelist.h fs/jffs2/nodemgmt.c fs/jffs2/read.c fs/jffs2/readnode.c fs/jffs2/scan.c fs/jffs2/summary.h fs/jffs2/write.c fs/jffs2/xattr.h</pre>					
	We need a source file transformation in the patches:					
	<pre>sed -i 's%/fs/jffs2%/cpukit/libfs/src/jffs2/src%g' 00*</pre>					
Description	To support the first commit:					
	<pre>From e8bbeeb755a0777cf0f814b07739f9225642d65c Mon Sep 17 00:00:00 2001 From: Cody P Schafer <cody@linux.vnet.ibm.com> Date: Thu, 23 Jan 2014 15:56:11 -0800 Subject: [PATCH 01/24] fs/jffs2: use rbtree postorder iteration helper instead of opencoding Use rbtree_postorder_for_each_entry_safe() to destroy the rbtree instead of opencoding an alternate postorder iteration that modifies the tree Signed-off-by: Cody P Schafer <cody@linux.vnet.ibm.com> Cc: Michel Lespinasse <walken@google.com> Cc: Jan Kara <jack@suse.cz> Cc: David Woodhouse <dwmw2@infradead.org> Signed-off-by: Andrew Morton <akpm@linux-foundation.org> Signed-off-by: Linus Torvalds <torvalds@linux-foundation.org></pre>					
	we have to a postorder iterator to the red-black tree support code.					
	The remaining 23 patches are easy to apply.					
	#3471	16 months ago	fixed	lib	Sebastian Huber	Sebastian Huber
Summary	Update libfdt as of date 2018-07-09					
Description	The initial import of libfdt was in 2015. Update it to the version as of date 2018-07-09.					
#3472	16 months ago	fixed	network/libbsd	Sebastian Huber	Sebastian Huber	9 months ago
Summary	Update of libbsd to a version close to the FreeBSD 12 release					
Description	The FreeBSD project is about to prepare the FreeBSD 12 release soon:					
	https://www.freebsd.org/releases/12.0R/schedule.html					
Summary	Use this time frame to update the libbsd stepwise to a FreeBSD trunk version close to the FreeBSD 12 release.					
	#3475	15 months ago	fixed	score	Sebastian Huber	Sebastian Huber
Summary	Add RTEMS_PREDICT_TRUE() and RTEMS_PREDICT_FALSE() for static branch prediction hints					
Description	Add macros to <rtems/score/basedefs.h> for the GNU extension builtin_expect(). Use RTEMS_PREDICT_TRUE() and RTEMS_PREDICT_FALSE() similar to the FreeBSD predict_true() and predict_false(). Alternatives are the Linux likely() and unlikely() or directly the GCC builtin_expect(), however, the FreeBSD names seem to be the most easy to understand.					
#3478	15 months ago	fixed	arch/riscv	Joel Sherrill	Sebastian Huber	14 months ago
Summary	RISCV BSP Tester Cleanup Needed					
Description	rtems-tools currently has the following bsp testing configurations:					
	<pre>\$ find . -name "**riscv*.ini" ./tester/rtems/rtems-bsps-riscv64.ini ./tester/rtems/testing/bsps/riscv64_generic.ini ./tester/rtems/testing/bsps/riscv_generic.ini ./tester/rtems/rtems-bsps-riscv32.ini</pre>					
	rtems-bsps.ini does not include the riscv.					
	tester/rtems/rtems-bsps-tiers.ini does not list the riscv					
#3480	15 months ago	fixed	config	Sebastian Huber	Sebastian Huber	12 months ago
Summary	CONFIGURE_MINIMUM_TASK_STACK_SIZE may affect CONFIGURE_INTERRUPT_STACK_SIZE					
Description	In case an application defines CONFIGURE_MINIMUM_TASK_STACK_SIZE, then this may change the CONFIGURE_INTERRUPT_STACK_SIZE as well:					
	<pre>#ifndef CONFIGURE_INTERRUPT_STACK_SIZE # ifdef BSP_INTERRUPT_STACK_SIZE # define CONFIGURE_INTERRUPT_STACK_SIZE BSP_INTERRUPT_STACK_SIZE # else # define CONFIGURE_INTERRUPT_STACK_SIZE CONFIGURE_MINIMUM_TASK_STACK_SIZE # endif #endif</pre>					
	I think this is not what a user expects.					
#3482	15 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	15 months ago

Summary	Relax the buffer alignment required by rtems_partition_create()					
Description	Buffer alignment required by rtems_partition_create() is too strict since it is checked via _Addresses_Is_aligned() which is <pre>RTEMS_INLINE_ROUTINE bool _Addresses_Is_aligned (const void *address) { #if (CPU_ALIGNMENT == 0) return true; #else return (((uintptr_t)address % CPU_ALIGNMENT) == 0); #endif }</pre> The CPU_ALIGNMENT must take long double and vector data type alignment requirements into account. For the partition maintenance only pointer alignment is required. The user should ensure that its buffer is suitable for the items it wants to manage. The user should not be burdened to provide buffers with the maximum architecture alignment, e.g. why need a 16 byte aligned buffer if you want to manage items with 4 byte integers only?					
#3484	15 months ago	fixed	fs/rfs	Sebastian Huber	Sebastian Huber	15 months ago
Summary	RFS: Remove stray call of rtems_disk_release() in rtems_rfs_buffer_sync()					
Description	The function rtems_rfs_buffer_sync() erroneously calls rtems_disk_release(). This screws up the reference counting of the disk.					
#3486	15 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	15 months ago
Summary	Use uintptr_t and size_t instead of uint32_t in rtems_partition_create()					
Description	Use uintptr_t to specify the length of the partition buffer area instead of uint32_t. This is in line with rtems_region_create(). On 64-bit targets, the length may exceed 4GiB. Use size_t for the buffer size, since on some targets the single object size is less than the overall address range, e.g. m32c sizeof(uintptr_t) > sizeof(size_t).					
#3488	15 months ago	fixed	config	Sebastian Huber	Sebastian Huber	14 months ago
Summary	Remove CONFIGURE_HAS_OWN_MOUNT_TABLE					
Description	RTEMS has the configuration option CONFIGURE_HAS_OWN_MOUNT_TABLE since 1999. This configuration option is broken since RTEMS 4.11. Remove this broken configuration option.					
#3489	15 months ago	fixed	config	Sebastian Huber	Sebastian Huber	14 months ago
Summary	Obsolete CONFIGURE_HAS_OWN_CONFIGURATION_TABLE					
Description	Obsolete the CONFIGURE_HAS_OWN_CONFIGURATION_TABLE configuration option. The RTEMS configuration should be done via explicit configuration options to allow more freedom for implementation changes.					
#3490	15 months ago	fixed	config	Sebastian Huber	Sebastian Huber	7 months ago
Summary	Remove CONFIGURE_HAS_OWN_CONFIGURATION_TABLE					
Description	This configuration option was obsoleted in RTEMS 5.1.					
#3491	15 months ago	fixed	posix	Sebastian Huber	Sebastian Huber	14 months ago
Summary	Align mprotect() prototype with POSIX					
Description	The correct prototype is: <pre>int mprotect(void *, size_t, int);</pre>					
#3496	15 months ago	fixed	score	Sebastian Huber	Sebastian Huber	15 months ago
Summary	Remove superfluous interrupt enable in _Thread_Dispatch_enable()					
Description	The _Thread_Dispatch_enable() contains a superfluous interrupt enable. This bug had probably no effect since the interrupt enable is idempotent on all CPU ports. <pre>RTEMS_INLINE_ROUTINE void _Thread_Dispatch_enable(Per_CPU_Control *cpu_self) { uint32_t disable_level = cpu_self->thread_dispatch_disable_level; if (disable_level == 1) { ISR_Level level; _ISR_Local_disable(level); if (cpu_self->dispatch_necessary #if defined(RTEMS_SCORE_ROBUST_THREAD_DISPATCH) !_ISR_Is_enabled(level) #endif) { _Thread_Do_dispatch(cpu_self, level); <-- This function enabled interrupts } else { cpu_self->thread_dispatch_disable_level = 0; _Profiling_Thread_dispatch_enable(cpu_self, 0); } _ISR_Local_enable(level); <-- Here we enable it again } else { _Assert(disable_level > 0); cpu_self->thread_dispatch_disable_level = disable_level - 1; } }</pre>					
#3498	15 months ago	fixed	doc	Jens Schweikhardt	Sebastian Huber	15 months ago
Summary	Command and Variable Index is empty					
Description	The Command and Variable Index, https://docs.rtems.org/branches/master/cpu-supplement/command.html does not contain any commands or variables. If this chapter does not apply to RTEMS it should not be generated. If it does apply, it should contain what its title promises.					
#3499	15 months ago	fixed	doc	Jens Schweikhardt	Sebastian Huber	15 months ago
Summary	The "Index" chapter is empty					
Description	The "Index" chapter, https://docs.rtems.org/branches/master/cpu-supplement/genindex.html is empty. This chapter should contain a usable and helpful index or not be generated at all.					
#3500	15 months ago	fixed	tool	Chris Johns	Chris Johns <chrisj@...>	15 months ago
Summary	Change rtems_waf's RTEMS path check from <code>bin</code> to <code>share/rtems<version></code>					
Description	Currently <code>rtems_waf</code> checks for a <code>bin</code> directory in the RTEMS path. There is no <code>bin</code> directory any more so this test needs to be changed to <code>share/rtems<version></code> .					

<https://devel.rtems.org/wiki/Release//5/5.1>

<https://devel.rtems.org/wiki/Release//5/5.1>

Fix issues raised by Coverity Scan for Telnet server						
#3531	13 months ago	fixed	unspecified	Joel Sherrill	Joel Sherrill	13 months ago
Summary	Add POSIX Attribute Reports for More Than Scheduler (examples-v2)					
Description	Add programs to report default attributes for various POSIX objects including barriers, condition variables, message queues, mutexes, pthreads, and rwlocks. The programs should be able to run on any POSIX host and report what it uses for object attribute defaults.					
	Object attribute defaults are unspecified by POSIX. The portable practice is to explicitly set every attribute. These programs allow one to probe and compare various operating system implementations.					
#3532	13 months ago	fixed	tool/rsb	Chris Johns	Chris Johns	5 months ago
Summary	RSB source only download is host specific					
Description	The RSB source only download is host specific. Configurations for builds can restrict sources or patches by host to work around specific host issues. Currently a source only download is host specific because the host check is based on the host the RSB is being run on.					
	The release process uses source only downloading to create the complete set of sources in a release. This issue means some host specific source may not be captured.					
	I am yet to figure how to resolve this issue because the download logic is driven by the configuration scripts and this type of logic exists in configuration files such as <code>rtems-gcc-7.3.0-newlib-d13c84eb07e35984bf7a974cd786a6cdac29e6b9.cfg</code> :					
	<pre>%if %{_build_os} == freebsd %{_build_os} == darwin %patch add gcc --rsb-file=freebsd-libgcc-sed-fix.patch -p0 https://gcc.gnu.org/bugzilla/attachment.cgi?id=41380 %hash sha256 freebsd-libgcc-sed-fix.patch 8a11bd619c2e55466688e328da00b387d02395c1e8ff4a99225152387a1e60a4 %endif</pre>					
Description	The simpler construct in <code>rtems-tools-common-1.cfg</code> of:					
	<pre>%ifos win32 mingw ming32 SB_BUILD_ROOT_WAF=\$SB_BUILD_ROOT\$(echo %{_prefix} cut -c 1-2) %else SB_BUILD_ROOT_WAF=\$SB_BUILD_ROOT %endif</pre>					
is easier to manage as the <code>%ifos</code> logic can always return <code>True</code> however the <code>%else</code> path also need to be followed and this could break the logic in a configuration file. Yes, the example is not about sources or patches however it shows what could be used. I do not think creating a new variable such as <code>%{download_only}</code> and adding logic to the configuration file will help, for example:						
<pre>%if %{download_only} %{_build_os} == freebsd %{_build_os} == darwin %patch add gcc foobar-bsd.patch %else %patch add gcc foobar-gnu.patch %endif</pre>						
We require the logic to follow the <code>%if True</code> path and the <code>%else</code> path.						
#3533	13 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	13 months ago
Summary	Add <code>rtems_task_exit()</code>					
Description	The <code>rtems_task_delete(RTEMS_SELF)</code> function does not return. In order to aid compilers and static analysis tools provide an <code>rtems_task_exit()</code> function which can be specified as a no return function.					
	<pre>void rtems_task_exit(void) RTEMS_NO_RETURN;</pre>					
	This is similar to the POSIX equivalent.					
<pre>void pthread_exit (void * __value_ptr) __dead2;</pre>						
#3535	13 months ago	fixed	lib	Sebastian Huber	Sebastian Huber	13 months ago
Summary	Remove <code>stdin</code> , <code>stdout</code> , <code>stderr</code> convenience routines for CEXP					
Description	These functions should be moved to a general CEXP support.					
#3536	13 months ago	fixed	tool	Chris Johns	Chris Johns	13 months ago
Summary	Move RTEMS configuration data to a common <code>config</code> directory					
Description	Move the <code>rtems-bsp-builder</code> configuration files to a common area in the RTEMS Tools project and create an <code>rtems.py</code> module to handle the configuration. This allows a number of tools access to the <code>arch/bsp</code> data.					
	In time this directory of data can move into the <code>rtems.git</code> repo.					
#3537	13 months ago	fixed	tool	Chris Johns	Chris Johns	10 months ago
Summary	RSB and RTEMS Tools Support for python2 and python3					
Description	Upstream python does not create a <code>python</code> command any more and creates <code>python2</code> and <code>python3</code> . Distributions and operating systems are starting to ship without the <code>python</code> command.					
The RSB and RTEMS Tools python commands need to be updated and tested so they run on Python2 and Python3 and support added to use the available commands.						
#3538	13 months ago	fixed	doc	Joel Sherrill	Joel Sherrill	13 months ago
Summary	Classic API Barrier Wait Section Title Has Wrong Name					
Description	The section title says obtain not wait.					
Likely also applies to 4.11.						
#3539	13 months ago	fixed	score	Sebastian Huber	Sebastian Huber	13 months ago
Summary	Remove <code>CPU_PROVIDES_IDLE_THREAD_BODY</code>					
Description	Remove the <code>CPU_PROVIDES_IDLE_THREAD_BODY</code> option to avoid unnecessary conditional compilation.					
#3542	13 months ago	fixed	lib	Sebastian Huber	Sebastian Huber	13 months ago
Summary	Remove <code>keep_stdio</code> feature from Telnet service					
Description	The Telnet service started via <code>rtems_telnetd_start()</code> has a <code>keep_stdio</code> feature. This just a task and executes the command function in a loop. For this kind of service we do not library support. This can be done by an application task on its own. Remove this functionality and provide only the real Telnet services.					
#3543	13 months ago	fixed	lib	Sebastian Huber	Sebastian Huber	13 months ago
Summary	Change Telnet server to allocate most resources during initialization					
Description	The Telnet server currently creates the resources needed for a client connection on demand. Allocate most resources during initialization to avoid sporadic resource shortage issues.					
#3545	13 months ago	fixed	lib	Sebastian Huber	Sebastian Huber	12 months ago
Summary	Support <code>O_DIRECTORY</code> <code>open()</code> flag					
Use this flag in <code>opendir()</code> .						

Descripti on	#3546	13 months ago	fixed	lib	Sebastian Huber	Sebastian Huber	12 months ago
Summar y	Support O_NOFOLLOW open() flag						
Descripti on	#3547	13 months ago	fixed	lib	Sebastian Huber	Sebastian Huber	12 months ago
Summar y	Support O_CLOEXEC open() flag						
Descripti on	This is a POSIX flag. Make sure its use causes no open failure.						
#3549	13 months ago	fixed	arch/powerpc	Sebastian Huber	Sebastian Huber		13 months ago
Summar y	Obsolete powerpc/virtex BSP						
Descripti on	This BSP is quite old (was added 1995), unmaintained and likely without users: https://lists.rtems.org/pipermail/users/2018-September/032557.html						
#3551	13 months ago	fixed	lib	Sebastian Huber	Sebastian Huber		12 months ago
Summar y	Move default configuration to separate library						
Descripti on	An RTEMS application default configuration is contained in cpukit/libmisc/dummy/default-configuration.c. This default configuration is contained in librtmscpu.a. This has at least two problems: 1. Application configuration errors may pull in the default configuration which in turn leads to multiply define symbols error. This is quite confusing. You have to consult the linker map file to figure out what cased the pull in of the default configurations. You need to know what a linker map file is and how you generate it with your build system. This is not very user friendly. 2. It prevents the use of default configuration items for each subsystem in librtmscpu.a. This can be used to reduce the size of the configuration itself. Proposed change: Move the default configuration to a separate library, e.g. librtmsdefaultconfig.a.						
#3553	13 months ago	fixed	build	Joel Sherrill			12 months ago
Summar y	rtems-libbsd Missing waf in Top Directory						
Descripti on	At least examples-v2 and rtems-libbsd use waf to build. examples-v2 has a copy of waf known to work for the users' convenience. rtems-libsd is missing one. Add one to rtems-libbsd. Also (if there are other repos using waf), make sure they have a copy of waf also.						
#3554	13 months ago	fixed	network/libbsd	Joel Sherrill	Sebastian Huber		9 months ago
Summar y	rtems-libbsd README.waf Needs an Update Sweep						
Descripti on	It is out of date at least by mentioning 4.12 instead of 5. If there are other nits or issues, they need to be addressed while updating the release info.						
#3555	13 months ago	fixed	admin	Amar Takhar	Amar Takhar		13 months ago
Summar y	IRC bots need to be registered to join #rtems						
Descripti on	Due to the spam on Freenode only registered users can join #rtems. The bots both need accounts now.						
#3557	13 months ago	fixed	admin	Amar Takhar	Amar Takhar		13 months ago
Summar y	Test ticket						
Descripti on	Using this as a test ticket to test out my fix.						
#3558	13 months ago	fixed	admin	Amar Takhar	Amar Takhar		13 months ago
Summar y	Update TracSpamFilter?						
Descripti on	Updated to the latest Trac Spam Filter and upgraded captcha to v2 to avoid any errors. This was reported a while back and should fix any issues.						
	There are more please open a new ticket.						
#3559	13 months ago	fixed	admin	Amar Takhar	Amar Takhar		13 months ago
Summar y	Fix NavAdd? plugin.						
Descripti on	I had no idea but this had gotten removed in the last upgrade I've re-added it. This makes a few changes to the navigation: • "New Ticket" now goes to /wiki/NewTicket • There is a new button "New Ticket (direct)" in the upper right for those who want to directly go to creating a ticket. • "My Tickets" used to go to a query but now goes to the new wiki:MyTickets page. These changes existed years ago when NavAdd? was working I opened this ticket in case anyone has complaints about it coming back if not I will close it in a few days.						
#3560	13 months ago	fixed	admin	Amar Takhar	Amar Takhar		13 months ago
Summar y	Fix FlexibleAssignTo?						
Descripti on	When we first went to trac we had restrictions on the 'owner' to developers only. When track was upgraded this broke completely but all the code to handle this was already in place. I took the time to fix it today so we have dropdowns again. I've created this ticket to see if anyone has an issue with this should we keep it? Drop it? I know it's been years but it was our original choice. See any ticket the 'reassign to' and on a new ticket the 'assign to' is now a dropdown. These are based on trac permissions so we can always add more if we need it but it really should be restricted to having a project member be the owner so we can ensure tickets are closed and sorted properly.						
#3561	13 months ago	fixed	admin	Amar Takhar	Amar Takhar		11 months ago
Summar y	Migrate to CommitTicketUpdater?						
Descripti on	The old script was ancient and outdated. I've now killed it off and moved to the internal system described here: https://trac.edgewall.org/wiki/CommitTicketUpdater This should handle all scenarios if it does not please let me know. I will leave this ticket open for a week or so.						
#3562	13 months ago	fixed	tool/rsb	Chris Johns	Chris Johns		12 months ago
Summar y	Use a short paths for the RSB temporary build path on Windows						
Descripti on	The <code>%{_tmproot}</code> path is currently based on a <code>BuildRoot</code> setting in the build configuration files. The line is: BuildRoot: %{_tmppath}/%{name}-root-%{_id_u} -n This is for a shared <code>\$TEMP</code> path plus the name is not shortened so on Windows these paths become long. Remove the <code>BuildRoot</code> from all configuration files and add support for a shortened temporary path. Windows needs short paths due to the 256 max. path length issue.						
#3568	12 months ago	fixed	tool/rsb	Sebastian Huber	Chris Johns		10 months ago
Summar y	RSB: UnboundLocalError?: local variable 'build_max_size_human' referenced before assignment						

../source-builder/sb-set-builder --prefix=/build/rtems/5 5/rtems-or1k

Description

```
...
config: tools/rtems-gcc-4.9.3-newlib-08eab6396f678cf5e5968acaed0bae9fd129983b.cfg
package: or1k-rtems5-gcc-4.9.3-newlib-08eab6396f678cf5e5968acaed0bae9fd129983b-x86_64-linux-gnu-1
warning: gcc-4.9.3-or1k.patch: no hash found
building: or1k-rtems5-gcc-4.9.3-newlib-08eab6396f678cf5e5968acaed0bae9fd129983b-x86_64-linux-gnu-1
error: building or1k-rtems5-gcc-4.9.3-newlib-08eab6396f678cf5e5968acaed0bae9fd129983b-x86_64-linux-gnu-1
Build FAILED
See error report: rsb-report-or1k-rtems5-gcc-4.9.3-newlib-08eab6396f678cf5e5968acaed0bae9fd129983b-x86_64-linux-gnu-1.txt
error: building or1k-rtems5-gcc-4.9.3-newlib-08eab6396f678cf5e5968acaed0bae9fd129983b-x86_64-linux-gnu-1
Mailing report: build@rtems.org
Traceback (most recent call last):
  File "../source-builder/sb/cmd-set-builder.py", line 26, in <module>
    setbuilder.run()
  File "/scratch/git-rtems-source-builder/source-builder/sb/setbuilder.py", line 619, in run
    b.build(deps, mail = mail)
  File "/scratch/git-rtems-source-builder/source-builder/sb/setbuilder.py", line 530, in build
    body += 'Maximum build usage: ' + build_max_size_human + os.linesep
UnboundLocalError: local variable 'build_max_size_human' referenced before assignment
```

#3576	12 months ago	fixed	tool/gdb	Joel Sherrill	Joel Sherrill	12 months ago
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Summary	gdb 8.0.1 sis does not build on Cygwin					
Description	Cygwin no longer has libtermcap. gdb/sim/erc32 needs a patch to find libncurses. Upstream gdb patch already merged. https://sourceware.org/git/gitweb.cgi?p=binutils-gdb.git;a=commitdiff;h=c1230d1bab8e36e1aa40f3bbadcef9b5d9ddc041 This ticket is just to contain a patch that applies cleanly to gdb 8.0.1 and to track adding that patch to the RSB.					

#3577	12 months ago	fixed	tool/gcc	Sebastian Huber	Sebastian Huber	12 months ago
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Summary	Avoid CLoog and ISL host dependencies for target GCC					
Description	We already use GCC in-tree libraries for MPFR, MPC, GMP and zlib. Use them also for CLoog and ISL. This helps to ensure that the same target code is generated across host systems. It also helps to avoid GCC build issues in case future versions of ISL and CLoog available on the host system are incompatible to the GCC version picked up by the RSB for RTEMS.					

#3579	12 months ago	fixed	admin	Chris Johns	Chris Johns <chrisj@...>	12 months ago
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Summary	testsuite's rtems-test-check.py python version support					
Description	This command used in the testsuite needs to find a suitable python or the build system needs to find it and invoke it with that python.					

#3583	12 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	12 months ago
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Summary	Add rtems_malloc() and rtems_calloc()					
Description	The standard C/POSIX functions malloc() and calloc() set errno in case of an error. A dependency to errno pulls in getreent() which pulls in a lot of data structures and functions. This is an issue in low level code especially in the area of a basic board support package initialization and device drivers. Provide rtems_malloc() and rtems_calloc() functions declared in <rtems/malloc.h> which do the same as the corresponding C/POSIX functions except setting errno. The posix_memalign() and aligned_alloc() functions do not have this issue with the errno.					

#3587	12 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	12 months ago
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Summary	Deprecate rtems_context					
Description	The rtems_context typedef as no corresponding API. A user can do nothing with it. It is only used in cpukit/libmisc/monitor/mon-monitor.c and cpukit/libmisc/monitor/mon-editor.c in RTEMS. Deprecate it in this release.					

#3589	12 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	12 months ago
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Summary	Deprecate rtems_context_fp					
Description	The rtems_context_fp typedef as no corresponding API. A user can do nothing with it. It is only used in cpukit/libmisc/monitor/mon-monitor.c in RTEMS. Deprecate it in this release.					

#3591	12 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	12 months ago
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Summary	Deprecate region_information_block					
Description	The region_information_block typedef as no corresponding API. It has no proper namespace prefix. A user can do nothing with it. It is only used in cpukit/libmisc/cpuuse/cpuusagetop.c and cpukit/libmisc/shell/main_mallocinfo.c in RTEMS. Deprecate it in this release.					

#3593	12 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	12 months ago
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Summary	Deprecate rtems_thread_cpu_usage_t					
Description	The rtems_thread_cpu_usage_t typedef as no corresponding API. It violates the POSIX namespace. A user can do nothing with it. It is only used in cpukit/include/rtems/rtems/ratemon.h in RTEMS. Deprecate it in this release.					

#3595	12 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	12 months ago
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Summary	Deprecate rtems_rate_monotonic_period_time_t					
Description	The rtems_rate_monotonic_period_time_t typedef as no corresponding API. It violates the POSIX namespace. A user can do nothing with it. It is only used in cpukit/include/rtems/rtems/ratemon.h in RTEMS. Deprecate it in this release.					

#3598	12 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	11 months ago
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Summary	Move internal types of API objects to separate header file					
Description	The <rtems.h> header file still exposes a lot of implementation details via the definition of internal data structures, e.g. the *_Control structures of the API objects. They are only necessary for the application configuration. Move them to separate header files. Currently we have: <rtems/rtems/XYZ.h> <rtems/rtems/XYZimpl.h> Use <rtems/rtems/XYZdata.h> for this new header file. Potential new header files are: - rtems/extensiondata.h - rtems/rtems/asrdata.h - rtems/rtems/barrierdata.h - rtems/rtems/dpmmemdata.h - rtems/rtems/eventdata.h - rtems/rtems/messagedata.h - rtems/rtems/partdata.h - rtems/rtems/ratemondata.h - rtems/rtems/regiondata.h - rtems/rtems/semdata.h - rtems/rtems/tasksdata.h					

• rtems/rtems/timerdata.h						
#3599	12 months ago	fixed	arch/m32c	Sebastian Huber	Sebastian Huber	12 months ago
Summary	Remove m32c architecture port					
Description	The m32c architecture port is incomplete, e.g. important features such as interrupt support are missing. It never run on real hardware. The tools are out dated and unmaintained. There are no known users: https://lists.rtems.org/pipermail/users/2018-January/031991.html					
#3602	12 months ago	fixed	arch/or1k	Sebastian Huber	Sebastian Huber	12 months ago
Summary	Update or1k tool chain to use the upstream GCC					
#3603	12 months ago	fixed	score	Sebastian Huber	Sebastian Huber	11 months ago
Summary	Remove support for 16-bit object identifiers					
Description	The RTEMS_USE_16_BIT_OBJECT define is not set by an RTEMS port. Remove support for 16-bit object identifiers. If someone really wants to use RTEMS on a 16-bit target, then it is better to use self-contained objects instead of playing around with object identifier optimizations.					
#3604	12 months ago	fixed	lib/dl	Joseph Hickey	Chris Johns	11 months ago
Summary	RTL Unresolved Symbols from common section on i386/pc686 (cloned)					
Description	Cloned from #3527: By default GCC puts uninitialized global variables into a common section in the ELF file. When attempting to load the resulting ELF file at runtime using <code>dlopen()</code>, these global symbols are not resolved as expected. The RTL reports unresolved symbols, and runtime code that take the address of the global get <code>NULL</code> instead. This is reproducible using the libtests/dl01 example by adding a global variable to the module code. I will attach a patch that replicates the issue. Test platform is QEMU using pc686 BSP, RTEMS source version 4.11.3 (latest on 4.11 git branch as of this writing)					
#3612	12 months ago	fixed	lib/dl	Chris Johns	Chris Johns	11 months ago
Summary	RTL unresolved compaction does not update string indexes after removing a string					
Description	The RTL unresolved compaction does not update the string indexes when compacting.					
#3620	11 months ago	fixed	admin	Sebastian Huber	Amar Takhar	11 months ago
Summary	CommitTicketUpdater? does not process commits in order					
Description	The new CommitTicketUpdater? does not process commits in order. For example see: https://devel.rtems.org/ticket/3598#comment:40 https://devel.rtems.org/ticket/3598#comment:41 Compare with Git commit order: https://git.rtems.org/rtems/log/?id=eaa5ea84eaf1b3dab72d7a7a6578f0dc59e55396&qt=range&q=1947449a5d6f01a44ccc61eda3e78ef7e06da952..5fc727fe77a632f9df38161a8474007dab020608					
#3621	11 months ago	fixed	score	Sebastian Huber	Sebastian Huber	11 months ago
Summary	Statically initialize object information structures					
Description	Statically initialize the object information structures to make the configuration easier to review and simplify the debugging. The workspace size estimate generated by <code><rtems/confdefs.h></code> looks currently like this: <pre>const rtems_configuration_table Configuration = { ((((sizeof t) (((((1 + 0) != 0 ? 1 : 0) * ((Objects_Maximum) ((1 + 0) & ~0x80000000U))) * (sizeof(Configuration_Thread_control))) != 0 ? 1 : 0) * (((((1 + 0) != 0 ? 1 : 0) * ((Objects_Maximum) ((1 + 0) & ~0x80000000U))) * (sizeof(Configuration_Thread_control)) + (2 * sizeof(uintptr_t) + (sizeof(Heap_Protection_block_begin) + sizeof(Heap_Protection_block_end)))) + (((sizeof(Heap_Block)) + (8) - 1) - ((sizeof(Heap_Block)) + (8) - 1) % (8))) - 1) - (((((1 + 0) != 0 ? 1 : 0) * ((Objects_Maximum) ((1 + 0) & ~0x80000000U))) * (sizeof(Configuration_Thread_control)) + (2 * sizeof(uintptr_t) + (sizeof(Heap_Protection_block_begin) + sizeof(Heap_Protection_block_end)))) + (((sizeof(Heap_Block)) + (8) - 1) - ((sizeof(Heap_Block)) + (8) - 1) % (8)))</pre> [more than 500 similar lines] <pre>1) - (((sizeof(Configuration_Initial_Extensions) / sizeof(Configuration_Initial_Extensions){0})) * sizeof(User_extensions_Switch_control) + (2 * sizeof(uintptr_t) + (sizeof(Heap_Protection_block_begin) + sizeof(Heap_Protection_block_end)))) + (((sizeof(Heap_Block)) + (8) - 1) - ((sizeof(Heap_Block)) + (8) - 1) % (8))) - 1) % (((sizeof(Heap_Block)) + (8) - 1) - ((sizeof(Heap_Block)) + (8) - 1) % (8)))) + 0 + 0 + (0 * 1024) + (((2 * sizeof(uintptr_t) + (sizeof(Heap_Protection_block_begin) + sizeof(Heap_Protection_block_end)))) + (8) - 1) - (((2 * sizeof(uintptr_t) + (sizeof(Heap_Protection_block_begin) + sizeof(Heap_Protection_block_end)))) + (8) - 1) % (8))),</pre> The object controls reside on the heap even for fixed object count configuration. Using a statically allocated array makes it easier to find the objects during debugging.					
#3622	11 months ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	11 months ago
Summary	Remove cache routines working with a processor set					
Description	The following cache manager API functions are exotic, complex, very hard to use correctly, not used in the RTEMS code base, and apparently unused by applications (https://lists.rtems.org/pipermail/users/2018-November/032764.html). Remove these functions					

Description	<pre>/** * @brief Flushes multiple data cache lines for a set of processors * * Dirty cache lines covering the area are transferred to memory. * Depending on the cache implementation this may mark the lines as invalid. * * This operation should not be called from interrupt context. * * @param[in] addr The start address of the area to flush. * @param[in] size The size in bytes of the area to flush. * @param[in] setsize The size of the processor set. * @param[in] set The target processor set. */ void rtems_cache_flush_multiple_data_lines_processor_set(const void *addr, size_t size, const size_t setsize, const cpu_set_t *set); /** * @brief Invalidates multiple data cache lines for a set of processors * * The cache lines covering the area are marked as invalid. A later read * access in the area will load the data from memory. * * In case the area is not aligned on cache line boundaries, then this * operation may destroy unrelated data. * * This operation should not be called from interrupt context. * * @param[in] addr The start address of the area to invalidate. * @param[in] size The size in bytes of the area to invalidate. * @param[in] setsize The size of the processor set. * @param[in] set The target processor set. */ void rtems_cache_invalidate_multiple_data_lines_processor_set(const void *addr, size_t size, const size_t setsize, const cpu_set_t *set); /** * @brief Flushes the entire data cache for a set of processors * * This operation should not be called from interrupt context. * * @see rtems_cache_flush_multiple_data_lines(). * * @param[in] setsize The size of the processor set. * @param[in] set The target processor set. */ void rtems_cache_flush_entire_data_processor_set(const size_t setsize, const cpu_set_t *set); /** * @brief Invalidates the entire cache for a set of processors * * This function is responsible for performing a data cache * invalidate. It invalidates the entire cache for a set of * processors. * * This operation should not be called from interrupt context. * * @param[in] setsize The size of the processor set. * @param[in] set The target processor set. */ void rtems_cache_invalidate_entire_data_processor_set(const size_t setsize, const cpu_set_t *set);</pre>						
	#3625	11 months ago	fixed	lib/dl	Kevin Gordon	Chris Johns	11 months ago
Summary	RTL Allows Unloading a Module other Modules Depend Upon (cloned)						
Description	Cloned from #3195:						
	Consider the following example using ELF .o files from compiled source files module-0.c and module-1.c from ticket #3194: module-0.o is loaded using dlopen() with no code or data dependencies. module-1.o is loaded using dlopen() with both code and data dependencies on module-0 which are resolved by RTL. The RTL function dlclose() returns no error when module-0 is unloaded, when it should return an error and not unload module-0. This becomes quite dangerous because a subsequent call to module1Function1() in the currently-loaded module-1.o, which accesses shared_resource_0[] and calls module0Function0(), will result in an unexpected trap on qemu or the call succeeding with the correct return value on hardware when it should not. The erroneous successful unload() of module-0 aside, it appears as though the resources are not actually deleted and I believe this ticket is related to tickets #3192 and #3194. Architecture is sparc-leon3 using both the RTEMS 4.11.1 public release and rtems master @f043b9bd3bf25626fb1a311dd7fa041eacc68adc with rtems-source-builder @55f2d69e9b67cde23d61375fa34ef5b0f04a985d. Execution environments are qemu-system-sparc and LEON3 UT700 hardware.						
Summary	#3626	11 months ago	fixed	posix	Joel Sherrill	Sebastian Huber	11 months ago
Description	sigtimedwait() needed when POSIX is disabled						
	When POSIX is disabled, psxmsgq01 does not link. Should we enable sigtimedwait() when POSIX is disabled or disable this test?						
Description	<pre>/data/home/joel/rtems-work/tools/5/bin/./lib/gcc/powerpc-rtems5/7.3.0/./../powerpc-rtems5/bin/ld: psxmsgq01/psxmsgq01-init.o: in function `wait_for_signal': /home/joel/rtems-work/rtems-testing/rtems/build-powerpc-ss555-rtems/powerpc- rtems5/c/ss555/testsuites/psxtests/./.././../rtems/c/src/./../testsuites/psxtests/psxmsgq01/init.c:932: undefined reference to `sigtimedwait'</pre>						
	#3636	11 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	11 months ago
Summary	Add rtems_scheduler_get_maximum_priority()						
The maximum task priority depends on the scheduler instance. It is a configuration parameter. Add a function to get it at runtime.							

Descripti on	<pre>/** * @brief Gets the maximum task priority of the specified scheduler instance. * * @param[in] scheduler_id Identifier of the scheduler instance. * @param[out] priority Pointer to a task priority value. * * @retval RTEMS_SUCCESSFUL Successful operation. * @retval RTEMS_INVALID_ADDRESS The @a priority parameter is @c NULL. * @retval RTEMS_INVALID_ID Invalid scheduler instance identifier. */ rtems_status_code rtems_scheduler_get_maximum_priority(rtems_id scheduler_id, rtems_task_argument priority)</pre>					
Summar y	#3637	11 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber
Summar y	Fix <code>rtems_task_restart()</code> argument type					
Descripti on	The argument type must be <code>rtems_task_argument</code> in <code>rtems_task_restart()</code> similar to <code>rtems_task_start()</code> . This is a severe issue on 64-bit targets since it prevents to pass pointer values to the task.					
Summar y	#3649	11 months ago	fixed	admin	Joel Sherrill	Amar Takhar
Summar y	Error with IRC announcing in examples-v2 commits.					
Descripti on	<pre>remote: 1: mail vc@rtems.org remote: 2: update github remote: 4: IRC remote: usage: <file with rev-list> <repo name without .git> remote: 5: Buildbot To ssh://joel@dispatch.rtems.org/data/git/examples-v2.git ced6542..276a025A am -> master</pre>					
Summar y	#3664	11 months ago	fixed	tool/rsb	Chris Johns	Chris Johns
Summar y	RSB config parsing slow on python3					
Descripti on	The execute support on python3 is slow and this slows the config file parsing.					
Summar y	#3666	11 months ago	fixed	lib	Sebastian Huber	Sebastian Huber
Summar y	Add support for C++17 <code>std::aligned_alloc</code>					
Descripti on	In C++17 there is a <code>std::aligned_alloc()</code>: https://en.cppreference.com/w/cpp/memory/c/aligned_alloc Unfortunately, it doesn't work with RTEMS currently: https://gcc.gnu.org/bugzilla/show_bug.cgi?id=85904 Provide <code>aligned_alloc()</code> and <code>malignn()</code> (as a strong alias to <code>aligned_allo()</code>) by RTEMS.					
Summar y	#3667	10 months ago	fixed	arch/arm	Sebastian Huber	Sebastian Huber
Summar y	Support data cache disable on ARMv7-AR					
Summar y	#3669	10 months ago	fixed	doc	Chris Johns	Amar Takhar
Summar y	<code>rtems-docs.git</code> does not build with Sphinx 1.8.2 and 1.8.3					
Descripti on	The docs do not build with Sphinx 1.8. Recent posts indicate some changes to support unicode indexes via <code>xindy</code> have caused this and the solution being discussed is to use the generate <code>Makefile</code> ... https://github.com/rtdf/readthedocs.org/issues/4454 The need to use the <code>Makefile</code> is debatable however what it contains is important as it defines what needs to happen. This recent issue can be seen in the Tex generated file for the User Manual (<code>user.tex</code>). It contains: <pre>\item[{Waf}\index{Waf}{spxentry{Waf}}{spxpagem}}\phantomsection\label{\detokenize{glossary/index:term-waf}}}{\leavevmode Waf build system. For more information see \sphinxurl{http://www.waf.io/}}</pre> Our current build uses <code>pdflatex</code> directly and there is an error as <code>spxpagem</code> is not defined. If you inspect a version 1.8 generated Makefile the command <code>latexmk</code> is used. This wraps the PDF generation so the correct number of passes are performed. Using this tool should be considered. The <code>Makefile</code> contains: <pre>export XINDYOPTS = -L english -C utf8 -M sphinx.xdy</pre> The <code>sphinx.xdy</code> contains the needed <code>spxpagem</code>. I can only conclude sphinx needs to be built with <code>xindy</code> because the reference is always generated. The problem for building FreeBSD is <code>xindy</code> is not an available command.					
Summar y	#3670	10 months ago	fixed	examples	Chris Johns	joel@...
Summar y	examples-v2 uses deprecated or obsolete RTEMS interfaces					
Descripti on	The examples need to be change to use what ever is the newer method of doing something. <pre>../filesystem/fat_ramdisk/init.c:46:3: warning: 'rtems_blkdev_generic_open' is deprecated [-Wdeprecated-declarations] open_entry: rtems_blkdev_generic_open, ^~~~~~ In file included from /opt/work/chris/rtems/kernel/5/arm-rtems5/xilinx_zynq_zedboard/lib/include/rtems/ramdisk.h:17:0, from ../filesystem/fat_ramdisk/init.c:16: /opt/work/chris/rtems/kernel/5/arm-rtems5/xilinx_zynq_zedboard/lib/include/rtems/blkdev.h:408:1: note: declared here rtems_blkdev_generic_open(^~~~~~ ../filesystem/fat_ramdisk/init.c:47:3: warning: 'rtems_blkdev_generic_close' is deprecated [-Wdeprecated-declarations] close_entry: rtems_blkdev_generic_close, ^~~~~~ In file included from ../ticker/low_ticker/init.c:88:0: /opt/work/chris/rtems/kernel/5/arm-rtems5/xilinx_zynq_zedboard/lib/include/rtems/confdefs.h:3276:4: warning: #warning "The CONFIGURE_TERMIOS_DISABLED configuration option is obsolete since RTEMS 5.1" [-Wcpp] #warning "The CONFIGURE_TERMIOS_DISABLED configuration option is obsolete since RTEMS 5.1" ^~~~~~</pre>					
Summar y	#3672	10 months ago	fixed	arch/i386	Joel Sherrill	
Summar y	No i386 BSP can link all tests after cache manager changes					
Descripti on	<pre>/data/home/joel/rtems-work/tools/5/bin/./lib/gcc/i386-rtems5/7.4.0/./../i386-rtems5/bin/ld: ./../lib/libbsp/i386/pc386/librtemsbsp.a(cache.o): in function `rtems_cache_invalidate_entire_instruction': /home/joel/rtems-work/rtems-testing/rtems/build-i386-pc486-rtems/i386- rtems5/c/pc486/lib/libbsp/i386/pc386/./../i386-rtems5/c/src/lib/libbsp/i386/pc386/./../i386-rtems5/bsps/i386/shared/cache/./../shared/cache/cacheimpl.h:350: undefined reference</pre>					

[illegible]

```
dead_error_condition: The condition oflag & 0 cannot be true.
289 if ( oflag & O_RDONLY ) {

CID 1399706 (#1 of 1): Logically dead code (DEADCODE)
dead_error_line: Execution cannot reach this statement: flags |= 2U;.
290 flags |= LIBIO_FLAGS_READ;
291 } else {
```

URL: <https://scan5.coverity.com/reports.htm#v29811/p10069/fileInstanceId=153084281&defectInstanceId=42558012&mergedDefectId=1399706&fileStart=1&fileEnd=250>

Same issue at other place in same file:

```
197 int flags;
dead_error_condition: The condition oflag & 0 cannot be true.
198 if ( oflag & O_RDONLY ) {

CID 1399714 (#1 of 1): Logically dead code (DEADCODE)
dead_error_line: Execution cannot reach this statement: flags = 4;.
199 flags = RTEMS_FS_PERMS_READ;
200 } else {
```

#3699	8 months ago	fixed	arch/arm	Kinsey Moore	Sebastian Huber	8 months ago
Summary	Wrong system register specified for ARM virtual timer value retrieval					
Description	In arm_cp15_get_counter_pl1_virtual_timer_value() in cpukit/score/cpu/arm/include/libcpu/arm-cp15.h, the system register specified by "p15, 0, %[val], c14, c2, 0" is actually the system register for the physical timer value. This should be "p15, 0, %[val], c14, c3, 0" for the virtual timer value as used in the setter.					
#3720	8 months ago	fixed	shell	Sebastian Huber	Sebastian Huber	8 months ago
Summary	mfill shell command uses the wrong arguments for the memset()					
#3724	8 months ago	fixed	arch/arm	Sebastian Huber	Sebastian Huber	8 months ago
Summary	bsp/lpc24xx: Convert SSP driver to Linux API					
#3725	8 months ago	fixed	arch/arm	Sebastian Huber	Sebastian Huber	6 months ago
Summary	bsp/lpc24xx: Convert I2C driver to Linux API					
Description						
#3728	7 months ago	fixed	bsps	Chris Johns	Chris Johns	7 months ago
Summary	Set small data section to max size for mvme5500 and motorola_powerpc BSPs					
Description	These are large memory targets that can support libdl. Make the small data memory the maximum size.					
#3731	7 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	7 months ago
Summary	Add rtems_scheduler_get_processor()					
Description	Add rtems_scheduler_get_processor() as a replacement for rtems_get_current_processor(). The rtems_get_current_processor() is a bit orphaned. Adopt it by the Scheduler Manager. This is in line with the glibc sched_getcpu() function.					
#3732	7 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	7 months ago
Summary	Add rtems_scheduler_get_processor_maximum()					
Description	Add rtems_scheduler_get_processor_maximum() as a replacement for rtems_get_processor_count(). The rtems_get_processor_count() is a bit orphaned. Adopt it by the Scheduler Manager. The count is also misleading, since the processor set may have gaps and the actual count of online processors may be less than the value returned by rtems_get_processor_count().					
#3733	7 months ago	fixed	lib/debugger	Chris Johns	Chris Johns	7 months ago
Summary	Add general reg support to libdebugger					

Testing master on a Zynq reports:

```
(gdb) target remote 10.10.5.45:1122
Remote debugging using 10.10.5.45:1122
Truncated register 19 in remote 'g' packet
```

It looks to me like gdb is now smart enough to know this ARM arch has a NEON and floating point registers:

```
(gdb) maint print registers
Name      Nr Rel Offset  Size Type
r0         0  0   0         4 uint32_t
r1         1  1   4         4 uint32_t
r2         2  2   8         4 uint32_t
r3         3  3  12         4 uint32_t
r4         4  4  16         4 uint32_t
r5         5  5  20         4 uint32_t
r6         6  6  24         4 uint32_t
r7         7  7  28         4 uint32_t
r8         8  8  32         4 uint32_t
r9         9  9  36         4 uint32_t
r10        10 10  40         4 uint32_t
r11        11 11  44         4 uint32_t
r12        12 12  48         4 uint32_t
sp        13 13  52          4 *1
lr        14 14  56         4 uint32_t
pc        15 15  60          4 *1
f0        16 16  64        12 _arm_ext
f1        17 17  76        12 _arm_ext
f2        18 18  88        12 _arm_ext
f3        19 19 100        12 _arm_ext
f4        20 20 112        12 _arm_ext
f5        21 21 124        12 _arm_ext
f6        22 22 136        12 _arm_ext
f7        23 23 148        12 _arm_ext
fps       24 24 160         4 uint32_t
cpsr      25 25 164         4 uint32_t
```

The target support in libdebugger is a simple array of 32bit ints. This needs to change to handle registers at various offsets. The lack of fp regs was a simplification at the time I first implement this server. Loos like I need to sort this out.

#3734	7 months ago	fixed	score	Sebastian Huber	Sebastian Huber	7 months ago
Summary	Add RTEMS_CONST attribute					

y						
Descripti on	Add RTEMS_CONST attribute to make the compiler specific <code>attribute ((const))</code> available.					
#3736	7 months ago	fixed	admin	Chris Johns	Sebastian Huber <sebastian.huber@...>	6 months ago
Summar y	PowerPC Beatinik BSP C++ exceptions broken					
Descripti on	Running <code>cdtest.exe</code> fails. I am wondering if there is an issue in the <code>linkcmd</code> scripts this BSP uses. The psim works.					
	The trace is:					
	<pre>config addr is 0xf1000cf8 config data is 0xf1000cfc Welcome to RTEMS rtems-5.0.0 (PowerPC/Generic (classic FPU)/beatnik) CPU: MPC7457 Board Type: MVME5500-0161 (S/N E1712C9) Bus Clock Freq: 133333333 Hz CPU Clock Freq: 1000000000 Hz Memory: 536870912 bytes ----- Now BSP_mem_size = 0x1fe00000 Configuration.work_space_size = a170 Page table setup finished; will activate it NOW... Going to start PCI buses scanning and initialization Number of PCI buses found is : 3 MSR 0x2003032 Exit from bspstart Universe II PCI-VME bridge detected at 0x82000000, IRQ 76 Universe Master Ports: Port VME-Addr Size PCI-Adrs Mode: 0: 0x20000000 0x0e000000 0x90000000 A32, D64 [MBLT], Dat, Sup 1: 0x00000000 0x00ff0000 0x9f000000 A24, D64 [MBLT], Dat, Sup 2: 0x00000000 0x00010000 0x9fff0000 A16, D64, Dat, Sup 7: 0x00000000 0x01000000 0x9e000000 CSR, D64, Dat, Sup Universe Slave Ports: Port VME-Addr Size PCI-Adrs Mode: 0: 0x90000000 0x1fe00000 0x00000000 A32, Pgm, Dat, Sup, Usr, PWEN, PRE N vmeUniverse IRQ manager: looking for registers on VME... Trying to find CRG on VME... vmeUniverse IRQ manager - registers not found on VME; falling back to PCI *** BEGIN OF TEST CONSTRUCTOR/DESTRUCTOR *** *** TEST VERSION: 5.0.0.8a8b95aa1d6932ba9d2acd7a785100f7d0919205-modified *** TEST STATE: EXPECTED-PASS *** TEST BUILD: RTEMS_NETWORKING RTEMS_POSIX_API *** TEST TOOLS: 7.4.0 20181206 (RTEMS 5, RSB 9a3e12e5820918057633798c3fe2 a1f952fb4e56, Newlib 1d35a003f) GLOBAL: Hey I'm in base class constructor number 1 for 0x5c404. GLOBAL: Hey I'm in base class constructor number 2 for 0x5c410. GLOBAL: Hey I'm in derived class constructor number 3 for 0x5c410. LOCAL: Hey I'm in base class constructor number 4 for 0x6cbdc. LOCAL: Hey I'm in base class constructor number 5 for 0x6cbd0. LOCAL: Hey I'm in base class constructor number 6 for 0x6cbc4. LOCAL: Hey I'm in base class constructor number 7 for 0x6cbb8. LOCAL: Hey I'm in derived class constructor number 8 for 0x6cbb8. IO Stream not tested LOCAL: Hey I'm in derived class destructor number 8 for 0x6cbb8. Derived class - Instantiation order 8 LOCAL: Hey I'm in base class destructor number 7 for 0x6cbb8. Derived class - Instantiation order 8 LOCAL: Hey I'm in base class destructor number 6 for 0x6cbc4. Derived class - Instantiation order 6 LOCAL: Hey I'm in base class destructor number 5 for 0x6cbd0. Derived class - Instantiation order 5 LOCAL: Hey I'm in base class destructor number 4 for 0x6cbdc. Derived class - Instantiation order 5 *** TESTING C++ EXCEPTIONS *** fatal source: RTEMS_FATAL_SOURCE_EXIT bsp_fatal_extension(): RTEMS terminated</pre>					
#3741	6 months ago	fixed	lib/dl	dufault	Chris Johns	6 months ago
Summar y	libld loading ELF objects from libbsd NFS file system ends in a deadlock					
Descripti on	For ELF files the run-time loader calls this chain:					
	<code>rtems_rtl_elf_file_load()</code> <code>rtems_rtl_alloc_lock()</code> <code>rtems_rtl_alloc_heap()</code> <code>_RTEMS_Lock_allocator()</code>					
	<code>_RTEMS_Lock_allocator()</code> locks all heap operations. RTL then calls <code>read()</code> and for NFS file systems the NFS threads try to use the heap, locking up the system.					
	#3742	6 months ago	fixed	test	Chris Johns	joel@...
	T_config conflicting type qualifiers for 'config'					
	Running the <code>rtems-bsp-builder</code> on FreeBSD is give an error in <code>ttest01</code> for bsp:					
	<code>arm/csb336</code> <code>arm/csb337</code> <code>arm/csb637</code> <code>arm/kit637_v6</code> <code>mips/csb350</code>					
	The error being reported is:					

error: testsuites/libtests/ttest01/init.c:146:23: error: conflicting type qualifiers for 'config'						
Descripti on	The builder command line is: <pre>/opt/work/chris/rtems/rt/rtems-tools.git/tester/rtems-bsp-builder \ --rtems-tools=/opt/work/rtems/5 \ --rtems=/opt/work/chris/rtems/kernel/rtems.git \ --log=everything-tests \ --profile=everything \ --build=tests \ --jobs=7/6</pre> A BSP configure command line is: <pre>/opt/work/chris/rtems/kernel/rtems.git/configure \ --target=mips-rtems5 --enable-rtemsbsp=csb350 --prefix=/opt/rtems/5 \ --enable-tests --disable-smp</pre>					
#3743	6 months ago	fixed	tool/rsb	Chris Johns	Chris Johns	6 months ago
Summar y	RSB os and arch config logic is broken					
Descripti on	The config file processing of conditionals:					
	• %ifos • %ifnos • %ifarch do not correctly process lists of arguments. The argument list is split in 2 with the first element correct handled and the remaining treated as a lump. The argument list needs to be split evenly.					
#3746	6 months ago	fixed	lib/dl	Chris Johns	Chris Johns <chrisj@...>	6 months ago
Summar y	libdl test dl05.exe failing					
Descripti on	This test is failing because the second stage of the symbol loading does not check if a section referenced by a symbol has been loaded.					
	It is not clear yet if the lack of support in libdl for group sections is a factor.					
#3747	6 months ago	fixed	arch/arm	Sebastian Huber	Sebastian Huber	5 months ago
Summar y	Address Cortex-M3 Errata 602117					
Descripti on	While testing on a NXP LPC1788 it found that this chip is affected by the Cortex-M3 Errata 602117. NXP didn't bother to document this in their errata sheet for the chip:					
	https://www.nxp.com/docs/en/errata/ES_LPC177X_8X.pdf					
	To avoid the issues, you have to compile everything with -mfix-cortex-m3-ldrd. This option is enabled by default, if you use -mcpu=cortex-m3.					
	I think we have to change our GCC multilibs to account for this errata. For example:					
	<pre>diff --git a/gcc/config/arm/t-rtems b/gcc/config/arm/t-rtems index 026a5895662..e276b4f3e57 100644 --- a/gcc/config/arm/t-rtems +++ b/gcc/config/arm/t-rtems @@ -1,7 +1,7 @@ # Custom RTEMS multilibs for ARM -MULTILIB_OPTIONS = mbig-endian mthumb march=armv6-m/march=armv7-a/march=armv7-r/march=armv7-m/mcpu=cortex-m7 mfpu=neon/mfpu=vfp/mfpu=vfpv3- d16/mfpu=fpv4-sp-d16/mfpu=fpv5-d16 mfloat-abi=hard +MULTILIB_OPTIONS = eb thumb armv6-m armv7-a armv7-r armv7-m cortex-m7 neon vfp vfpv3-d16 fpv4-sp-d16 fpv5-d16 hard +MULTILIB_OPTIONS = mbig-endian mthumb march=armv6-m/march=armv7-a/march=armv7-r/mcpu=cortex-m3/mcpu=cortex-m4/mcpu=cortex-m7 mfpu=neon/mfpu=vfp/mfpu=vfpv3-d16/mfpu=fpv4-sp-d16/mfpu=fpv5-d16 mfloat-abi=hard +MULTILIB_DIRNAMES = eb thumb armv6-m armv7-a armv7-r cortex-m3 cortex-m4 cortex-m7 neon vfp vfpv3-d16 fpv4-sp-d16 fpv5-d16 hard # Enumeration of multilibs @@ -16,7 +16,8 @@ MULTILIB_REQUIRED += mthumb/march=armv7-a/mfpu=neon/mfloat-abi=hard MULTILIB_REQUIRED += mthumb/march=armv7-a MULTILIB_REQUIRED += mthumb/march=armv7-r/mfpu=vfpv3-d16/mfloat-abi=hard MULTILIB_REQUIRED += mthumb/march=armv7-r -MULTILIB_REQUIRED += mthumb/march=armv7-m/mfpu=fpv4-sp-d16/mfloat-abi=hard +MULTILIB_REQUIRED += mthumb/mcpu=cortex-m3 +MULTILIB_REQUIRED += mthumb/mcpu=cortex-m4 +MULTILIB_REQUIRED += mthumb/mcpu=cortex-m4/mfpu=fpv4-sp-d16/mfloat-abi=hard MULTILIB_REQUIRED += mthumb/mcpu=cortex-m7/mfpu=fpv5-d16/mfloat-abi=hard -MULTILIB_REQUIRED += mthumb/march=armv7-m MULTILIB_REQUIRED += mthumb</pre>					
#3748	6 months ago	fixed	lib/dl	Chris Johns	Chris Johns <chrisj@...>	5 months ago
Summar y	libdl uses a linear symbol search on object file symbols					
Descripti on	Symbol searching has two parts, searching the object file and searching the global symbol table. Currently the object file search is linear and the global table search uses a hash table.					
	A large incrementally linked object file can have a large local and global set of symbols and this can slow the loading process. This issue does not show up for small object files with a few symbols which is typically how our libraries are made.					
Descripti on	Change the object file symbol search to a binary search (bsearch). A hash table for each object file would increase the in memory object file footprint by a significant amount and would harm the small object file use case that only have a few symbols. A binary search is a suitable compromise.					
	#3754	5 months ago	fixed	doc	Joel Sherrill	Joel Sherrill
Summar y	Users Guide Ubuntu Instructions Have Typo					
Descripti on	sudo should be sudo					
#3756	5 months ago	fixed	arch/sparc	Sebastian Huber	Sebastian Huber	5 months ago
Summar y	Condition codes in PSR are destroyed by lazy FP context switch					
Descripti on	https://lists.rtems.org/pipermail/devel/2019-June/026014.html					
#3760	5 months ago	fixed	arch/arm	Chris Johns	Chris Johns <chrisj@...>	3 months ago
Summar y	BBB MMU update crashes					
Descripti on	Calling arm_cp15_set_translation_table_entries() on a BBB (Cortex-A8) crashes in the call to arm_cp15_tlb_invalidate_entry_all_asids(). There is no HYP support in the BBB's A8. The cp15 register is documented in the A8 manual but the BBB device from TI does not have the support built in.					
	A check of the A8 doco from ARM says this is for use in HYP mode so should we be using without checking if HYP is supported and if it is active? I am also wondering if we use should be using it on the Zynq. I have no idea why the Zynq (A9) does not complain, it may be ignoring the invalidate request.					
	While looking at this code I was wondering why we do not follow ARM's recommendation of 'break-make' updates of the TLB? I do not know we could support such a process because we may be asked to invalidate the entry for the text section we are running in to update it.					

Note, following the other path in the call works on a BBB.						
#3762	4 months ago	fixed	arch/arm	Chris Johns	Chris Johns	4 months ago
Summary	Return the current handler from ARM cp15 set exception call					
Description	Update the cp15 call <code>arm_cp15_set_exception_handler()</code> to return the current handler. This lets code catch and return an exception handler, for example code to probe suspect hardware. This is need to probe the memory map debug registers for debug v7 implementations.					
#3763	4 months ago	fixed	tool/rsb	Chris Johns	Chris Johns <chrisj@...>	3 months ago
Summary	RSB SIS build fails on FreeBSD					
Description	The RSB SIS build for RISCv fails on FreeBSD with:					
	<pre>+ CFLAGS='-O2 -pipe -fbracket-depth=1024 -I/opt/work/chris/rtems/rsb/rtems-source-builder.git/rtems/build/tmp/sb-chris/5/rtems-sis/opt/work/rtems/5/include ' ./configure '--build=x86_64-freebsd12.0' '--host=x86_64-freebsd12.0' '--program-prefix=sis-rtems5-' '--prefix=' checking for a BSD-compatible install... /usr/bin/install -c checking whether build environment is sane... yes checking for a thread-safe mkdir -p... build-aux/install-sh -c -d checking for gawk... no checking for mawk... no checking for nawk... nawk checking whether make sets \$(MAKE)... yes checking for x86_64-freebsd12.0-gcc... /usr/bin/cc -O2 -pipe -fbracket-depth=1024 -I/opt/work/chris/rtems/rsb/rtems-source-builder.git/rtems/build/tmp/sb-chris/5/rtems-sis/opt/work/rtems/5/include checking whether the C compiler works... yes checking for C compiler default output file name... a.out checking for suffix of executables... checking whether we are cross compiling... no checking for suffix of object files... o checking whether we are using the GNU C compiler... yes checking whether /usr/bin/cc -O2 -pipe -fbracket-depth=1024 -I/opt/work/chris/rtems/rsb/rtems-source-builder.git/rtems/build/tmp/sb-chris/5/rtems-sis/opt/work/rtems/5/include accepts -g... yes checking for /usr/bin/cc -O2 -pipe -fbracket-depth=1024 -I/opt/work/chris/rtems/rsb/rtems-source-builder.git/rtems/build/tmp/sb-chris/5/rtems-sis/opt/work/rtems/5/include option to accept ISO C89... none needed checking for style of include used by make... GNU checking dependency style of /usr/bin/cc -O2 -pipe -fbracket-depth=1024 -I/opt/work/chris/rtems/rsb/rtems-source-builder.git/rtems/build/tmp/sb-chris/5/rtems-sis/opt/work/rtems/5/include... gcc3 checking how to run the C preprocessor... /usr/bin/cc -O2 -pipe -fbracket-depth=1024 -I/opt/work/chris/rtems/rsb/rtems-source-builder.git/rtems/build/tmp/sb-chris/5/rtems-sis/opt/work/rtems/5/include -E checking for grep that handles long lines and -e... /usr/bin/grep checking for egrep... /usr/bin/grep -E checking for ANSI C header files... yes checking for sys/types.h... yes checking for sys/stat.h... yes checking for stdlib.h... yes checking for string.h... yes checking for memory.h... yes checking for strings.h... yes checking for inttypes.h... yes checking for stdint.h... yes checking for unistd.h... yes checking for fcntl.h usability... yes checking for fcntl.h presence... yes checking for fcntl.h... yes checking for stddef.h usability... yes checking for stddef.h presence... yes checking for stddef.h... yes checking for stdlib.h... (cached) yes checking for string.h... (cached) yes checking for sys/time.h usability... yes checking for sys/time.h presence... yes checking for sys/time.h... yes checking for unistd.h... (cached) yes checking for termios.h usability... yes checking for termios.h presence... yes checking for termios.h... yes checking for readline in -lreadline... no configure: error: the required "readline" library is missing</pre>					
#3768	3 months ago	fixed	build	Chris Johns	Chris Johns	3 months ago
Summary	Add staging support to Makefile.inc					
Description	Add support to allow staging of an RTEMS BSP build so dependent packages can be built in a single RBS buildset build.					
#3769	3 months ago	fixed	tool/rsb	Chris Johns	Chris Johns	3 months ago
Summary	RSB BSP Buildsets					
Description	Add support to the RSB for BSP build sets. The support includes building 3rd party packages for a BSP.					
	1. Add BSP buildset support 2. Build packages for a BSP 3. Stage buildset builds if not the outer build so dependent packages and be built before a package and used 4. Fix packages to support staged builds					
#3773	3 months ago	fixed	arch/arm	Chris Johns	Chris Johns	3 months ago

Summary	RPI fails to boot					
Description	The RPI BSP fails to boot with the current master. A bsect of the repo shows the failure appears after this change [bdec62c4/rtems] .					
#3774	3 months ago	fixed	arch/arm	Chris Johns	Sebastian Huber <sebastian.huber@...>	3 months ago
Summary	RPI2 SMP does not build					
Description	<pre>arm-rtems5-gcc -march=armv7-a -mthumb -mcpu=neon -mfloat-abi=hard -mtune=cortex-a7 -O1 -g -ffunction-sections -fdata-sections -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -B./../lib/libbsp/arm/raspberrypi -B/opt/work/chris/rtems/kernel/rtems.git/bsps/arm/raspberrypi/start -specs bsp_specs -qrtems -L./../cpukit -L/opt/work/chris/rtems/kernel/rtems.git/bsps/arm/shared/start -Wl,--wrap=printf -Wl,--wrap=puts -Wl,--wrap=putchar -Wl,--gc-sections -o calloc.norun.exe POSIX/calloc.o ./../cpukit/librtemsdefaultconfig.a ./../lib/libbsp/arm/raspberrypi/librtemsbsp.a ./../cpukit/librtemscpu.a ./../cpukit/librtemstest.a /opt/work/rtems/5/lib/gcc/arm-rtems5/7.4.0/./../arm-rtems5/bin/ld: calloc.norun.exe section `'.rtemsstack' will not fit in region `VECTOR_RAM' /opt/work/rtems/5/lib/gcc/arm-rtems5/7.4.0/./../arm-rtems5/bin/ld: section `start VMA [0000000000008000,00000000000085ff]' overlaps section `rtemsstack VMA [0000000000000400,0000000000002003f]' /opt/work/rtems/5/lib/gcc/arm-rtems5/7.4.0/./../arm-rtems5/bin/ld: region `VECTOR_RAM' overflowed by 114752 bytes</pre>					
	Configured with ...					
	<pre>/opt/work/chris/rtems/kernel/rtems.git/configure --target=arm-rtems5 --prefix=/opt/work/chris/rtems/kernel/5 --disable-networking --enable-maintainer-mode --enable-rtems-debug --enable-tests --enable-rtemsbsp=raspberrypi2 --enable-smp</pre>					
#3775	3 months ago	fixed	lib/dl	Chris Johns	Chris Johns	3 months ago
Summary	libdl does not handle ARM mode reloc tramp parsing					
Description	The BBB fails on libdl tests because the trampoline parsing of reloc records does not handle the ABS type relocs when the code is built in ARM mode.					
#3776	3 months ago	fixed	lib/dl	Chris Johns	Chris Johns	3 months ago
Summary	libdl ARM does not support ARM mode trampolines.					
Description	The BBB is ARM mode and crashes dl09.exe . This is due to only Thumb mode trampoline support.					
#3777	3 months ago	fixed	lib/dl	Chris Johns	Chris Johns	3 months ago
Summary	libdl object unload debugger delete support is broken					
Description	The test dl09.exe crashes on BBB, Zedboard, and RPI2 but runs on arm qemu and psim. The issue is uncovered by the heap protection support in free() where the free block has been touched.					
	It turns out _rtdl_linkmap_delete() list code is broken. The object module's block should not be walked to the end.					
#3783	3 months ago	fixed	tool/rsb	jameszj		8 weeks ago
Summary	MSYS2 RSB build error					
Description	I tried to update the compiler to RSB master, and encountered an error. command line:					
	<pre>../source-builder/sb-set-builder --dry-run --with-download 5/rtems-arm</pre>					
	error messgae:					
#3792	8 weeks ago	fixed	admin	Jeff Mayes	Chris Johns	8 weeks ago
Summary	RSB fails to build on MSYS2					
Description	Fresh install of Windows 10, with updates. Then installed MSYS2 as instructed here: https://docs.rtems.org/branches/master/user/hosts/windows.html#msys2					
	Fetched the RSB, and then tried to build rtems-sparc tools, like this...					
	<pre>\$../source-builder/sb-set-builder --prefix=/home/mayes/dev/rtems/5 5/rtems-sparc RTEMS Source Builder - Set Builder, 5 (b45df48a51bc) Build Set: 5/rtems-sparc Build Set: 5/rtems-autotools.bset Build Set: 5/rtems-autotools-internal.bset config: tools/rtems-autoconf-2.69-1.cfg config: devel/expat-2.1.0-1.cfg package: expat-2.1.0-x86_64-w64-mingw32-1 building: expat-2.1.0-x86_64-w64-mingw32-1 sizes: expat-2.1.0-x86_64-w64-mingw32-1: 9.229MB (installed: 2.037MB) cleaning: expat-2.1.0-x86_64-w64-mingw32-1 reporting: devel/expat-2.1.0-1.cfg -> expat-2.1.0-x86_64-w64-mingw32-1.txt reporting: devel/expat-2.1.0-1.cfg -> expat-2.1.0-x86_64-w64-mingw32-1.xml config: tools/rtems-gdb-8.3-1.cfg error: shell macro failed: sh -c "/mingw64/bin/python2-config --ldflags awk 'BEGIN{FS=" "}/python/{for(i=1;i<NF;++i)if(match(\$i,.*lpython.*)) print "lib"substr(\$i,3)*";"}'": -c: line 0: unexpected EOF while looking for matching `}'/python/{for(i=1;i<NF;++i)if(match(\$i,.*lpython.*)) print "lib"substr(\$i,3)*";"}'": -c: line 1: syntax error: unexpected end of file Build FAILED Build Set: Time 0:00:47.324763 Build FAILED</pre>					
#3794	7 weeks ago	fixed	posix	Joel Sherrill	Joel Sherrill	4 weeks ago
Summary	Initial POSIX Signals Mask Incorrect					
Description	RTEMS initial signal mask for the "process" does not match the behavior of Linux, FreeBSD, and Cygwin.					
	There are some subtle rules which need to be followed for the value of the created thread's signal mask. Because signals are part of C99 and enhanced by POSIX, both Classic API tasks and POSIX threads have to have them enabled.					
	- Internal system threads should have no signals enabled. They have no business executing user signal handlers -- especially IDLE. - The initial signal mask for other threads needs to follow the implication of a pure C99 environment which only has the methods <code>raise()</code> and <code>signal()</code>. This implies that all signals are unmasked until the thread explicitly uses a POSIX methods to block some. This applies to both Classic tasks and POSIX threads created as initialization tasks/threads (e.g. before the system is up). - After the initial threads are created, the signal mask should be inherited from the creator. This can be done based on system state.					
	RTEMS behavior was incorrect by blocking all signals initially and for Classic API tasks.					
	Notes: - The default signal mask does not matter for any application that does not use POSIX signals. - It is assumed that Classic API tasks should provide a compliant C run-time environment. Hence the default signal mask state matters.					
	Impact on Applications and Tests ===== In general, an application should always explicitly block or unmask any signals that it intends to process. If there is concern about which thread may process it, then it should be blocked in all threads that are not intended to process it. The following code can be used to block all signals. This method can be used in the initialization task/thread to mimic historical behavior:					

	static void block_all_signals(void)					
#3800	4 weeks ago	fixed	posix	Joel Sherrill	Joel Sherrill	3 weeks ago
Summary	termios - Add Capability to Generate SIGINTR and SIGQUIT					
Description	<pre>sigset_t sigset; sigset_t mask; // check sc == 0</pre>					
	Currently the RTEMS termios implementation does not examine the ISIG setting in the termios attributes and thus does not examine input for the INTR (ctl-C) and QUIT (ctl-\) characters. As a consequence, it cannot return -1/EINTR. The proposed solution implements a point at which a default handler can do nothing like currently or the application can use the following new method which allows them to register the RTEMS provided method <code>rtems_termios_posix_isig_handler()</code>. <pre>// check sc == 0 rtems_termios_isig_status_code rtems_register_isig_handler(rtems_termios_isig_handler handler);</pre>					
	The method <code>rtems_termios_posix_isig_handler()</code> is provided and has the POSIX compliant behavior of generating SIGINTR for the VINTR character and SIGQUIT for the VQUIT character. The user also can register <code>rtems_termios_default_isig_handler()</code> to return to the default behavior. The tests <code>termios10</code> (polled IO) and <code>termios11</code> (interrupt driven IO) are added to exercise this behavior.					
#3805	39 hours ago	invalid	lib/debugger	Joel Sherrill	Chris Johns	32 hours ago
Summary	libdebugger build error on atsamv					
Description	This was caught in a build sweep using <code>rtems-bsp-builder</code>. Configure command: <pre>/home/joel/rtems-cron-5/rtems/configure --target=arm-rtems5 --enable-rtemsbsp=atsamv --prefix=/home/joel/rtems-cron-5/tools/5/bsps --enable-rtems-debug --disable-smp</pre>					
	Compiler output:					
	<pre>arm-rtems5-gcc --pipe -DHAVE_CONFIG_H -I. -I/home/joel/rtems-cron-5/b-atsam/arm-rtems5/c/atsamv/include -I/home/joel/rtems-cron-5/rtems/cpukit/include - I/home/joel/rtems-cron-5/rtems/cpukit/score/cpu/arm/include -I/home/joel/rtems-cron-5/rtems/cpukit/libnetworking -mthumb -mcpu=cortex-m7 -mfpv5-d16 -mfloat- abi=hard -O2 -g -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -MT libdebugger/rtems- debugger-arm.o -MD -MP -MF \$depbase.Tpo -c -o libdebugger/rtems-debugger-arm.o /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c &&\ mv -f \$depbase.Tpo \$depbase.Po /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c: In function 'arm_debug_mmap_enable': /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:826:12: warning: unused variable 'abort_handler' [-Wunused-variable] void* abort_handler; ^~~~~~ /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c: In function 'arm_debug_unlock_abort': /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:1593:53: error: 'arm_switch_reg' undeclared (first use in this function) #define EXCEPTION_ENTRY_EXC() (void) arm_switch_reg ^ /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:1609:3: note: in expansion of macro 'EXCEPTION_ENTRY_EXC' EXCEPTION_ENTRY_EXC(); ^~~~~~ /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:1593:53: note: each undeclared identifier is reported only once for each function it appears in #define EXCEPTION_ENTRY_EXC() (void) arm_switch_reg ^ /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:1609:3: note: in expansion of macro 'EXCEPTION_ENTRY_EXC' EXCEPTION_ENTRY_EXC(); ^~~~~~ /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:1607:24: warning: variable 'frame' set but not used [-Wunused-but-set-variable] CPU_Exception_frame* frame; ^~~~~~ /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c: In function 'target_exception_undefined_instruction': /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:1593:53: error: 'arm_switch_reg' undeclared (first use in this function) #define EXCEPTION_ENTRY_EXC() (void) arm_switch_reg ^ /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:1619:3: note: in expansion of macro 'EXCEPTION_ENTRY_EXC' EXCEPTION_ENTRY_EXC(); ^~~~~~ /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c: In function 'target_exception_supervisor_call': /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:1593:53: error: 'arm_switch_reg' undeclared (first use in this function) #define EXCEPTION_ENTRY_EXC() (void) arm_switch_reg ^ /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:1642:3: note: in expansion of macro 'EXCEPTION_ENTRY_EXC' EXCEPTION_ENTRY_EXC(); ^~~~~~ /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c: In function 'target_exception_prefetch_abort': /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:1593:53: error: 'arm_switch_reg' undeclared (first use in this function) #define EXCEPTION_ENTRY_EXC() (void) arm_switch_reg ^ /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:1659:3: note: in expansion of macro 'EXCEPTION_ENTRY_EXC' EXCEPTION_ENTRY_EXC(); ^~~~~~ /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c: In function 'target_exception_data_abort': /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:1593:53: error: 'arm_switch_reg' undeclared (first use in this function) #define EXCEPTION_ENTRY_EXC() (void) arm_switch_reg ^ /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:1676:3: note: in expansion of macro 'EXCEPTION_ENTRY_EXC' EXCEPTION_ENTRY_EXC(); ^~~~~~ At top level: /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c:1605:1: warning: 'arm_debug_unlock_abort' defined but not used [-Wunused-function] arm_debug_unlock_abort(void)</pre>					

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5 5.1 release

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