



RTEMS - 5.0.0-m1912 Release Notes

05 December 2019

RTEMS 5 Series Release Notes

These notes cover the dot releases:

5.1

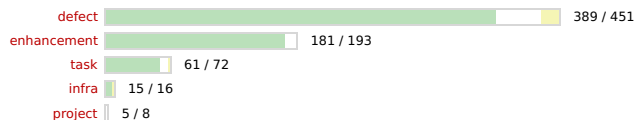
5.0

5.1 (open)

Statistics

Total	740
Fixed	596
Invalid	11
Works for me	6
Duplicate	10
Won't fix	28

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 Architectural 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 Obsolete 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 environment 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 Coverage 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 Flexibleassignto 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 acinclud
- #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 Dhrystone 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/m32csim 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 MDS 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 Mavrck
- #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 qemuprep-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 qemuppc 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 libdwarf 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-w64-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 announcing 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 glibc
- #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 Libdl does not load incrementally linked object file
- #3741 libdl 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 libdl test dl05.exe failing
- #3747 Address Cortex-M3 Errata 602117
- #3748 libdl 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 libdl does not handle ARM mode reloc tramp parsing
- #3776 libdl ARM does not support ARM mode trampolines.
- #3777 libdl 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 application 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
- #3808 Fix qemu-couverture-git RSB download file name
- #3809 Fix epiphany-rtems5-gdb-7.8 RSB download file name
- #3810 Use the release details in the release build docs
- #3811 Release source path on ftp.rtems.org is wrong
- #3812 Released RSB has no source set for rtems-tools
- #3813 RSB does not handle --rsb-file in releases
- #3814 Releasing creates 2 copies of the kernel and tools.
- #3815 Improve SMP EDF scheduler configuration
- #3817 RSB fails on FreeBSD 12.0 (32bit and 64bit)
- #3818 New build system
- #3819 Consider FAA AC 20-148 - Reusable Software Components in RTEMS Software Engineering manual
- #3820 Rename psx_example_N to something meaningful
- #3821 Port NVMe support from FreeBSD to libbsd
- #3822 Release created VERSION file in rtems-tools-*.tar.xz is wrong
- #3823 Untar_ family doesn't handle nested directories
- #3825 RSB prefix argument incorrectly processes tilde
- #3826 top on SMP shows invalid priorities
- #3828 Switch over to new build system
- #3830 Build problems with user names which contain space characters
- #3831 Duplicate description of Tiers and Rules

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	<p>multi-threaded newlib protects a number of internal data structures (as of newlib-1.15 these comprise:</p> <ul style="list-style-type: none"> • 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 <p>) 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').</p> <p>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.</p> <p>I am currently working on an implementation which should be available shortly.</p>					
#1394	11 years ago	fixed	tool/newlib	Daniel Hellstrom	Chris Johns	2 years ago
Summary	scandir() fails due to MAXNAMELEN is incorrect					
Description	<p>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.</p> <p>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.</p> <p>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.</p>					

I tried to run the code below on my FAT filesystem, taken directly from the scandir(3) man page.

```

/* 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);
    }
}

```

#1662	9 years ago	fixed	fs	Bharath Suri	Chris Johns	22 months ago
-------	-------------	-------	----	--------------	-------------	---------------

Summary: termios.c: semaphore not deleted, consequently resulting in failure of rtems_termios_open

Description: The semaphore osem is still in use in rtems_termios_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
-------	-------------	-------	-------	-------------	-----------------	-------------

Summary: Heap extend allows discontinuous memory regions.

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.

Description: 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	22 months ago
-------	-------------	-------	----	---------	-------------	---------------

Summary: Memory leak in tmpfile()

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
-------	-------------	-------	-------	-----------------	-----------------	-------------

Summary: <rtems/score/basedefs.h> superfluously includes <limits.h>

Description: 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
-------	-------------	-------	-------	-----------------	-----------------	-------------

Summary: <rtems/score/basedefs.h> superfluously includes <string.h>

Description: 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
-------	-------------	-------	-------	-----------------	-----------------	-------------

Summary: times() and _times() are subject to integer overflows

Description: 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
-------	-------------	-------	-------	-----------------	---------------	-------------

Summary: Potential integer overflow problem in EDF scheduler

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.

```

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);
}

```


This makes it possible to get rid of the red-black tree implementation used by the JFFS2 support.

#2355	5 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 <code>c/src/lib/libbsp/sparc/shared/</code> use <code>interrupt disable/enable</code> for low-level mutual exclusion. This is not enough on SMP configurations.					
#2363	4 years ago	duplicate	arch/sparc	Sebastian Huber		22 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 <code>spstests/spcontext01</code> . This problem exists for many years and might be working as intended. It is possible to fix this issue using the <code>SPARC_USE_SAFE_FP_SUPPORT</code> 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 <code>open()</code> 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. 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
Summary	Documentation of User Extensions needs more information					
Description	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 <code>rtems_extension_create()</code> 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
Summary	<code>rtems_waf</code> : Tools without a version are not supported					
Description	<code>waf configure --prefix=/opt/rtems --rtems=/opt/rtems --rtems-tools=/opt/rtems --rtems-bsps=i386/pc686</code> Setting top to <code>:/scratch/git-rtems-libbsd</code> Setting out to <code>:/scratch/git-rtems-libbsd/build</code> Could not find any architectures (complete log in <code>:/scratch/git-rtems-libbsd-upstream/build/config.log</code>)					
#2385	4 years ago	fixed	arch/arm	Chris Johns	Sebastian Huber	2 years ago
Summary	Warning from commit "bsps/arm: Do not use <code>ARM_ARCH_7A</code> "					
Description	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
Summary	Enable function and data sections					
Description	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: <code>CFLAGS += -function-sections -fdata-sections LDFLAGS += -Wl,--gc-sections</code> 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 <code>KEEP()</code> directive of GNU ld).					
#2408	4 years ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	20 months ago
Summary	Linker set based initialization					
Description	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 <ul style="list-style-type: none"> • 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>					

Description

```
#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);
```

and `init.c`.

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

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

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

/* Define the end marker */
__attribute__((used))
__attribute__((section(".rtmsroset.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.

```
.rtmsroset : {
KEEP (*(SORT(.rtmsroset.*)))
```

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.

```
.rtmsroset 0x000000001001990 0x4 load address 0x00000000002268c
*(SORT(.rtmsroset.*))
.rtmsroset.myset.begin
0x000000001001990 0x0 init.o
.rtmsroset.myset.content
0x000000001001990 0x4 module.o
.rtmsroset.myset.end
0x000000001001994 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).

#2442	4 years ago	fixed	bsps	Joel Sherrill	joel.sherrill@...	2 years ago
Summary	Remove the avr/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
Summary	Remove AVR Architectural Port					
Description	<p>Remove the AVR port per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_Port.</p> <p>All BSPs must be removed before the architectural port can be removed. These are tracked by the following tickets:</p> <ul style="list-style-type: none"> #2442 - avrttest <p>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.</p>					
#2444	4 years ago	fixed	arch/m68k	Joel Sherrill	Aun-Ali Zaidi <admin@...>	2 years ago
Summary	Remove m68k/mvme136 BSP					
Description	<p>Remove the m68k/mvme136 BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP</p> <p>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.</p>					
#2445	4 years ago	fixed	arch/m68k	Joel Sherrill	Aun-Ali Zaidi <admin@...>	2 years ago
Summary	Remove m68k/sim68000 BSP					
Description	<p>Remove the m68k/sim68000 BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP</p> <p>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.</p>					
#2446	4 years ago	fixed	unspecified	Joel Sherrill	Joel Sherrill	2 years ago
Summary	Remove M32R Architectural Port					
Description	<p>Remove the M32R port per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_Port.</p> <p>All BSPs must be removed before the architectural port can be removed. These are tracked by the following tickets:</p> <ul style="list-style-type: none"> #2447 - m32rsim <p>Rationale: The M32R port is incomplete, appears to have no users, and the CPU architecture is end-of-lifed.</p>					
#2447	4 years ago	fixed	bsps	Joel Sherrill	Aun-Ali Zaidi <admin@...>	2 years ago
Summary	Remove m32r/m32rsim					
Description	<p>Remove the m32r/m32rsim BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP</p>					
#2448	4 years ago	fixed	arch/mips	Joel Sherrill		2 years ago
Summary	Remove mips/mongoose BSP					
Description	<p>Remove the m32r/m32rsim BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP</p> <p>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.</p>					
#2449	4 years ago	fixed	arch/arm	Joel Sherrill	Aun-Ali Zaidi <admin@...>	2 years ago
Summary	Remove arm/gba BSP					
Description	<p>Remove the arm/gba BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP</p> <p>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.</p>					
#2450	4 years ago	fixed	arch/arm	Joel Sherrill	Aun-Ali Zaidi <admin@...>	2 years ago
Summary	Remove arm/nds					
Description	<p>Remove the arm/nds BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP</p> <p>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.</p>					
#2451	4 years ago	fixed	arch/arm	Joel Sherrill	Aun-Ali Zaidi <admin@...>	2 years ago
Summary	Remove arm/gp32 BSP					
Description	<p>Remove the arm/gp32 BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP</p> <p>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.</p>					
#2452	4 years ago	fixed	unspecified	Joel Sherrill	Joel Sherrill	13 months ago
Summary	Remove H8300 Architectural Port					
Description	<p>Remove the H8300 port per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_Port.</p> <p>All BSPs must be removed before the architectural port can be removed. These are tracked by the following tickets:</p> <ul style="list-style-type: none"> #2453 - h8sim <p>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.</p>					
#2453	4 years ago	fixed	bsps	Joel Sherrill	Aun-Ali Zaidi <admin@...>	2 years ago
Summary	Remove h8300/h8sim BSP					
Description	<p>Remove the h8300/h8sim BSP per the instructions at https://devel.rtems.org/wiki/Developer/Removing_a_BSP</p>					
#2454	4 years ago	fixed	unspecified	Joel Sherrill	Sebastian Huber	2 years ago
Summary	Warning in threadqops.c					
Description	<p>This may apply to the 4.11 branch as well. I am not sure.</p> <pre>.././././././././.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.</pre>					

#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 and 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 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	13 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 6d21c13e5094d490280a941cf0e833f91f85715 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	Obsolete 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.					

- 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.

Description

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;
    struct 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).

#2557	4 years ago	fixed	score	Amar Takhar	Amar Takhar	2 years ago
Summary	Delete the EXTERN pattern					
Description	Use the thread lock to protect the priority nodes. 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: <pre>#define SOME_XYZ_EXTERN #include <some.h></pre> into: some.h: <pre>extern type xyz;</pre> some_xyz.c: <pre>#include <some.h> type xyz;</pre> See discussion: https://lists.rtems.org/pipermail/devel/2016-January/013506.html Update Developer/Coding/Conventions accordingly.					

#2559	4 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Delete the EXTERN pattern					

Change the following pattern: some.h:

```
#ifndef SOME_XYZ_EXTERN
#define SOME_XYZ_EXTERN extern
#endif
SOME_XYZ_EXTERN type xyz;
```

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.

#2560	4 years ago	fixed	arch/arm	Sebastian Huber		2 years ago
Summary	smdk2410 is broken due to gp32 removal					

Description	The smdk2410 BSPs use files of the removed gp32 BSP. [f2a228b2cb5ce376c56ae8d767084b92f2822af0/rtems]					
-------------	--	--	--	--	--	--

#2576	4 years ago	fixed	arch/arm	Joel Sherrill	Joel Sherrill <joel@...>	15 months ago
Summary	arm/lpc176x: linker script update (add KEEP() sections)					

Description	This 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.					
-------------	---	--	--	--	--	--

#2606	4 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	alarm() uses seconds watchdog and thus is affected by clock changes					

Description	alarm() uses <code>_Watchdog_Insert_seconds()</code> and thus is affected by clock changes, e.g. via <code>_TOD_Set()</code> . 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 <code>ualarm()</code> and <code>nanosleep()</code> .					
-------------	---	--	--	--	--	--

#2608	4 years ago	fixed	posix	Joel Sherrill	Gedare Bloom	2 years ago
Summary	POSIX Condition Variables Clock Attribute Support					

Description	I 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 <code>CLOCK_MONOTONIC</code> and <code>CLOCK_REALTIME</code> . The thread queue is based on <code>CLOCK_MONOTONIC</code> and does not have an option to use <code>CLOCK_REALTIME</code> . Threads and timers waiting on <code>CLOCK_REALTIME</code> 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?					
-------------	--	--	--	--	--	--

#2617	4 years ago	fixed	score	Joel Sherrill	Sebastian Huber	2 years ago
Summary	rtems_heap_allocate_aligned_with_boundary() body and prototype inconsistent					

Description	The first parameter is <code>size_t</code> in the .h and <code>uintptr_t</code> 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 <code>malloc.h</code> header file has this: <pre>void *rtems_heap_allocate_aligned_with_boundary(size_t size, uintptr_t alignment, uintptr_t boundary);</pre> <code>malloc_deferred.c</code> has this: <pre>void *rtems_heap_allocate_aligned_with_boundary(uintptr_t size, uintptr_t alignment, uintptr_t boundary)</pre>					
-------------	---	--	--	--	--	--

#2624	4 years ago	fixed	tool/newlib	Sebastian Huber	Needs Funding	15 months ago
Summary	Fix the year 2038 problem					
Description	<p>RTEMS 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.</p> <p>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</p> <pre> {{{#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; } }}}</pre>					
#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	<p>CentOS 7 on master</p> <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) 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)</pre>					
#2633	4 years ago	fixed	network/legacy	joguinn	Sebastian Huber	2 years ago
Summary	waf build failed for rtems-libbsd					
Description	<p>The rtems-libbsd failed when building with waf. Here is the output:</p> <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);</pre>					

<p> <pre> Description on BSD_ASSERT(executing->Timer.state == WATCHDOG_INACTIVE); ~ /frebsd/sys/kern/subr_sleepqueue.c:424:2: note: in expansion of macro 'BSD_ASSERT' /frebsd/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/frebsd/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> </p>	<p>#2634</p>	<p>4 years ago</p>	<p>fixed</p>	<p>arch/i386</p>	<p>Joel Sherrill</p>	<p>Pavel Pisa <ppisa@...></p>	<p>2 years ago</p>
<p> <pre> Summary New warning in pc386 VESA driver Pavel.. can you look into this? /.i386-rtems4.12-gcc-..../rtems/c/src/lib/libbsp/i386/pc386/console/fb_vesa_rm.c: In function 'find_mode_using_EDID': /.i386-rtems4.12-gcc-..../rtems/c/src/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> </p>	<p>#2638</p>	<p>4 years ago</p>	<p>fixed</p>	<p>unspecified</p>	<p>Joel Sherrill</p>	<p>Joel Sherrill <joel@...></p>	<p>2 years ago</p>
<p> <pre> Summary pc386: ld -r issue with per function sections 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. i386-rtems4.12-gcc --pipe -B..../.i386-rtems4.12-gcc-..../lib/ -B..../.i386-rtems4.12-gcc-..../pc386/lib/ -specs bsp_specs -qrtems -mtune=i386 -O2 -g -ffunction-sections -fdata-sections -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -Wno-linkcmd -nostdlib -r -WI,--gc-sections -WI,-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 </pre> </p>	<p>#2641</p>	<p>4 years ago</p>	<p>fixed</p>	<p>build</p>	<p>aurelio</p>	<p>Chris Johns</p>	<p>20 months ago</p>
<p> <pre> Summary configure: enable-rtemsbsp doesn't warn if bsp does not exist 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. </pre> </p>	<p>#2644</p>	<p>4 years ago</p>	<p>fixed</p>	<p>tool/rsb</p>	<p>Joel Sherrill</p>		<p>2 years ago</p>
<p> <pre> Summary sis does not run on gdb 7.11 but does on gdb 7.9 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. </pre> </p>	<p>#2649</p>	<p>4 years ago</p>	<p>fixed</p>	<p>tool/rsb</p>	<p>Chris Johns</p>	<p>Chris Johns</p>	<p>2 years ago</p>
<p> <pre> Summary RSB remove 4.11, 4.10 and 4.9 from the master branch. 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. </pre> </p>	<p>#2663</p>	<p>4 years ago</p>	<p>wontfix</p>	<p>arch/i386</p>	<p>Joel Sherrill</p>	<p>Sebastian Huber</p>	<p>2 years ago</p>
<p> <pre> Description 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%. </pre> </p>	<p>#2664</p>	<p>4 years ago</p>	<p>duplicate</p>	<p>score</p>	<p>Joel Sherrill</p>	<p>Sebastian Huber</p>	<p>2 years ago</p>
<p> <pre> Summary spclock_err02 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/.i386-rtems4.12-gcc-..../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/.i386-rtems4.12-gcc-..../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/.i386-rtems4.12-gcc-..../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/.i386-rtems4.12-gcc-..../rtems/c/src/..../cpukit/libcsupport/src/assert.c:52 #3 0x0200bbf8 in _Watchdog_Ticks_from_timespec (ts=0x2022210) at/cpukit/..../sis/lib/include/rtems/score/watchdogimpl.h:316 #4 _TOD_Set_with_timestamp (tod_as_timestamp=tod_as_timestamp@entry=0x2022280) at/.i386-rtems4.12-gcc-..../rtems/c/src/..../cpukit/score/src/coretodset.c:40 #5 0x02009880 in rtems_clock_set (tod=tod@entry=0x2022304) at/.i386-rtems4.12-gcc-..../rtems/c/src/..../cpukit/rtems/src/clockset.c:42 #6 0x02001818 in Init (argument=<optimized out>) at/.i386-rtems4.12-gcc-..../rtems/c/src/..../testsuites/sptests/spclock_err02/init.c:93 </pre> </p>							

Summary	User extensions execution order must be clarified					
Description	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
Summary	Update doc to reflect obsoleting rtems_clock_get()					
Description	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	worksforme	network/legacy	Joel Sherrill	Sebastian Huber	2 years ago
Summary	linking issue for htonl, etc when using -std=c99					
Description	<p>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.</p> <p>Test case ===== #include <arpa/inet.h></p> <pre>int main(int argc, char argv) { uint32_t v = (uint32_t) argc; uint32_t rc = htonl(v); return v; } =====</pre> <p>This script was what I used to find what caused the linking error to go away.</p> <pre>===== 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 \ -D_XOPEN_SOURCE=600 -DUSE_SVID main.c -lbsd -lm -lbsd i386-rtems4.12-gcc -std=c99 \ -B\${RTEMS_MAKEFILE_PATH}/lib -specs bsp_specs -qrtems \ -DUSE_SVID main.c -lbsd -lm -lbsd i386-rtems4.12-gcc -std=c99 \ -B\${RTEMS_MAKEFILE_PATH}/lib -specs bsp_specs -qrtems \ main.c -lbsd -lm -lbsd i386-rtems4.12-gcc \ -B\${RTEMS_MAKEFILE_PATH}/lib -specs bsp_specs -qrtems \ main.c -lbsd -lm -lbsd =====</pre>					
#2695	4 years ago	fixed	tool/gcc	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Add libatomic for RTEMS					
#2696	4 years ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Unpredictable errno value returned by sem_wait() in case of semaphore deletion					
Description	_POSIX_Semaphore_Delete() used -1 for the thread queue flush status which in turn resulted in an invalid memory access in _POSIX_Semaphore_Translate_core_semaphore_return_code().					
#2698	4 years ago	fixed	tool/gcc	Sebastian Huber		2 years ago
Summary	GCC 6.1 is broken for microblaze					
Description	<p>The enabled libatomic reveals a bug in the microblaze RTEMS configuration:</p> <pre>configure:3566: checking for C compiler default output file name configure:3588: /scratch/git-rtems-source-builder/rtems/build/microblaze-rtems4.12-gcc-6.0.1-RC-20160415-newlib-6ee81f44e04848901c7b05c968564d34a7ceed06-x86_64-linux-gnu-1/build/.gcc/xgcc -B/scratch/git-rtems-source-builder/rtems/build/microblaze-rtems4.12-gcc-6.0.1-RC-20160415-newlib-6ee81f44e04848901c7b05c968564d34a7ceed06-x86_64-linux-gnu-1/build/.gcc/ -nostdinc -B/scratch/git-rtems-source-builder/rtems/build/microblaze-rtems4.12-gcc-6.0.1-RC-20160415-newlib-6ee81f44e04848901c7b05c968564d34a7ceed06-x86_64-linux-gnu-1/build/microblaze-rtems4.12/newlib/ -isystem /scratch/git-rtems-source-builder/rtems/build/microblaze-rtems4.12-gcc-6.0.1-RC-20160415-newlib-6ee81f44e04848901c7b05c968564d34a7ceed06-x86_64-linux-gnu-1/build/microblaze-rtems4.12/newlib/targ-include -isystem /scratch/git-rtems-source-builder/rtems/build/microblaze-rtems4.12-gcc-6.0.1-RC-20160415-newlib-6ee81f44e04848901c7b05c968564d34a7ceed06-x86_64-linux-gnu-1/build/microblaze-rtems4.12/microblaze-rtems4.12/lib/ -B/build/rtems-4.12/microblaze-rtems4.12/lib/ -isystem /build/rtems-4.12/microblaze-rtems4.12/include -isystem /build/rtems-4.12/microblaze-rtems4.12/sys-include -g -O2 conftest.c >&5 /build/rtems-4.12/microblaze-rtems4.12/bin/ld: cannot open linker script file xilinx.ld: No such file or directory collect2: error: ld returned 1 exit status</pre> <p>Reason:</p> <pre>gcc/config/microblaze/microblaze.h: %(!T*: -dT xilinx.ld%s)"</pre> <p>This should be somehow fixed in the RTEMS GCC configuration for microblaze.</p>					
#2700	4 years ago	fixed	unspecified	David Biderman	Sebastian Huber <sebastian.huber@...>	2 years ago
Summary	cpukit/libfs/src/nfsclient/src/rpcio.c:524): (style) Suspicious condition					
Description	<p>cpukit/libfs/src/nfsclient/src/rpcio.c:524): (style) Suspicious condition (assignment + comparison); Clarify expression with parentheses.</p> <p>Source code is</p> <pre>if ((len = getgroups(NGROUPS, gids) < 0)) { maybe better code if ((len = getgroups(NGROUPS, gids)) < 0) {</pre>					
#2701	4 years ago	fixed	build	printk	Amar Takhar	2 years ago
Summary	Rename asm file with .S (upper case) ext. name					
Description	The are some asm file with .s ext. name, .s and .S is different for gnu as, the pre processed produce .s file from .S. In a word, .S can use #define .s can not. KBuild clean .s files when make clean. I have submit a patch to devel, but blocked. Too big patch.					
#2702	4 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Remove descriptor objects for POSIX message queues					
Description	The mq_open() function returns a descriptor to a POSIX message queue object identified by a name. This is similar to sem_open(). In contrast to the POSIX semaphore the POSIX message queues use a separate object for the descriptor. This extra object is superfluous, since the object identifier can be used directly for this purpose, just like for the semaphores.					
#2706	4 years ago	fixed	unspecified	Sebastian Huber	Sebastian Huber <sebastian.huber@...>	2 years ago
Summary	Buffer allocation of capture engine is broken on SMP configurations					
Description	The capture engine uses function static variables.					
#2707	4 years ago	fixed	unspecified	Sebastian Huber	Sebastian Huber <sebastian.huber@...>	2 years ago
Summary	Unsafe use of current processor index in capture engine					

Summary	The current processor index is used outside a thread dispatch disabled section.					
#2714	4 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
Summary	A pthread_detach() does not lead to a resource reclamation					
Description	According to POSIX a pthread_detach() should lead to a resource reclamation if the thread is already cancelled.					
#2718	4 years ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Blocking_CORE_message_queue_Submit() may lead to unpredictable results					
Description	The thread wait return code is not properly initialized before the thread queue enqueue.					
#2722	4 years ago	fixed	tool/newlib	Sebastian Huber	Sebastian Huber	2 years ago
Summary	SEM_VALUE_MAX is unusually small on RTEMS					
Description	RTEMS defines SEM_VALUE_MAX to 32767 in Newlib newlib/libc/sys/rtems/include/limits.h Other systems use INT_MAX or 2147483647.					
#2723	4 years ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	2 years ago
Summary	CPUINFO command to report per-processor information					
Description	Add a CPUINFO command to report per-processor information, e.g. processor index, online state and scheduler assignment.					
Description	<pre>[/] # 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</pre>					
#2725	4 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Classic binary semaphores without a locking protocol can be released by everyone					
Description	<p>The Classic binary semaphores without a locking protocol can be released by everyone, e.g. in contrast to the POSIX mutexes (all variants) or the Classic binary semaphores with priority inheritance or ceiling, there is no owner check in the release path.</p> <p>This behaviour is a bit unexpected and not documented.</p> <p>The following test case fails in case an owner check is added:</p> <pre>*** BEGIN OF TEST SP 42 *** Exercising blocking discipline w/extract in FIFO order Exercising blocking discipline w/unblock in FIFO order TA00 - unblocked - OK rtems_semaphore_delete FAILED -- expected (RTEMS_SUCCESSFUL) got (RTEMS_RESOURCE_IN_USE)</pre> <p>This is actually a bug in the test, since an available mutex is released again.</p>					
#2726	3 years ago	fixed	arch/sparc	Sebastian Huber	Daniel Hellstrom	2 years ago
Summary	grascs.c: Questionable use of binary semaphore					
Description	Use a simple binary semaphore or binary semaphore with inherit priority instead.					
Description	<pre>c/src/lib/libbsp/sparc/shared/ascs/grascs.c- c/src/lib/libbsp/sparc/shared/ascs/grascs.c- /* Create semaphores for blocking ASCS_TC/TM functions */ c/src/lib/libbsp/sparc/shared/ascs/grascs.c- if(rtems_semaphore_create(rtems_build_name('A','S','C','0'),1, c/src/lib/libbsp/sparc/shared/ascs/grascs.c- (RTEMS_FIFO RTEMS_BINARY_SEMAPHORE) c/src/lib/libbsp/sparc/shared/ascs/grascs.c- RTEMS_NO_INHERIT_PRIORITY RTEMS_LOCAL c/src/lib/libbsp/sparc/shared/ascs/grascs.c- RTEMS_NO_PRIORITY_CEILING), 0, c/src/lib/libbsp/sparc/shared/ascs/grascs.c- &cfg->tcsem1) != RTEMS_SUCCESSFUL) { c/src/lib/libbsp/sparc/shared/ascs/grascs.c- goto init_error2; c/src/lib/libbsp/sparc/shared/ascs/grascs.c- } c/src/lib/libbsp/sparc/shared/ascs/grascs.c- if(rtems_semaphore_create(rtems_build_name('A','S','C','2'),0, c/src/lib/libbsp/sparc/shared/ascs/grascs.c- (RTEMS_FIFO RTEMS_BINARY_SEMAPHORE) c/src/lib/libbsp/sparc/shared/ascs/grascs.c- RTEMS_NO_INHERIT_PRIORITY RTEMS_LOCAL c/src/lib/libbsp/sparc/shared/ascs/grascs.c- RTEMS_NO_PRIORITY_CEILING), 0, c/src/lib/libbsp/sparc/shared/ascs/grascs.c- &cfg->tcsem2) != RTEMS_SUCCESSFUL) {</pre>					
#2727	3 years ago	fixed	fs/fat	Sebastian Huber	Sebastian Huber	2 years ago
Summary	FAT file systems use wrong semaphore for mutual exclusion					

#2745	3 years ago	fixed	posix	Gedare Bloom	Gedare Bloom	2 years ago
Summary	Use clock from pthread_condattr in pthread_cond_timedwait					
Description	For pthread_cond_timedwait, the condition variable shall have a clock attribute which specifies the clock that shall be used to measure the time specified by the abstime argument. RTEMS currently does not honor the clock attribute. See http://pubs.opengroup.org/onlinepubs/9699919799/functions/pthread_cond_timedwait.html					
#2748	3 years ago	fixed	network/legacy	Sebastian Huber	Sebastian Huber <sebastian.huber@...>	2 years ago
Summary	Move RTEMS-specific socket wake-up to RTEMS-specific <rtems/rtems_bsdnet.h>					
Description	The <sys/socket.h> contains definitions for the RTEMS-specific socket wake-up support. Move this stuff to <rtems/rtems_bsdnet.h> since this feature is not present in standard network stacks. Portable applications should not use it.					
#2749	3 years ago	fixed	rtems	Sebastian Huber	Sebastian Huber	2 years ago
Summary	rtems_task_set_scheduler() has insufficient parameters					

Task priorities are only valid within a scheduler instance. The rtems_task_set_scheduler() directive moves a task from one scheduler instance to another using the current priority of the thread. However, the current task priority of the source scheduler instance is undefined in the target scheduler instance. Add a third parameter to specify the priority.

```

/**
 * @brief Sets the scheduler instance of a task.
 *
 * Initially, the scheduler instance of a task is set to the scheduler instance
 * of the task that created it. This directive allows to move a task from its
 * current scheduler instance to another specified by the scheduler identifier.
 *
 * @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[in] priority The task priority with respect to the new scheduler
 * instance. The real and initial priority of the task is set to this value.
 * The initial priority is used by rtems_task_restart() for example.
 *
 * @retval RTEMS_SUCCESSFUL Successful operation.
 * @retval RTEMS_ILLEGAL_ON_REMOTE_OBJECT Directive is illegal on remote tasks.
 * @retval RTEMS_INVALID_ID Invalid task or scheduler identifier.
 * @retval RTEMS_INVALID_PRIORITY Invalid priority.
 * @retval RTEMS_RESOURCE_IN_USE The task owns resources which deny a scheduler
 * change.
 *
 * @see rtems_scheduler_ident().
 */
rtems_status_code rtems_task_set_scheduler(
  rtems_id task_id,
  rtems_id scheduler_id,
  rtems_task_priority priority
);
    
```

Description

#2750	3 years ago	fixed	unspecified	Joel Sherrill	Sebastian Huber	2 years ago
Summary	Compile Error When Multiprocessing Enabled					
Description	This should impact every BSP with multiprocessing enabled but I saw it on the sparc/leon3 and powerpc/psim <pre> ../..cpukit/..../psim/lib/include/rtems/score/defs.h:229:5: error: static assertion failed: "Message_queue_MP_Packet" _Static_assert(cond, # msg) ../..../rtems/c/src/..../cpukit/rtems/src/msgmp.c:28:1: note: in expansion of macro 'RTEMS_STATIC_ASSERT' RTEMS_STATIC_ASSERT(</pre>					

#2751	3 years ago	fixed	score	Sebastian Huber	Sebastian Huber	17 months ago
Summary	Thread dispatch via interrupt is broken at least on ARM and PowerPC					
Description	The ARM and PowerPC interrupt epilouges call _Thread_Dispatch() with interrupts disabled (counter example: SPARC). On SMP configurations, since inter-processor interrupts set the thread dispatch necessary indicator this prevents a thread dispatch notification in post-switch handlers (which all run with interrupts disabled). On all configurations, this is a serious issue for the interrupt latency.					

#2752	3 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Relax execution environment for thread begin extensions					
Description	Currently, the thread begin extensions are invoked with thread dispatching disabled. There is an explanation for this in the code <pre> /* * Take care that 'begin' extensions get to complete before * 'switch' extensions can run. This means must keep dispatch * disabled until all 'begin' extensions complete. */ _User_extensions_Thread_begin(executing); </pre> However, the switch extension is always invoked before the thread begin extension for all threads except the initialization thread. A thread dispatch disabled contexts drastically limits the work which can be carried out in the thread begin extensions. It is for example not possible to call malloc(), create POSIX keys or access C++ thread local storage. The thread begin extension should execute in a normal thread context. Thread begin extensions that are disturbed by a thread dispatch should deal with this locally. With the availability of C++ thread local storage in RTEMS being able to pre-initialize such objects in the thread begin extension would be quite handy.					

#2754	3 years ago	fixed	lib/dl	Patrick Gauvin	Chris Johns	2 years ago
Summary	no .strtab section					
Description	dlopen on the object generated by libfoo.cpp in the attached test case fails and results in the error <code>no .strtab section</code> . readelf shows that the section is present, though:					

```
readelf -S libfoo.o | grep strtab
(standard input):97: [92] .shstrtab      STRTAB      00000000 001fb0 00040c 00   0 0 1
(standard input):99: [94] .strtab       STRTAB      00000000 0018b0 00019e 00   0 0 1
```

Steps to Reproduce (you may have to edit `BSP_DIR` in the Makefile):

```
make clean all
qemu-system-arm -m 256M -M xilinx-zynq-a9 -serial null -serial mon:stdio \
-nographic -no-reboot -kernel libdl-strtab-test.exe
```

Expected Output:

```
TEST BEGIN
dlopen: no .strtab section
assertion "handle != NULL" failed: file "libdl-strtab-test.c", line 46, function: POSIX_Init
```

Development Environment:

- **RTEMS Version:** 4.11 (Branch "4.11", commit [3f72dda6ee518d3ea04341ad4df079ecb1895ef7](#)) with the dlerror patches from [#2747](#), and the attached ARM PREL31 support patch (I will be making a separate ticket for this with test code soon).
- **System Type:** ARM Cortex-A9, xilinx_zynq_a9_qemu BSP
- **GCC Type:**

```
arm-rtems4.11-gcc (GCC) 4.9.3 20150626 (RTEMS 4.11, RSB 1675a733536d1aec2020011e5e522497a442561a (HEAD, origin/4.11, 4.11), Newlib 2.2.0.20150423)
```
- **RTEMS Configure Options:**

```
--target=arm-rtems4.11 --enable-rtemsbsp="xilinx_zynq_a9_qemu xilinx_zynq_zedboard xilinx_zynq_csp_cots xilinx_zynq_csp_hybrid" --enable-tests=samples --enable-posix --prefix=$HOME/development/rtems/4.11 --disable-networking
```

#2765	3 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
--------------	-------------	-------	-------	-----------------	-----------------	-------------

Summary Application level deadlocks may lead to SMP lock level deadlocks

Description Due to a missing deadlock detection application level deadlocks may lead to SMP lock level deadlocks.

#2768	3 years ago	fixed	unspecified	Chris Johns	Chris Johns	2 years ago
--------------	-------------	-------	-------------	-------------	-------------	-------------

Summary untar does not keep permissions correctly.

On disk I have 'x' with:

```
$ ls -las x
4 -rwxr-xr-x 1 chris caeng 48 Jul 14 11:46 x
```

the tar file shows:

```
$ tar tvf rootfs.tar
-rwxr-xr-x 0 chris caeng 48 Jul 14 11:46 x
```

and in the IMFS it shows:

```
[/] # ls -las x
0 -rw-r--r-- 1 root root 48 Jan 1 00:00 x
```

The makes adding 'joel' scripts difficult.

#2769	3 years ago	invalid	unspecified	Chris Johns	Chris Johns	20 months ago
--------------	-------------	---------	-------------	-------------	-------------	---------------

Summary rtems-syms does not clean up temp files.

I am seeing temps files such as:

```
$ 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--1libaaa.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
```

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.

#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

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.

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.

I have an application that does not build.

The following C++ file:

```
$ cat t1.cpp
#include <rtems.h>
```

does not compile with git head [5fe6d07ad5690e3d9c6445ca3a465a700a5a5015](#) on Zynq ARM. Build with:

```
$ /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
```

Some (too much to post) of the output is:

Descripti
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 );
                        ^
/opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/include/rtems/score/timestamp.h: In function 'void _Timestamp_Set_to_zero(Timestamp_Control*)':
/opt/work/bsps/rtems/4.12/arm-rtems4.12/xilinx_zynq_zc706/lib/include/rtems/score/timestamp.h:94:8: error: invalid use of incomplete type 'Timestamp_Control {aka struct bintime}'
    _time->sec = 0;
    ^
In file included from /opt/work/rtems/4.12/arm-rtems4.12/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,
      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}'
extern struct bintime _Timecounter_Boottimebin;
      ^~~~~~
```

If '-std=c++11' is removed or replaced with '-std=gnu++11' the error becomes:

```
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'
```

#2775	3 years ago	fixed	arch/arm	Chris Johns	Chris Johns <chrisj@...>	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. The table cannot be changed unless the MMU is disabled.
I suggest the MMU be disabled, the table updated and then the MMU enabled.
Note, the issue only shows up on real hardware, qemu does not complain.

#2776	3 years ago	fixed	score	Alexander Krutwig	Sebastian Huber	2 years ago
-------	-------------	-------	-------	-------------------	-----------------	-------------

Summary SPI Framework

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++

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

Descripti
on

```
/**
 * @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

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

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?doi=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
);

```

#2798	3 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
-------	-------------	-------	-------	-----------------	-----------------	-------------

Summary Fix POSIX timer interval

See also:

<https://lists.rtems.org/pipermail/users/2016-October/030714.html>

Description

	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%	=====									
#2841	3 years ago	fixed	score	2.771%	=====	Sebastian Huber	Sebastian Huber				2 years ago	
Summary	Add NXP SDRAM driver for NXP SC1616											
Description	Timecounter_Binuptime 2.722% Thread_Do_dispatch 2.653% Add support for NXP SC1616 (RS485 over SPI or I2C). 2.240% ARMV7M_Interrupt_service_leave 2.100%											
#2843	3 years ago	fixed	unspecified	1.876%	=====	Sebastian Huber	Sebastian Huber				22 months ago	
Summary	Use self-contained objects instead of Classic API for drivers and support libraries											
Description	CPU_Context_switch 1.773% The Classic API has some weaknesses: The change resulted in 10% more total idle time on the system. • 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	
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	
Summary	Add I2C framework documentation											
Description	The new I2C framework lacks documentation.											
#2849	3 years ago	fixed	doc			Sebastian Huber					2 years ago	
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	
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	
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	
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	
Summary	Add user defined thread names											
Description	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	
Summary	Implement POSIX Shared Memory Objects											
Description	POSIX Shared Memory is a widely used API for inter-process communication. The functions in the API include: • shm_open • ftruncate • mmap • munmap • shm_unlink • close • fstat • fchown • fchmod											
#2862	3 years ago	fixed	doc			Chris Johns	Chris Johns				2 years ago	
Summary	docs.rtems.org Add support to ReST format releases.											
Description	Add support to the releases section of the web site to handle ReST packages. The catalogues have a legacy field for texinfo docs.											

on	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
Summary	Update POSIX 1003.1 Compliance Guide for ReST					
Description	<p>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.</p> <p>I will have to decipher what we used to do and define a new procedure.</p> <p>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.</p>					
#2864	3 years ago	fixed	doc	Chris Johns		2 years ago
Summary	docs.rtems.org Automatic update of branches content when a rtems-doc.git change is made.					
Description	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
Summary	Coverpage installed when building the docs repeats catalogue.xml entries					
Description	The catalogue repeats entries.					
#2867	3 years ago	fixed	tool	Stavros Passas	Chris Johns	2 years ago
Summary	Fix exclude rule in rtems-test-check					
Description	<p>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.</p> <p>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.</p>					
#2868	3 years ago	fixed	arch/arm	David Binderman	Gedare Bloom <gedare@...>	2 years ago
Summary	src/c/src/lib/libbsp/arm/smdk2410/smc/smc.c: 3 * pointless local variables ?					
Description	<pre>[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. \$ 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 ?</pre>					
#2873	3 years ago	fixed	arch/arm	David Binderman	Gedare Bloom <gedare@...>	2 years ago
Summary	src/c/src/lib/libbsp/arm/raspberrypi/i2c/i2c.c:320: defective error checking ?					
Description	<pre>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) { 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.</pre>					
#2874	3 years ago	fixed	arch/powerpc	David Binderman	Sebastian Huber <sebastian.huber@...>	2 years ago
Summary	src/c/src/lib/libbsp/powerpc/beatnik/marvell/gt_timer.c: 4 * pointless check ?					
Description	<pre>[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.</pre>					
#2877	3 years ago	fixed	score	Stavros Passas	joel.sherrill@...	2 years ago
Summary	DHCP client fails on complex networks					
Description	<p>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.</p> <p>However our implementation of a DHCP client, expects a linear execution flow:</p> <ol style="list-style-type: none"> 1. Broadcast a DHCP discover; 2. Wait for a DHCP offer; 3. Transmit a DHCP request; 4. Wait for a DHCP ack; <p>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.</p> <p>This issue that is present from when I remember in RTEMS, definitely from 4.10 up to now.</p>					
#2878	3 years ago	fixed	arch/sparc	David Binderman	Daniel Hellstrom	2 years ago
Summary	src/c/src/lib/libbsp/sparc/shared/can/occan.c:1573: broken error checking ?					
Description	<pre>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 if ((speed=pelican_speed_auto(can)) < 0){ /* failed */ return RTEMS_IO_ERROR; } but unsigned int speed; and</pre>					

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.

#2879	3 years ago	fixed	score	David Binderman	Chris Johns	2 years ago
-------	-------------	-------	-------	-----------------	-------------	-------------

Summary src/cpukit/libdebugger/rtems-debugger-server.c: four problems

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

```
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;
```

Description

Suggest adding `return -1` inside the `if`.

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

```
while (p != NULL && p != '\0') {
```

Maybe better code

```
while (p != NULL && *p != '\0') {
```

#2880	3 years ago	wontfix	unspecified	David Binderman		2 years ago
-------	-------------	---------	-------------	-----------------	--	-------------

Summary src/cpukit/libfs/src/jffs2/src/readinode.c:189: faulty logic

src/cpukit/libfs/src/jffs2/src/readinode.c:189]: (style) Condition 'tn.fn ofs >= offset' is always true

Source code is

```
if (tn->fn->ofs < offset)
    next = tn->rb.rb_right;
else if (tn->fn->ofs >= offset)
    next = tn->rb.rb_left;
else
```

Description

Maybe better code

```
if (tn->fn->ofs < offset)
    next = tn->rb.rb_right;
else if (tn->fn->ofs > offset)
    next = tn->rb.rb_left;
else
    break;
```

#2883	3 years ago	fixed	arch/arm	David Binderman	Pavel Pisa	2 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 '|'

Description

Source code is

```
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.

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/v850/preinstall.am Generating ./cpukit/score/cpu/or1k/preinstall.am Generating ./cpukit/score/cpu/bfin/preinstall.am Generating ./cpukit/score/cpu/sh/preinstall.am Generating ./cpukit/score/cpu/m68k/preinstall.am Generating ./cpukit/score/cpu/powerpc/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/libbci/preinstall.am Generating ./cpukit/wrapup/preinstall.am Generating ./cpukit/sapi/preinstall.am Generating ./cpukit/libdl/preinstall.am Generating ./cpukit/libcsupport/preinstall.am Generating ./cpukit/pppd/preinstall.am Generating ./cpukit/dt/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/teinetd/preinstall.am Generating ./cpukit/libdebugger/preinstall.am Generating ./cpukit/rtems/preinstall.am Generating ./cpukit/libmd/preinstall.am Generating ./cpukit/wrapup/preinstall.am Generating ./c/src/libchip/preinstall.am Generating ./c/src/lib/libbsp/no_cpu/no_bsp/preinstall.am Generating ./c/src/lib/libbsp/preinstall.am Generating ./c/src/lib/libbsp/arm/csb336/preinstall.am Generating ./c/src/lib/libbsp/arm/smdk2410/preinstall.am Generating ./c/src/lib/libbsp/arm/realview-pbx-a9/preinstall.am Generating ./c/src/lib/libbsp/arm/preinstall.am Generating ./c/src/lib/libbsp/arm/stm32f4/preinstall.am Generating ./c/src/lib/libbsp/arm/atsam/preinstall.am Generating ./c/src/lib/libbsp/arm/rtl22xx/preinstall.am Generating ./c/src/lib/libbsp/arm/csb337/preinstall.am Generating ./c/src/lib/libbsp/arm/beagle/preinstall.am Generating ./c/src/lib/libbsp/arm/edb7312/preinstall.am Generating ./c/src/lib/libbsp/arm/lm3s69xx/preinstall.am Generating ./c/src/lib/libbsp/arm/lpc176x/preinstall.am Generating ./c/src/lib/libbsp/arm/lpc24xx/preinstall.am Generating ./c/src/lib/libbsp/arm/gumstix/preinstall.am Generating ./c/src/lib/libbsp/arm/xilinx-zynq/preinstall.am Generating ./c/src/lib/libbsp/arm/gdbarmsim/preinstall.am Generating ./c/src/lib/libbsp/arm/lpc32xx/preinstall.am Generating ./c/src/lib/libbsp/arm/tms570/preinstall.am Generating ./c/src/lib/libbsp/arm/raspberrypi/preinstall.am Generating ./c/src/lib/libbsp/arm/altera-cyclone-v/preinstall.am Generating ./c/src/lib/libbsp/lm32/milkyinst/preinstall.am Generating ./c/src/lib/libbsp/lm32/lm32_evr/preinstall.am Generating ./c/src/lib/libbsp/nios2/nios2_iss/preinstall.am Generating ./c/src/lib/libbsp/epiphany/preinstall.am Generating ./c/src/lib/libbsp/epiphany/epiphany_sim/preinstall.am Generating ./c/src/lib/libbsp/sparc64/niagara/preinstall.am Generating ./c/src/lib/libbsp/bfin/usiii/preinstall.am Generating ./c/src/lib/libbsp/m32c/m32cbsp/preinstall.am Generating ./c/src/lib/libbsp/i386/pc386/preinstall.am Generating ./c/src/lib/libbsp/mips/rbt4938/preinstall.am Generating ./c/src/lib/libbsp/mips/rbt4925/preinstall.am Generating ./c/src/lib/libbsp/mips/hurricane/preinstall.am Generating ./c/src/lib/libbsp/mips/jmr3904/preinstall.am Generating ./c/src/lib/libbsp/mips/malta/preinstall.am Generating ./c/src/lib/libbsp/mips/csb350/preinstall.am Generating ./c/src/lib/libbsp/v850/preinstall.am Generating ./c/src/lib/libbsp/v850/gdbv850sim/preinstall.am Generating ./c/src/lib/libbsp/or1k/preinstall.am Generating ./c/src/lib/libbsp/or1k/generic_or1k/preinstall.am Generating ./c/src/lib/libbsp/bfin/TL16527M/preinstall.am Generating ./c/src/lib/libbsp/sparc64/niagara/preinstall.am Generating ./c/src/lib/libbsp/bfin/eKit533/preinstall.am Generating ./c/src/lib/libbsp/sh/gensh2/preinstall.am Generating ./c/src/lib/libbsp/sh/gensh1/preinstall.am Generating ./c/src/lib/libbsp/sh/gensh4/preinstall.am Generating ./c/src/lib/libbsp/sh/shsim/preinstall.am Generating ./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/virtex4/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/qoriq/preinstall.am Generating ./c/src/lib/libbsp/powerpc/tqm8xx/preinstall.am Generating ./c/src/lib/libbsp/powerpc/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 bash: /home/dhanpal/development/rtems/rsb/source-builder/sb-bootstrap: No such file or directory root@dhanpal-HP-Pavilion-15-Notebook-PC:~/development/rtems/kernel#

#2943	3 years ago	wontfix	unspecified	DHANPAL SINGH		2 years ago
-------	-------------	---------	-------------	---------------	--	-------------

Summary: rtems building error
Description: i am attaching the screenshot of file system

#2945	3 years ago	workforme	unspecified	Joel Sherrill	Daniel Hellstrom	2 years ago
-------	-------------	-----------	-------------	---------------	------------------	-------------

Summary: 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 spccounter01.exe spintrcritical03.exe psxtimes01.exe

Timeouts:

nsec.exe sptask_err02.exe sprvenv01.exe psxkey03.exe psxsignal01.exe psx06.exe psx10.exe sp04.exe mrf5_fstime.exe ticker.exe psxmgsq03.exe psxkey09.exe psx07.exe sptimerserver01.exe psxusleep.exe psxstack02.exe psxkey07.exe psxkey10.exe stackchk.exe sp01.exe fileio.exe spsimplsched01.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 spdfsched01.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 jfs2_fstime.exe psxsignal06.exe spstdthreads01.exe psxbarrier01.exe sp31.exe sp73.exe psxualarm.exe spffio03.exe psxtimer01.exe monitor.exe

Invalid:

cxix_istream.exe spinternalerror01.exe sptimecounter01.exe

#2946	3 years ago	fixed	unspecified	Chris Johns	joel.sherrill@...	2 years ago
-------	-------------	-------	-------------	-------------	-------------------	-------------

Summary: Add a top level global testsuite configuration file (.tcfg) and a 'user-input' test state.

Description: 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.

#2949	3 years ago	wontfix	tool/rsb	Sebastian Huber		2 years ago
-------	-------------	---------	----------	-----------------	--	-------------

Summary: Questionable patch organization in RTEMS tools and RSB

Patches for RTEMS tools are available via the RTEMS tools repository: <https://git.rtems.org/rtems-tools/tree/tools>

They are organized using subdirectories.

The RSB uses these patches. It removes the subdirectories and collects everything in a "patches" directory, e.g. download: <https://git.rtems.org/rtems-tools/plain/tools/4.11/newlib/arm/newlib-ARM-Optimize-IEEE-754-sqrt-implementation.diff> -> patches/newlib-ARM-Optimize-IEEE-754-sqrt-implementation.diff

This works only in case the patch file names are unique. So, the use of subdirectories in the RTEMS tools is questionable.

#2951	3 years ago	fixed	build	alexgerbor	chrisj@...	2 years ago
-------	-------------	-------	-------	------------	------------	-------------

Summary: Error path in rtems-gcc-6.3.0-newlib-2.5.0.20170228-1.cfg

newlib-ARM-Optimize-IEEE-754-sqrt-implementation.diff in path <https://git.rtems.org/rtems-tools/plain/tools/4.12/newlib/arm/> not found

In rtems-gcc-6.3.0-newlib-2.5.0.20170228-1.cfg there error: %patch add newlib {%rtems_newlib_patches}/arm/newlib-ARM-Optimize-IEEE-754-sqrt-implementation.diff


```
rtems-db: tcp remote: connect host: 10.10.5.2
rtems-db: arm debug: (v3.0) ARMv7 [v7, all CP14 registers] breakpoints:5 watchpoints:3
[] frame = 005664EC sig=1 vector=4 ifsr=00000000 pra=0024173A
[] R0 = 00000158 R1 = 00000004 R2 = 00000001 R3 = 0041AB64
[] R4 = 00000158 R5 = 00000004 R6 = 00000000 R7 = 005606A4
[] R8 = 00000016 R9 = 00000001 R10 = 00000006 R11 = 0041AB64
[] R12 = 00560658 SP = 00566540 LR = 00000FFD PC = 00241736
[] CPSR = 08010173 ----Q--A-FT GE:0 IT:01 M:13 SVC
[] target exception: 0 0 0
[] tid:0A01000A: thread:0041F5B0 frame:005664EC
[] server access fault
[] frame = 005664EC sig=1 vector=4 ifsr=00000000 pra=0024173A
[] R0 = 00000158 R1 = 00000004 R2 = 00000001 R3 = 0041AB64
[] R4 = 00000158 R5 = 00000004 R6 = 00000000 R7 = 005606A4
[] R8 = 00000016 R9 = 00000001 R10 = 00000006 R11 = 0041AB64
[] R12 = 00560658 SP = 00566540 LR = 00000FFD PC = 00241736
[] CPSR = 08010173 ----Q--A-FT GE:0 IT:01 M:13 SVC
[] target exception: 0 0 0
[] tid:0A01000A: thread:0041F5B0 frame:005664EC
[] server access fault
```

The following lines first two values are `cpu_self->thread_dispatch_disable_level` and `_ISR_Get_level()` which are both `0` so I cannot see a reason the assert is happening:

```
[] target exception: 0 0 0
```

#2994	3 years ago	fixed	unspecified	Joel Sherrill	Chris Johns	2 years ago
Summary	tar01 XZ error					

This shows up on erc32 and psim.
 /dest3/home/test_script: mode: 0755 want: 0755
 ===== /dest3/symlink ===== (0)This is a test of loading an RTEMS filesystem from an initial tar image.
 Untaring chunks from txz - XZ file is corrupt (data) .././././././././.rtems/src/./././testsuites/libtests/tar01/init.c: 272 status == UNTAR_SUCCESSFUL

#2995	3 years ago	fixed	tool/rsb	Hassan Karim	joel.sherrill@...	2 years ago
Summary	Missing bsets					

When I went to rebuild based on 4.12, I cloned from github. I am no longer getting all of the b-sets that I was expecting. Specifically, 4.12/rtems-sparc
 Chris Johns said to submit it as a bug. It must have happened within the last couple of weeks. As my scripts that automated these tasks were working as of around 3/1/2017
 git clone [git://git.rtems.org/rtems-source-builder.git](https://git.rtems.org/rtems-source-builder.git) \$SETBLDRSCRIPTDIR/sb-set-builder --list-bsets
 RTEMS Source Builder - Set Builder, 4.12 (2074bd1168ee) Examining: config Examining: ../rtems/src/rtems-source-builder/bare/config devel/autotools-base.bset devel/autotools-internal.bset devel/autotools.bset devel/dtc.bset devel/libtool.bset devel/libusb.bset devel/or1ksim.bset devel/qemu.bset gnu-tools-4.6.bset gnu-tools-4.8.2.bset lang/gcc491.bset

#2997	3 years ago	fixed	score	Chris Johns	Chris Johns	2 years ago
Summary	Monitor config command does not handle unlimited objects.					

Running the console's `config` command with unlimited objects gives:

```
[/] # config
INITIAL (startup) Configuration Info
-----
WORKSPACE start: 0x800f0173; size: 0x374c8
TIME usec/tick: 10000; tick/timeslice: 50; tick/sec: 100
MAXIMUMS tasks: -2147483614; timers: -2147483616; sems: -2147483609; que's: -2147483616; ext's: 1
partitions: -2147483616; regions: -2147483616; ports: -2147483616; periods: -2147483616
```

#2999	3 years ago	wontfix	tool/rsb	Joel Sherrill	Chris Johns	2 years ago
Summary	sb-check on Cygwin					

It looks like there are two issues in windows.py

- Probes for programs like bison and flex as required.
- tar - bsdtar must be on mingw. It doesn't appear to exist on cygwin.

 I think the fix is pretty simple code-wise but I wanted to get some feedback on why there were a lot more required programs in this file than on other OS.py files.

#3000	3 years ago	fixed	score	Chris Johns	Joel Sherrill	11 months ago
Summary	Setting interrupt level in the mode arg on SMP returns RTEMS_UNSATISFIED					

If for any reason a user sets the interrupt level in the mode on an SMP build the error `RTEMS_UNSATISFIED` is returned. The documentation indicates this is a lack of stack and this confusing.
 The reason this happens is the SMP check for an interrupt level being set is in the score's `_Thread_Initialize`. I propose that and `is_preemptible` check be converted to an `assert` and checks be added to the Classic API to catch these errors and report suitable error codes.
 There is no meaningful error code available without abusing an existing one so I propose adding `RTEMS_INVALID_MODE`.

#3001	3 years ago	fixed	score	Chris Johns	Sebastian Huber	2 years ago
Summary	SMP build of RTEMS Testsuite does not set CONFIGURE_MAXIMUM_PROCESSORS					

The default setting for `CONFIGURE_MAXIMUM_PROCESSORS` is `1` and this means `rtems_configuration_is_smp_enabled()` returns `false`. Only the `smptests` set the maximum processor count to `CPU_COUNT` and therefore run in SMP mode.
 If SMP is not running in an SMP build when running the tests are the tests really reporting a true indication of the of the system?
 I would expect we have the API tests, `libtests` and `fstests` running with SMP enabled in an SMP build.

#3003	3 years ago	fixed	fs/fat	munster	Sebastian Huber	2 years ago
Summary	FAT does not support clusters bigger than 32K					

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
Summary	SPARC LEON3 BSP SMP build is broken.					

The `rtems-bsp-builder` failure output is:

Description	<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> <p>The BSP builder command line is:</p>						
Summary	#3007	3 years ago	fixed	tools Project	arch/arm	joel.sherrill@...	2 years ago
Summary	<pre>ARM toolchain for docs.rtems.org tools=/build/rtems/tools/4.12\ --rtems=/opt/work/chris/rtems/kernel/rtems.git --build=smp-debug\ --log=x</pre> <p>There are two problems with the caching on ARM:</p> <ul style="list-style-type: none"> 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. <p>I have attached the proposed patch.</p>						
Summary	#3008	3 years ago	fixed	doc	Hassan Karim	chrisj@...	2 years ago
Summary	missing pax causes install failures						
Description	<p>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.</p> <p>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)</p> <p>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.</p> <p>https://docs.rtems.org/rsb/#_host_setups Under this section, 11.1.5. Ubuntu</p> <p>Add pax to this line <code>\$ sudo apt-get build-dep binutils gcc g++ gdb unzip git python2.7-dev pax</code></p>						
Summary	#3009	3 years ago	wontfix	tool/website	Chris Johns	joel.sherrill@...	2 years ago
Summary	Provide invalid link handler for docs.rtems.org so old docs can be removed.						
Description	<p>The docs.rtems.org website has lots of old docs which need to be removed.</p> <p>See #3008 for a reference to old documentation.</p>						
Summary	#3010	3 years ago	fixed	unspecified	David Binderman	Gedare Bloom <gedare@...>	2 years ago
Summary	src/cpukit/posix/src/mmap.c:189: (style) Suspicious condition						
Description	<p>src/cpukit/posix/src/mmap.c:189: (style) Suspicious condition (bitwise operator + comparison); Clarify expression with parentheses.</p> <p>Source code is</p> <pre>} else if ((flags & MAP_PRIVATE != MAP_PRIVATE)) { Maybe better code } else if ((flags & MAP_PRIVATE) != MAP_PRIVATE) {</pre>						
Summary	#3011	3 years ago	workforme	arch/arm	Arturo Pérez	Gedare Bloom	2 years ago
Summary	Error compiling xilinx_zynq_zedboard.						
Description	<p>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 build 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 build again the xilinx_zynq_zedboard BSP, encountering the same error:</p> <pre>gmake[6]: * No rule to make target 'posix/include/sys/mman.h', needed by './cpukit/./../xilinx_zynq_zedboard/lib/include/sys/mman.h'. Stop.</pre>						
Summary	#3012	3 years ago	fixed	tool/newlib	Sebastian Huber	Chris Johns	2 years ago
Summary	Global C++ IO streams are broken (cout, cin, cerr)						
Description	<p>The global C++ IO stream objects are initialized here</p> <p>https://gcc.gnu.org/viewcvs/gcc/trunk/libstdc%2B%2B-v3/src/c%2B%2B98/ios_init.cc?view=markup#185</p> <p>via a placement new. The "stdout" etc. is thread-local in Newlib</p> <pre>#define stdout (_REENT->_stdout)</pre> <p>Using this for a global object like <code>std::cout</code> is quite broken. Which FILE object should be used instead? Potential fix:</p> <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 @@ @@@ -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->_stdin) +#define stderr (_GLOBAL_REENT->_stderr) +#endif + + namespace __gnu_internal_GLIBCXX_VISIBILITY(hidden) + { + using namespace __gnu_cxx;</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
+++ b/newlib/libc/stdio/findfp.c
@@ -259,6 +259,12 @@ _@_ _DEFUN(__sinit, (s),
   __sinit_lock_release ();
 }
```

#3013	3 years ago	fixed	tool/website	Nikolay Komashinskiy	Amar Takhar	14 months ago
-------	-------------	-------	--------------	----------------------	-------------	---------------

Summary: Program received signal SIGSEGV: Invalid memory reference. 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'

Hello, during the CI QA, I had an internal error. This card was automatically generated.

How to Reproduce

```
#ifndef SINGLE_THREAD_
While doing a POST operation on /reset_password, Trac issued an internal error.
LOCK_INIT RECURSIVE(static, sfp_recursive_mutex);
(please provide additional details here)
```

Request parameters:

```
{u'__FORM_TOKEN': u'56888d70c5e5799302935f97',
u'email': u'nikolay.komashinskiy@yandex.ru',
u'register_phone': u'',
u'rtems_user_phone': u'',
u'username': u'nikolaykomashinskiy'}
```

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	3 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	3 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	3 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\lib\chip\serial\ns16550_p.h, need to add a couple register and #ifndef around serial.h

#3017	3 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
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	3 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

#3023	3 years ago	fixed	tool/newlib	Sebastian Huber	Sebastian Huber	2 years ago
Summary	create a patch to the RSB adding the patch to the autoconf build, finally 'git send-email' the patches to devel@... for review.					
Summary	Parameter of CPU_COPY() are in wrong order					
Description	<p>According to the FreeBSD man page we have:</p> <p>https://www.freebsd.org/cgi/man.cgi?query=cpuset&sektion=9&apropos=0&manpath=FreeBSD+11.0-RELEASE+and+Ports</p> <pre>CPU_COPY(cpuset_t *from, cpuset_t *to);</pre> <p>However, in Newlib we have:</p> <pre>static __inline void CPU_COPY(cpu_set_t *dest, const cpu_set_t *src) { *dest = *src; }</pre>					
#3025	3 years ago	fixed	unspecified	Chris Johns	joel.sherrill@...	2 years ago
Summary	m32c/m32csim does not build linpack-pc.c					
Description	<p>1 tests m32c/m32csim build:</p> <pre>configure: /opt/work/chris/rtems/kernel/rtems.git/configure --target\ =m32c-rtems4.12 --enable-rtemsbsp=m32csim --prefix=/opt/rtems/4.12\ --enable-tests</pre> <p>error: testsuites/benchmarks/linpack/linpack-pc.c:253:33: error: storage size of 'a' isn't constant</p> <p>error: testsuites/benchmarks/linpack/linpack-pc.c:253:21: error: storage size of 'aa' isn't constant</p>					
#3027	3 years ago	fixed	tool/rsb	Worth Burruss	Chris Johns	20 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	<p>According to the FreeBSD man page we have:</p> <p>https://www.freebsd.org/cgi/man.cgi?query=cpuset&sektion=9&apropos=0&manpath=FreeBSD+11.0-RELEASE+and+Ports</p> <p>The CPU_NAND() macro removes CPUs in src from dst. (It is the cpuset(9) equivalent of the scalar: dst &= ~ src.)</p> <p>However, in Newlib we had:</p> <pre>static __inline void CPU_NAND_S(size_t setsize, cpu_set_t *dstset, const cpu_set_t *srcset1, const cpu_set_t *srcset2) { cpu_set_word_t *wdest = &dstset->_bits[0]; const cpu_set_word_t *wsrc1 = &srcset1->_bits[0]; const cpu_set_word_t *wsrc2 = &srcset2->_bits[0]; size_t n = setsize / sizeof(*wdest); size_t i; for (i = 0; i < n; ++i) wdest[i] = ~(wsrc1[i] & wsrc2[i]); }</pre>					
#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	<p>According to the FreeBSD man page we have:</p> <p>https://www.freebsd.org/cgi/man.cgi?query=cpuset&sektion=9&apropos=0&manpath=FreeBSD+11.0-RELEASE+and+Ports</p> <p>The CPU_CMP() macro returns true if cpuset1 is NOT equal to cpuset2.</p> <p>However, in Newlib we had:</p> <pre>/* 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); }</pre>					
#3040	2 years ago	invalid	tool/website	Sebastian Huber	Amar Takhar	14 months ago
Summary	Cannot use RTEMS mailing list archive for patches					
Description	<p>The RTEMS mailing list archive has no option to get the raw e-mail via the web interface, e.g.</p> <p>https://lists.rtems.org/pipermail/devel/2017-June/018101.html</p> <p>For example the Newlib mailing list archive:</p> <p>https://sourceware.org/cgi-bin/get-rat-msg?listname=newlib&date=2017&msgid=20170612064218.11969-1-sebastian.huber%40embedded-brains.de</p>					
#3043	2 years ago	fixed	unspecified	Chris Johns		2 years ago
Summary	4.11/rtems-nios2 does not build on Windows.					
Description	The attached RSB report details the failure.					
Description	The path to <code>ranlib</code> is the <code>cwd</code> (see <code>make[5]</code> path) plus the relative path (see the report) which is 308 characters in length and this exceeds the max path length for the Win32 API and binutils reports this as a <code>No such file</code> .					
#3046	2 years ago	fixed	tool/rsb	Chris Johns	Chris Johns	2 years ago
Summary	4.12/rtems-moxie missing release number.					
Description	4.12/rtems-moxie is reporting					
Description	<pre>cleaning: dtc-1.4.1-x86_64-freebsd11.0-1 cleaning: expat-2.1.0-x86_64-freebsd11.0-1 cleaning: moxie-rtems4.12-binutils-2.28-x86_64-freebsd11.0- cleaning: moxie-rtems4.12-gcc-7.1.0-newlib-2.5.0.20170519-x86_64-freebsd11.0- cleaning: moxie-rtems4.12-gdb-7.12-x86_64-freebsd11.0- cleaning: rtems-tools-HEAD-</pre>					


```

../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)
^
../gdb-7.12/gdb/common/vec.h:399:22: note: expanded from macro 'VEC_OP'
#define VEC_OP(T,OP) VEC_##T##_##OP
^
<scratch space>:205:1: note: expanded from here
VEC_tp_t_safe_grow
^
../gdb-7.12/gdb/record-brtrace.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)
^
../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)
^
../gdb-7.12/gdb/common/vec.h:399:22: note: expanded from macro 'VEC_OP'
#define VEC_OP(T,OP) VEC_##T##_##OP
^
<scratch space>:225:1: note: expanded from here
VEC_tp_t_safe_insert
^
2 warnings generated.
/usr/bin/c++ -O2 -pipe -fbracket-depth=1024 -l/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -g -O2 -l-
-l../gdb-7.12/gdb -l../gdb-7.12/gdb/common -l../gdb-7.12/gdb/config -DLOCALEDIR=""/rtems-source-builder/rtems~/rtems/4.12/share/locale"" -DHAVE_CONFIG_H -
-l../gdb-7.12/gdb/.include/opcode -l../gdb-7.12/gdb/.opcodes/.. -l../gdb-7.12/gdb/.readline/.. -l../gdb-7.12/gdb/.zlib -l../bfd -l../gdb-7.12/gdb/.bfd -l../gdb-
7.12/gdb/.include -l../libdecnumber -l../gdb-7.12/gdb/.libdecnumber -l../gdb-7.12/gdb/.gnulib/import -lbuild-gnulib/import -DTUI=1 -l/rtems-source-
builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -
l/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -l/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 -l/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -g -O2 -l-
-l../gdb-7.12/gdb -l../gdb-7.12/gdb/common -l../gdb-7.12/gdb/config -DLOCALEDIR=""/rtems-source-builder/rtems~/rtems/4.12/share/locale"" -DHAVE_CONFIG_H -
-l../gdb-7.12/gdb/.include -l../libdecnumber -l../gdb-7.12/gdb/.libdecnumber -l../gdb-7.12/gdb/.gnulib/import -lbuild-gnulib/import -DTUI=1 -l/rtems-source-
builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -
l/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -l/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 -l/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -g -O2 -l-
-l../gdb-7.12/gdb -l../gdb-7.12/gdb/common -l../gdb-7.12/gdb/config -DLOCALEDIR=""/rtems-source-builder/rtems~/rtems/4.12/share/locale"" -DHAVE_CONFIG_H -
-l../gdb-7.12/gdb/.include/opcode -l../gdb-7.12/gdb/.opcodes/.. -l../gdb-7.12/gdb/.readline/.. -l../gdb-7.12/gdb/.zlib -l../bfd -l../gdb-7.12/gdb/.bfd -l../gdb-
7.12/gdb/.include -l../libdecnumber -l../gdb-7.12/gdb/.libdecnumber -l../gdb-7.12/gdb/gnulib/import -lbuild-gnulib/import -DTUI=1 -l/rtems-source-
builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -
l/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -l/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 -l/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -g -O2 -l-
-l../gdb-7.12/gdb -l../gdb-7.12/gdb/common -l../gdb-7.12/gdb/config -DLOCALEDIR=""/rtems-source-builder/rtems~/rtems/4.12/share/locale"" -DHAVE_CONFIG_H -
-l../gdb-7.12/gdb/.include/opcode -l../gdb-7.12/gdb/.opcodes/.. -l../gdb-7.12/gdb/.readline/.. -l../gdb-7.12/gdb/.zlib -l../bfd -l../gdb-7.12/gdb/.bfd -l../gdb-
7.12/gdb/.include -l../libdecnumber -l../gdb-7.12/gdb/.libdecnumber -l../gdb-7.12/gdb/gnulib/import -lbuild-gnulib/import -DTUI=1 -l/rtems-source-
builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -
l/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -l/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
clang: warning: treating 'c' input as 'c++' when in C++ mode, this behavior is deprecated
clang: warning: treating 'c' input as 'c++' when in C++ mode, this behavior is deprecated
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]
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]
/usr/bin/c++ -O2 -pipe -fbracket-depth=1024 -l/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -g -O2 -l-
-l../gdb-7.12/gdb -l../gdb-7.12/gdb/common -l../gdb-7.12/gdb/config -DLOCALEDIR=""/rtems-source-builder/rtems~/rtems/4.12/share/locale"" -DHAVE_CONFIG_H -
-l../gdb-7.12/gdb/.include/opcode -l../gdb-7.12/gdb/.opcodes/.. -l../gdb-7.12/gdb/.readline/.. -l../gdb-7.12/gdb/.zlib -l../bfd -l../gdb-7.12/gdb/.bfd -l../gdb-
7.12/gdb/.include -l../libdecnumber -l../gdb-7.12/gdb/.libdecnumber -l../gdb-7.12/gdb/gnulib/import -lbuild-gnulib/import -DTUI=1 -l/rtems-source-
builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -
l/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -l/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-regex.o -MT common-regex.o -MMD -MP -MF .deps/common-regex.Tpo
../gdb-7.12/gdb/common/common-regex.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.
/usr/bin/c++ -O2 -pipe -fbracket-depth=1024 -l/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -g -O2 -l-
-l../gdb-7.12/gdb -l../gdb-7.12/gdb/common -l../gdb-7.12/gdb/config -DLOCALEDIR=""/rtems-source-builder/rtems~/rtems/4.12/share/locale"" -DHAVE_CONFIG_H -
-l../gdb-7.12/gdb/.include/opcode -l../gdb-7.12/gdb/.opcodes/.. -l../gdb-7.12/gdb/.readline/.. -l../gdb-7.12/gdb/.zlib -l../bfd -l../gdb-7.12/gdb/.bfd -l../gdb-
7.12/gdb/.include -l../libdecnumber -l../gdb-7.12/gdb/.libdecnumber -l../gdb-7.12/gdb/gnulib/import -lbuild-gnulib/import -DTUI=1 -l/rtems-source-
builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -
l/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -l/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 compile.o -MT compile.o -MMD -MP -MF .deps/compile.Tpo ../gdb-7.12/gdb/compile/compile.c
/usr/bin/c++ -O2 -pipe -fbracket-depth=1024 -l/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -g -O2 -l-
-l../gdb-7.12/gdb -l../gdb-7.12/gdb/common -l../gdb-7.12/gdb/config -DLOCALEDIR=""/rtems-source-builder/rtems~/rtems/4.12/share/locale"" -DHAVE_CONFIG_H -
-l../gdb-7.12/gdb/.include/opcode -l../gdb-7.12/gdb/.opcodes/.. -l../gdb-7.12/gdb/.readline/.. -l../gdb-7.12/gdb/.zlib -l../bfd -l../gdb-7.12/gdb/.bfd -l../gdb-
7.12/gdb/.include -l../libdecnumber -l../gdb-7.12/gdb/.libdecnumber -l../gdb-7.12/gdb/gnulib/import -lbuild-gnulib/import -DTUI=1 -l/rtems-source-
builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -
l/System/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -l/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 compile-c-symbols.o -MT compile-c-symbols.o -MMD -MP -MF .deps/compile-c-symbols.Tpo
../gdb-7.12/gdb/compile/compile-c-symbols.c
/usr/bin/c++ -O2 -pipe -fbracket-depth=1024 -l/rtems-source-builder/rtems/build/tmp/sb-peer/4.12/rtems-powerpc/rtems-source-builder/rtems~/rtems/4.12/include -g -O2 -l-
-l../gdb-7.12/gdb -l../gdb-7.12/gdb/common -l../gdb-7.12/gdb/config -DLOCALEDIR=""/rtems-source-builder/rtems~/rtems/4.12/share/locale"" -DHAVE_CONFIG_H -
-l../gdb-7.12/gdb/.include/opcode -l../gdb-7.12/gdb/.opcodes/.. -l../gdb-7.12/gdb/.readline/.. -l../gdb-7.12/gdb/.zlib -l../bfd -l../gdb-7.12/gdb/.bfd -l../gdb-
7.12/gdb/.include -l../libdecnumber -l../gdb-7.12/gdb/.libdecnumber -l../gdb-7.12/gdb/gnulib/import -lbuild-gnulib/import -DTUI=1 -l/rtems-source-

```

Descripti
on


```
-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 mi-cmd-target.o mi-cmd-info.o mi-interp.o mi-main.o mi-parse.o mi-getopt.o tui-command.o tui-data.o tui-disasm.o tui-file.o tui-hooks.o tui-interp.o tui-io.o tui-
layout.o tui-out.o tui-regs.o tui-source.o tui-stack.o tui-win.o tui-windata.o tui-wingeneral.o tui-winsource.o tui.o 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-param.o py-prettyprint.o py-
progspace.o py-signalevent.o py-stopevent.o py-symbol.o py-symtab.o py-threadevent.o py-threadstring.o py-type.o py-unwind.o py-value.o py-varobj.o guile.o elfread.o stap-probe.o
dtrace-probe.o posix-hdep.o posix-strerror.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 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 incfall.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 inf-regs.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 m2-lang.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-pe-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 registry.o btrace.o opncl-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-namespaces.o d-namespaces.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 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-ldl-framework CoreFoundation -lpython2.7 -u_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_print_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_error, __Z25memory_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_errmsg9bfd_errorPKc, __Z29observer_attach_command_errorPFvVE, __Z27gdbpy_print_python_errors_pv, _bfd_get_error, __Z14internal_errorPKciS0_z,
_Z17get_regcomp_erroriP17re_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.					
Description	Including <code>unistd.h</code> in a C++ program does not compile with the RSB for today:					

`$ /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);
 ^~~~~~

#3063	2 years ago	fixed	config	Sebastian Huber	Sebastian Huber	2 years ago
-------	-------------	-------	--------	-----------------	-----------------	-------------

Summary: Make the EDF scheduler the default SMP scheduler.
 In file included from /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);

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 affinity. The EDF-SMP scheduler is implemented in `libbsp` and `libcpu`. Note applications also need to use the `libbsp` and `libcpu` run-time libraries like `libgomp`, `MTAPI`, work stealing schedulers, language interpreters, etc. For this reason, `destset` and `srcset1` are used to set 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().
 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:119:3: error: 'count' was not declared in this scope
 *return BIT_COUNT(_cpu_set_bits(setsize), set);
 * @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.

Description:

```

/**
 * @brief Identifies a scheduler by a processor set.
 *
 * The scheduler is selected according to the highest numbered online processor
 * in the specified processor set.
 *
 * @param[in] cpuset Size of the specified processor set buffer in
 * bytes. This value must be positive.
 * @param[out] cpuset The processor set to identify the scheduler.
 * @param[out] id The scheduler identifier associated with the processor set.
 *
 * @retval RTEMS_SUCCESSFUL Successful operation.
 * @retval RTEMS_INVALID_ADDRESS The @a id parameter is @c NULL.
 * @retval RTEMS_INVALID_SIZE Invalid processor set size.
 * @retval RTEMS_INVALID_NAME The processor set contains no online processor.
 * @retval RTEMS_INCORRECT_STATE The processor set is valid, however, the
 * highest numbered online processor in the specified processor set is not
 * owned by a scheduler.
 */
rtems_status_code rtems_scheduler_ident_by_processor_set(
  size_t cpuset_size,
  cpu_set_t *cpuset,
  rtems_id *id
);
  
```

#3070	2 years ago	fixed	rtems	Sebastian Huber	Sebastian Huber	2 years ago
-------	-------------	-------	-------	-----------------	-----------------	-------------

Summary: Add rtems_scheduler_ident_by_processor_set().

Description:

```

/**
 * @brief Identifies a scheduler by a processor set.
 *
 * The scheduler is selected according to the highest numbered online processor
 * in the specified processor set.
 *
 * @param[in] cpuset Size of the specified processor set buffer in
 * bytes. This value must be positive.
 * @param[out] cpuset The processor set to identify the scheduler.
 * @param[out] id The scheduler identifier associated with the processor set.
 *
 * @retval RTEMS_SUCCESSFUL Successful operation.
 * @retval RTEMS_INVALID_ADDRESS The @a id parameter is @c NULL.
 * @retval RTEMS_INVALID_SIZE Invalid processor set size.
 * @retval RTEMS_INVALID_NAME The processor set contains no online processor.
 * @retval RTEMS_INCORRECT_STATE The processor set is valid, however, the
 * highest numbered online processor in the specified processor set is not
 * owned by a scheduler.
 */
rtems_status_code rtems_scheduler_ident_by_processor_set(
  size_t cpuset_size,
  cpu_set_t *cpuset,
  rtems_id *id
);
  
```

#3071	2 years ago	fixed	bsps	Sebastian Huber	Sebastian Huber	2 years ago
-------	-------------	-------	------	-----------------	-----------------	-------------

#3089	2 years ago	fixed	fs	Fan Deng	Fan Deng	20 months ago
-------	-------------	-------	----	----------	----------	---------------

Summary: Inconsistent blocking addressing in RFS

Background There are two ways to address a block in RFS:

- Via a single 32bit block number (bno)
- 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

- In `rtems_rfs_group_bitmap_alloc` (`rtems-rfs-group.c`, line 172)


```
bno = gno * group_blocks + bit
```
- In `rtems_rfs_group_bitmap_alloc` (`rtems-rfs-group.c`, line 228)


```
bno = gno * group_blocks + bit + 1 (via rtems_rfs_group_block() function)
```
- In `rtems_rfs_group_bitmap_free` (`rtems-rfs-group.c`, line 283)


```
bno = gno * group_blocks + bit + 1 (RTEMS_RFS_SUPERBLOCK_SIZE)
```
- In `rtems_rfs_group_bitmap_test` (`rtems-rfs-group.c`, line 332)


```
bno = gno * group_blocks + bit
```

To summarize, the implementation contains two ways of converting a bno to a (gno, bit) pair:

Either:

```
bno = gno * group_blocks + bit
```

Or:

```
bno = gno * group_blocks + bit + 1
```

The Fix The RFS implementation should consistently convert a bno to a (gno, bit) pair with:

```
bno = gno * group_blocks + bit + RTEMS_RFS_SUPERBLOCK_SIZE
```

This is because the superblock is not accounted for in the block bitmaps. So places to change:

- `rtems-rfs-group.c`: all references to the conversion must be updated to use `RTEMS_RFS_SUPERBLOCK_SIZE` explicitly.
- `rtems_rfs_group_block` converts the pair to bno via:


```
#define rtems_rfs_group_block(g, _b) (((g)->base) + (_b))
```

`(_g)->base` is calculated via `rtems-rfs-format.c` from:

```
#define rtems_rfs_block(_fs, _grp, _blk) \
    (((_fs)->group_blocks) * (_grp)) + (_blk) + 1
```

The "+ 1" part should really be "+ RTEMS_RFS_SUPERBLOCK_SIZE" to be logically correct. As `RTEMS_RFS_SUPERBLOCK_SIZE` itself has a comment saying:

```
/**
 * 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)
```

#3090	2 years ago	fixed	bsps	Sebastian Huber	Sebastian Huber	22 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 qemuprep and qemuprep-altivec BSPs.

```
gmake[8]: Entering directory `/data/home/joel/rtems-work/rtems-testing/rtems/build-powerpc-qemuprep-rtems/powerpc-rtems4.12/c/qemuprep/lib/libbsp/powerpc/motorola_powerpc/qemu_fakerom' powerpc-rtems4.12-ld -o qemu_fakerom.bin qemu_fakerom.o qemu_fakeres.o --format binary -nostdlib -Ttext 0xffff0000 --section-start=.romentry=0xffffffc 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	14 months ago
-------	-------------	-------	-------	-------------	-------------	---------------

Summary: Add new RTEMS repos to github.

Description: Please add:

- `rtems-docs.git`
- `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

Description: Add a Xilinx AXI I2C driver.

#3101	2 years ago	fixed	score	Chris Johns	Chris Johns	2 years ago
-------	-------------	-------	-------	-------------	-------------	-------------

Summary: Add I2C Drivers for LM25066A, TMP112, ADS1113 and ADS1115

Description: Add drivers for:

- LM25066A

Description	2. TMP112	3. ADS1113	4. ADS1115
-------------	-----------	------------	------------

#3102	2 years ago	fixed	tool	Chris Johns	Chris Johns	2 years ago
-------	-------------	-------	------	-------------	-------------	-------------

Summary: rtems-exeinfo does not decode ARM static constructors.

Description: The sections for ARM are not the same as other architectures.

#3103	2 years ago	fixed	tool	Joel Sherrill	chrisj@...	2 years ago
-------	-------------	-------	------	---------------	------------	-------------

Summary: 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 process.h : not found Checking for header stdlib.h : yes Checking for header string.h : yes Checking for header strings.h : yes Checking for header sys/file.h : yes Checking for header sys/stat.h : yes Checking for header sys/time.h : yes Checking for header sys/types.h : yes Checking for header sys/wait.h : yes Checking for header unistd.h : yes Checking for header vfork.h : not found Checking for function getrusage : 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', '-I./rtemstoolkit', '-I./rtemstoolkit/elftoolchain/libelf', '-I./rtemstoolkit/elftoolchain/libelf', '-I./rtemstoolkit/elftoolchain/common', '-I./rtemstoolkit/elftoolchain/common', '-I./rtemstoolkit/libiberty', '-I./rtemstoolkit/libiberty', '-DHAVE_CONFIG_H=1', '-DRTEMS_VERSION=4.12', '-DRTEMS_RELEASE=4.12.78bbe4c1a31d', '-DFASTLZ_LEVEL=1', '-I./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,
```

Description: 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', '-I./rtemstoolkit', '-I./rtemstoolkit/elftoolchain/libelf', '-I./rtemstoolkit/elftoolchain/libelf', '-I./rtemstoolkit/elftoolchain/common', '-I./rtemstoolkit/elftoolchain/common', '-I./rtemstoolkit/libiberty', '-I./rtemstoolkit/libiberty', '-DHAVE_CONFIG_H=1', '-DRTEMS_VERSION=4.12', '-DRTEMS_RELEASE=4.12.78bbe4c1a31d', '-DFASTLZ_LEVEL=1', '-I./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
#define 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	16 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	23 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.					
Code	<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.					
Code	<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.					
Code	<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.					
Code	<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.					
Code	<pre>typedef struct { struct _Semaphore_Control _sem; } sem_t;</pre>					
#3117	2 years ago	fixed	score	Sebastian Huber	Sebastian Huber	21 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	8 months ago
Summary	Simplify and unify BSP_output_char					
Description	The BSP_output_char should output a char and not mangle 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:					
Code	<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					

Descripti on	Since we have only one process, sharing between processes is trivial.					
#3127	2 years ago	fixed	tool/gcc	Chris Johns	Chris Johns	14 months ago
Summar y	MIPS tool build on Darwin (MacOS) fails.					
Descripti on	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
Summar y	RTEMS Tools corvar does not build on Windows.					
Descripti on	<p>The following error has appeared on Windows:</p> <pre>In file included from ../rtemstoolkit/elftoolchain/libelf/libelf.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
Summar y	RTEMS Tools covoar build fails on Windows					
Descripti on	<p>The following warnings and errors are present so the RSB tools do not finish and install:</p> <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 'covoar' 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
Summar y	RTEMS Doxygen.in latex output does not build					
Descripti on	<p>Doxygen latex output on sync.rtems.org does not build.</p> <p>Does latex output build on any host? If so which hosts and what tool combination.</p> <p>If it does not build we should consider defaulting the setting for latex output to "no".</p>					
#3132	2 years ago	fixed	fs	Sebastian Huber	Sebastian Huber	2 years ago
Summar y	Add reference counting to file descriptors					
Descripti on	<p>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.</p> <p>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.</p> <p>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.</p> <p>Each operation using a file descriptor should perform a sequence like this:</p>					

```

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;
}
    
```

#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'
    
```

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

Description 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

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

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

Description 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:

```

gmake[5]: Entering directory '/opt/work/chris/rtems/kernel/bsp/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 );
    ^
./../cpukit/./../beagleboneblack/lib/include/rtems/score/assert.h:67:12: note: in definition of macro '_Assert'
    (( _e ) ? \
    ^
gmake[5]: *** [Makefile:4571: src/libscore_a-semaphore.o] Error 1
    
```

We need the [rtems-bsp-builder](#) to be run on a regular basis to catch these errors.

Tools are:

```
$ /opt/work/rtems/4.12/bin/arm-rtems4.12-gcc --version
arm-rtems4.12-gcc (GCC) 7.2.0 20170814 (RTEMS 4.12, RSB e6d0a8bae6d16eba605370ca11a5928b797820bb-modified, Newlib 2.5.0.20170818)
```

#3141	2 years ago	fixed	doc	Chris Johns	Chris Johns	2 years ago
-------	-------------	-------	-----	-------------	-------------	-------------

Summary
Change the BSP Howto's name to something smaller.

The BSP Howto's current name is:

RTEMS BSP and Device Driver Development Guide

This is long and causes problems in the PDF output. Change the name to:

RTEMS BSP and Driver Guide

#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

Running `rtems-test` with a recent u-boot and a current master this failure is reported:

```
] RTEMS Beagleboard: am335x-based
]
]
] *** BEGIN OF TEST PSXRDWRV ***
] writv bad file descriptor -- EBADF
] writv error 1: 22=Invalid argument
] Error during error test!!!
```

#3152	2 years ago	wontfix	arch/arm	Chris Johns	Chris Johns	14 months ago
-------	-------------	---------	----------	-------------	-------------	---------------

Summary
Beaglebone Black crashes on u-boot master build.

The crash with a Linux type image and no FDT is:

```
] ## 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: nzcvc IRQs off FIQs on Mode SVC_32
] Resetting CPU ...
```

and the code is:

```
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
```

#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

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-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 >&S 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
Summary	Examples v2 does not build					
Description	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
Summary	Examples v2 trace linker ini files reference non-existing dump-on-error					
Description	Remove the dump-on-error option.					
#3160	2 years ago	fixed	unspecified	Chris Johns	Chris Johns	2 years ago
Summary	Trace linker score support is broken					
Description	<p>The trace linker needs to be updated to build. I am not sure which bit is broken. Building the tools gives:</p> <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: ^~~~~~ /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: ^~~~~~ /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' /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: { sizeof(const CORE_mutex_Attributes*), "const CORE_mutex_Attributes*" }, /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: ^~~~~~ /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) /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: { sizeof(CORE_mutex_API_mp_support_callout), "CORE_mutex_API_mp_support_callout" }, /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: ^~~~~~ /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: ^~~~~~ /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 /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: ^ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:342:31: error: expected expression before ')' token /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: ^ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:359:31: error: expected expression before ')' token /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: ^ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:368:31: error: expected expression before ')' token /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: ^ /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: hello-deep.c:443:31: error: expected expression before ')' token /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: ^ /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: ^~~~~~ /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: ^~~~~~ /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 'printk'; did you mean 'printf'? [-Wimplicit-function-declaration] /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: printk(">>> %s (0x%08x)\n", func_name, func_addr); /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: ^~~~~~ /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' /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: 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: ^~~~~~ /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' /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: 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: ^~~~~~ /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' /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: 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: ^~~~~~ /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'? /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: CORE_mutex_Status __CORE_mutex_Initialize(CORE_mutex_Control* a1, Thread_Control* a2, const /Users/chris/development/rtems/4.12/bin/arm-rtems4.12-gcc: 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>					
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					

<p>y</p> <p>..../.rtems/c/src/././testsuites/tmtests/tmfine01/init.c:58:21: error: size of variable 'test_instance' is too large</p> <p>Descripti on</p> <p>static test_context test_instance;</p> <p>FWIW I marked this as unspecified because this is just a generic small target issue.</p>	#3201	2 years ago	fixed	arch/epiphany	Joel Sherrill	Joel Sherrill <joel@...>	2 years ago
<p>Summary</p> <p>epiphany tools checksum error</p> <p>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.</p> <p>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</p> <p>Descripti on</p> <p>redirect: https://codeoad.github.com/adapteva/epiphany-gcc/zip/f7051762470c42ce7f01baa7edeb113d51c7dd72 redirect: https://codeoad.github.com/adapteva/epiphany-gcc/zip/f7051762470c42ce7f01baa7edeb113d51c7dd72</p> <p>checksums: f7051762470c42ce7f01baa7edeb113d51c7dd72.zip: 4d911e7bff4f1827dd7712669d20e4a1bf02806df0fae113ff0e7d13466bef2e ==> 2b2034fd12f2fd5108205ade66400c175ede8cef8141a38ae03fc78bf2d65325 warning: checksum error: f7051762470c42ce7f01baa7edeb113d51c7dd72.zip error: checksum failure file: sources/f7051762470c42ce7f01baa7edeb113d51c7dd72.zip</p>	#3202	2 years ago	fixed	arch/or1k	Joel Sherrill	Joel Sherrill <joel@...>	2 years ago
<p>Summary</p> <p>or1k tools build error</p> <p>I assume this is a side-effect of recent checksum changes. Otherwise, there is a serious problem.</p> <p>Descripti on</p> <p>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</p>	#3203	2 years ago	fixed	admin	Amar Takhar	Amar Takhar	14 months ago
<p>Summary</p> <p>Upgrade trac to fix numerous problems.</p> <p>There are a ton of issues going on with trac that need to be resolved. The two major ones are:</p> <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> ◦ This one is not a huge deal since it's just that request process users won't even notice when this happens. <p>Upgrading trac is a weeklong project usually I will start preparing for it and update here.</p> <p>If anyone has any feature requests now is the time to do it!</p>	#3205	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
<p>Summary</p> <p>Relative timespec timeouts are subject to integer overflows</p> <p>Descripti on</p> <p>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.</p>	#3207	2 years ago	fixed	doc	Joel Sherrill		2 years ago
<p>Summary</p> <p>Supported Architectures Page is out of date</p> <p>Descripti on</p> <p>https://devel.rtems.org/wiki/TBR/UserManual/SupportedCPU is out of date. I have the information to update it if that's what we want to do.</p> <p>I don't know the best way to provide this broad view from 4.6 up on what architectures are supported. The wiki seems OK.</p>	#3209	2 years ago	fixed	tool/rsb	Joel Sherrill	Chris Johns	20 months ago
<p>Summary</p> <p>RSB should fail on this error</p> <p>I was updating the md5's to sha512's on qemu and made a typo which resulted in this message:</p> <pre>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 ()</pre> <p>Descripti on</p> <p>The error message did not result in the build aborting. Perhaps this should be a fatal error.</p> <p>The broken RSB fragment was in qemu-git-1.cfg:</p> <pre>%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 376ea9e07c4c8077b345af02856549843dff2ad73b5da5886c71e859c4a0849522c59dcd0572427075676348aecdb70211ea2ae8cac28056cb17da53c3981e1</pre>	#3210	2 years ago	fixed	tool/rsb	Chris Johns	Chris Johns	2 years ago
<p>Summary</p> <p>Improve the RSB build email message</p> <p>Descripti on</p> <p>The message needs more detail to provide a suitable archive.</p>	#3211	2 years ago	fixed	posix	Sebastian Huber	Sebastian Huber	2 years ago
<p>Summary</p> <p>Fix pthread_create() with user provided stack</p> <p>Descripti on</p> <p>In case the user provides a stack with address and size, then do not alter the stack size.</p>	#3215	2 years ago	fixed	doc	Joel Sherrill	Joel Sherrill	2 years ago
<p>Summary</p> <p>Configuring a System Still Includes Notepads and Has Wrong Heading</p> <p>This section has the wrong heading and needs to be deleted anyway.</p> <p>Descripti on</p> <pre>24.8.2. Specify Maximum Classic API Timers CONSTANT: CONFIGURE_ENABLE_CLASSIC_API_NOTEPADS</pre>	#3216	2 years ago	fixed	score	Sebastian Huber	Sebastian Huber	2 years ago
<p>Summary</p> <p>Replace vprintk() implementation</p> <p>Descripti on</p> <p>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.</p>	#3217	2 years ago	fixed	lib	Chris Johns	Chris Johns	20 months ago
<p>Summary</p> <p>Add RTEMS version, build and tools details to tests</p> <p>Descripti on</p> <p>Published test results need the RTEMS version, how it is built and the tools used to build the kernel and tests.</p>							

on	#3218	2 years ago	fixed	dev/serial	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Termios canonical mode (ICANON) does not return input line by line						
Description	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.						
on	#3219	2 years ago	fixed	bsps	Chris Johns	Chris Johns	15 months ago
Summary	Zynq BSP missing linker option --gc-sections						
Description	This Zynq BSP is missing this option.						
on	#3220	2 years ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	21 months ago
Summary	Change RTEMS release number scheme from 4.12 to 5						
Description	<p>As discussed here</p> <p>https://lists.rtems.org/pipermail/devel/2017-October/019169.html</p> <p>it was agreed to use version 5.1 with the new number scheme for the next RTEMS release.</p> <p>Most important items of this release:</p> <ul style="list-style-type: none"> • 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) <p>The following steps are necessary to carry out the number change:</p> <ol style="list-style-type: none"> 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 						
on	#3224	2 years ago	fixed	tool/binutils	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Upgrade or1k and m32c to Binutils 2.29						
on	#3225	2 years ago	fixed	tool/gdb	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Upgrade m32c to GDB 8.0.1						
on	#3226	2 years ago	fixed	tool/gdb	Sebastian Huber	Sebastian Huber	2 years ago
Summary	gdb: pr 16827, fix sim on Mavrick						
on	#3227	2 years ago	workforme	admin	Joel Sherrill	Chris Johns	2 years ago
Summary	sb-check fails on Msys2 64-bit						
Description	<p>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</p> <pre>\$./source-builder/sb-check error: no hosts defaults found; please add</pre> <p>After adding some prints, I learned this:</p> <pre>\$./source-builder/sb-check posix made it MSYS_NT-10.0 error: no hosts defaults found; please add</pre> <p>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:</p> <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> <p>I installed binutils explicitly with pacman and then sb-check is complaining about gcc. I did a find to locate the gcc's installed:</p> <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	arch64 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	14 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 tricket 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 <code>_Semaphore_Get_operations()</code> 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 <code>_Thread_queue_Flush_critical()</code>					
Description	The thread queue extract operations performed by the <code>_Thread_queue_Flush_critical()</code> 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 <code>_Thread_queue_Extract_locked()</code> 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 <code>_Thread_queue_Context_clear_priority_updates()</code> invocation to the callers.					
#3238	2 years ago	fixed	admin	Chris Johns	Amar Takhar	14 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 <code>arc4random_buf()</code> . 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 <code>Stack_check_Dump_threads_usage</code> 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 <code>inttypes.h</code> formatting define was used.					
#3242	2 years ago	fixed	tool/gcc	Sebastian Huber	Sebastian Huber	2 years 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	14 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	18 months ago
Summary	Change rtems_panic() implementation and document this function					
Description	The current rtems_panic() implementation is quite heavy weight. It depends on <code>_exit()</code> which calls the global destructors. It uses <code>fprintf(stderr, ...)</code> for output which depends on an initialized console device and the complex <code>fprintf()</code> . Introduce a new fatal source <code>RTEMS_FATAL_SOURCE_PANIC</code> for rtems_panic() and output via <code>printk()</code> . Document this function in Fatal Manager chapter. Replace all <code>BSP_panic()</code> with <code>rtems_panic()</code> .					
#3245	2 years ago	fixed	arch/powerpc	Sebastian Huber	Sebastian Huber	2 years ago
Summary	Replace <code>BSP_panic()</code> with <code>rtems_panic()</code>					
Description	Due to a new rtems_panic() implementation, it is possible to replace the PowerPC-specific <code>BSP_panic()</code> with <code>rtems_panic()</code> . Remove <code>BSP_panic()</code> implementations.					
#3246	2 years ago	fixed	arch/powerpc	Sebastian Huber	Sebastian Huber	2 years ago

#3267	2 years ago	fixed	arch/powerpc	Chris Johns	21 months ago
Summary	<pre>\$ find . -name byteorder.h ./bsp/powerpc/include/libcpu/byteorder.h ./bsp/sparc/include/libcpu/byteorder.h ./bsp/386/include/mcpu/byteorder.h</pre> <p>including the needed header.</p> <pre>/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] printk(fmt, ##_VA_ARGS_) ^ /opt/work/chris/rtems/kernel/rtems.git/cpukit/include/rtems/status-checks.h:86:3: note: in expansion of macro 'RTEMS_SYSLOG_PRINT' RTEMS_SYSLOG_PRINT("%s: " fmt, __func__, ##_VA_ARGS_) ^~~~~~ /opt/work/chris/rtems/kernel/rtems.git/cpukit/include/rtems/status-checks.h:107:3: note: in expansion of macro 'RTEMS_SYSLOG' RTEMS_SYSLOG("Error: " fmt, ##_VA_ARGS_) ^~~~~~ /opt/work/chris/rtems/kernel/rtems.git/cpukit/include/rtems/status-checks.h:113:3: note: in expansion of macro 'RTEMS_SYSLOG_ERROR' RTEMS_SYSLOG_ERROR("SC = %i: %s\n", (int) sc, msg); ^~~~~~ /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' RTEMS_SYSLOG_ERROR_WITH_SC(sc, msg); \ ^~~~~~ /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' RTEMS_CHECK_SC(sc, "create GPIO device"); ^~~~~~</pre>				
Description					
Summary	<p>PowerPC BSP include naming mess.</p>				
Description	<p>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 <code>preinstall</code> exposes this. The specific issue appears with <code>irq.h</code> when building the <code>no-preinstall</code> branch. There is a PowerPC BSP family header and a number of BSPs also have an <code>irq.h</code> which overrides families header. The code has <code>#include <bsp/irq.h></code> 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 <code>#include <mvme3100/irq.h></code>.</p>				
#3270	2 years ago	fixed	arch/powerpc	Sebastian Huber	Sebastian Huber 22 months ago
Summary	<p>Remove unused support for MPC505</p>				
Description	<p>There is some support for MPC505 in libcpu, however, I cannot find a BSP for this code. Remove this apparently dead code.</p>				
#3277	23 months ago	fixed	network/libbsd	Sebastian Huber	Sebastian Huber 22 months ago
Summary	<p>QoriQ: Add MAC-less DPAA driver to libbsd</p>				
Description	<p>The SDK Linux DPAA driver supports a so called MAC-less interface driver. This driver allows Ethernet communication between guest systems of a hypervisor.</p>				
#3278	23 months ago	fixed	tool	Joel Sherrill	Chris Johns 22 months ago
Summary	<p>bsp-builder has incorrect print (%s in output)</p>				
Description	<p>I don't think the tools have branches so only impacts master. 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/bsps\ --enable-profiling</p>				
#3281	23 months ago	wontfix	tool/gdb	Sebastian Huber	Sebastian Huber 22 months ago
Summary	<p>Add epiphany support to GDB 8.0.0</p>				
#3283	23 months ago	fixed	doc	Joel Sherrill	Chris Johns 22 months ago
Summary	<p>Bad URL in OpenOCD/Xilinx_Zynq Wiki Page</p>				
Description	<p>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</p>				
#3284	22 months ago	fixed	tool/rsb	Sebastian Huber	Sebastian Huber <sebastian.huber@...> 22 months ago
Summary	<p>RSB uses hard coded GCC binary paths</p>				
Description	<p>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:</p> <pre>source-builder/defaults.mc: __cc: exe, required, '/usr/bin/gcc' source-builder/defaults.mc: __cxx: exe, required, '/usr/bin/g++'</pre> <p>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.</p>				
#3285	22 months ago	fixed	build	Sebastian Huber	Sebastian Huber 16 months ago
Summary	<p>Reorganize BSP source directory</p>				
Description	<p>Now, that all BSP header files are in</p> <ul style="list-style-type: none"> • bsp/include • bsp/@RTEMS_CPU@/include • bsp/@RTEMS_CPU@/@RTEMS_BSP_FAMILY@/include <p>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@/?</p> <ul style="list-style-type: none"> • include (this is already there, see #3254) • config <ul style="list-style-type: none"> ◦ somebsp.cfg • start (everything required to run a minimal application without devices) <ul style="list-style-type: none"> ◦ start.S ◦ bspstart.c ◦ bspsmc.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	22 months ago	fixed	arch/arm	Sebastian Huber	Sebastian Huber	22 months ago
Summary	Add device tree support to Altera/Intel? Cyclone V BSP					
#3294	22 months ago	fixed	tool/rsb	Chris Johns	Chris Johns	22 months ago
Summary	gcc version report for released tools is wrong.					
Description	The release gcc version string has the RTEMS release and not the actual release.					
#3298	22 months ago	fixed	lib/dl	Chris Johns	Chris Johns	10 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	22 months ago	fixed	arch/arm	Joel Sherrill	Joel Sherrill	21 months ago
Summary	Add paravirtualization support to ARM					
Description	The Arm port does not currently have paravirtualization support.					
#3306	22 months ago	fixed	arch/powerpc	Joel Sherrill	Joel Sherrill <joel@...>	21 months ago
Summary	Add paravirtualization support to PowerPC					
Description	The PowerPC port does not currently have paravirtualization support.					
#3307	22 months ago	fixed	arch/powerpc	Joel Sherrill	Joel Sherrill	15 months ago
Summary	PowerPC linkcmds.base missing wildcards on some sections					
Description	Some sections were missing sections. Wildcards needed to be added.					
#3309	22 months ago	fixed	doc	Chris Johns		14 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	22 months ago	fixed	tool/rsb	Chris Johns	Chris Johns	22 months ago
Summary	RSB macro calls such as define fail on unicode keys.					
Description	<p>The define call in macros.py checks for a str while the _setitem call can convert a unicode string to str. Remove the check.</p> <p>Remove the other places in macros.py a key str check is made and see if they can be improved.</p> <p>The following has been reported to me:</p> <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	21 months ago	fixed	tool/rsb	Chris Johns	Chris Johns	21 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	21 months ago	fixed	bsps	mletcher	Sebastian Huber	21 months ago
Summary	Improve INTERNAL_ERROR_THREAD_EXITTED to show the id and thread name					
Description	<p>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.</p> <p>This example works ok.</p> <pre>static void thread_exitted_print_info(rtems_tcb *tcb) { printf("Thread exited: %s (id %d)\n", tcb->Object.name, tcb->Object.id) } /* In your configuration: */ #define CONFIGURE_INITIAL_EXTENSIONS \ { .thread_exitted = thread_exitted_print_info }</pre>					
#3320	21 months ago	fixed	dev/serial	Sebastian Huber	Sebastian Huber <sebastian.huber@...>	17 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 rtems_putc() done directly in the context of the executing thread. This is a problem for timing sensitive tests. Add a simple task console driver.					

.. 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.

#3323	21 months ago	fixed	lib	Chris Johns	Chris Johns	20 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.

The `cp` and `untar` code do not update a file's time.

Add support for an etag callback so a user can manage the tag, ie MD5 or something similar.

#3325	21 months ago	fixed	config	Sebastian Huber	Sebastian Huber	21 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	21 months ago	fixed	score	Joel Sherrill		21 months ago
-------	---------------	-------	-------	---------------	--	---------------

Summary: Eliminate score/cpu*/.../types.h

Description: Each port contains a types.h file. It universally defines one type (CPU_Uint32ptr) that is required. Some of the types.h files define a CPU specific simple vectored ISR handler prototype.

- Move the CPU_Uint32ptr typedef to cpu.h
- If unused, delete the ISR handler prototype. If used, move to cpu.h

#3328	21 months ago	fixed	build	Amaan Cheval		21 months ago
-------	---------------	-------	-------	--------------	--	---------------

Summary: bootstrap uses non-POSIX compliant echo -e

Description: On certain shells, the "-e" option is not supported, and causes echo to output the flag along with the quoted text.

```
-> % sh
$ echo -e "foo bar"
-e foo bar
$
```

This varies by shell, and is not even consistent between sh or bash.

It was introduced [while removing the make preinstall stage here](#), and may still work on most shells, though it didn't for me on sh 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.

A patch is attached.

Reference to the POSIX standard which confirms that -n is the only argument supported.

<http://pubs.opengroup.org/onlinepubs/9699919799/utilities/echo.html>

Link to POSIX for printf(1):

#3329	21 months ago	fixed	tool/website	Joel Sherrill	Amar Takhar	14 months ago
-------	---------------	-------	--------------	---------------	-------------	---------------

Summary
Trac Login Failure (bad password) Causes Internal Error

Behavior is as expected with a bad user name.

Try to login to Trac with a bad password:

Oops... Trac detected an internal error: 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'") 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 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'")
==== How to Reproduce ====

While doing a POST operation on `/login`, Trac issued an internal error.

(please provide additional details here)

Request parameters:

```
{u'__FORM_TOKEN': u'0dc25ae350c181046ceae015',
u'password': u'XXX',
u'referer': u'https://devel.rtems.org/ticket/3328',
'user_locked': False,
'username': u'joel.sherrill'}
```

User agent: Mozilla/5.0 (X11; Linux x86_64) KHTML/4.14.8 (like Gecko) Konqueror/4.14 Fedora/4.14.8-6.el7_3

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 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 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='joel.sherrill' AND authenticated=1 AND name='failed_logins_count' at line 1'")
}} Create a ticket.

The action that triggered the error was:
POST: /login
TracGuide — The Trac User and Administration Guide
```

Description

#3334	21 months ago	fixed	posix	Stavros Passas	Sebastian Huber	10 months ago
-------	---------------	-------	-------	----------------	-----------------	---------------

Summary
deadlock in _once()

RTEMS threads getting locked up when using certain c++ functionality. Issue happens for example when std::future is combined with std::async.
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.
_once() uses a common semaphore for all calls, thus the first function (async.get usually) gets the lock, calls its "init" function (which blocks until the second function has completed). After this, std::future also uses pthread_once to execute, but because the lock is already taken, it also blocks, causing a deadlock.
Attached you can find a test application that reproduces the deadlock.

#3340	21 months ago	fixed	arch/powerpc	Joel Sherrill	Sebastian Huber	21 months ago
-------	---------------	-------	--------------	---------------	-----------------	---------------

Summary
gen83xx warning for macros redefined

```
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:
=====
/* bgs BCSR register */ #define FPGA_START 0xF8000000 #define FPGA_SIZE 0x8000 #define FPGA_END
(FPGA_START+FPGA_SIZE-1)
```

Description

- working values for various registers, used in start/start.S */

```
/* fpga config 16 MB size */ #define FPGA_CONFIG_START 0xF8000000 #define FPGA_CONFIG_SIZE 0x01000000 /* fpga register 8 MB size */ #define FPGA_REGISTER_START 0xF9000000 #define FPGA_REGISTER_SIZE 0x00800000 /* fpga fifo 8 MB size */ #define FPGA_FIFO_START 0xF9800000 #define FPGA_FIFO_SIZE 0x00800000
```

```
#define FPGA_START (FPGA_CONFIG_START) fpga window size 32 MByte #define FPGA_SIZE (0x02000000) #define FPGA_END (FPGA_START+FPGA_SIZE-1)
```

#	Age	Fixed	Arch	Author	Reviewer	Time
#3341	21 months ago	fixed	arch/sparc64	Joel Sherrill	Gedare Bloom	21 months ago
Summary	sparc64: Macro Redefined					
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.					
#3342	21 months ago	fixed	posix	Joel Sherrill	Joel Sherrill	17 months ago
Summary	pthread_setschedparam() has incorrect prototype					
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)					
#3343	21 months ago	fixed	posix	Joel Sherrill	Joel Sherrill	17 months ago
Summary	pthread_mutex_getprioceiling() has incorrect prototype					
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)					
#3344	21 months ago	fixed	arch/m68k	Joel Sherrill	Joel Sherrill	21 months ago
Summary	mcf5272/mcf5272.h Timer3 Duplicate Definition					
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_PI (bit(23)) #define MCF5272_ICR1_INT3_IPL(x) ((x) << 20) #define MCF5272_ICR1_INT3_MASK ((7) << 20) -#define MCF5272_ICR1_INT3_PI (bit(19)) -#define MCF5272_ICR1_INT3_IPL(x) ((x) << 16) -#define MCF5272_ICR1_INT3_MASK ((7) << 16) +#define MCF5272_ICR1_INT4_PI (bit(19)) +#define MCF5272_ICR1_INT4_IPL(x) ((x) << 16) +#define MCF5272_ICR1_INT4_MASK ((7) << 16)					
#3345	21 months ago	fixed	arch/powerpc	Joel Sherrill	Joel Sherrill	21 months ago
Summary	mvme3100 spaces needed around quote in macro definitions in bsp.h					
Description	Various BSP_I2c_XXX_DEV_NAME macros have a stray " at the end of the first parameter.					
#3346	21 months ago	fixed	arch/bfin	Joel Sherrill	Joel Sherrill	21 months ago
Summary	bf533.h					
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	21 months ago	fixed	arch/powerpc	Joel Sherrill	Joel Sherrill	21 months ago
Summary	beatnick:spaces needed around quote in macro definitions in bsp.h					
Description	Macros need spaces around " ,"					
#3349	21 months ago	fixed	arch/i386	Joel Sherrill	Joel Sherrill	21 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	21 months ago	fixed	rtems	Joel Sherrill	Sebastian Huber	21 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	21 months ago	fixed	arch/arm	Joel Sherrill	Sebastian Huber	21 months ago
Summary	Warning in all ipc176x variants					
Description	bsps/arm/lpc176x/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/lpc176x/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_DEFAULT.					
#3354	21 months ago	fixed	arch/powerpc	Joel Sherrill	Joel Sherrill	21 months ago
Summary	PowerPC BSPs duplicate PAGE_MASK, etc redefinition					

		<pre> **** PACKHEX.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 </pre>				
#3386	21 months ago	errors: fixed	tool	Sebastian Huber	Sebastian Huber	18 months ago
Summary	Move rtems-bin2c program to rtems-tools * Published: May 1993 Embedded Systems Programming magazine * "Creating Faster Hex Files"					
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. * URL: ESP magazine: http://www.embedded.com * Source Code: ftp://ftp.mfi.com/pub/espomag/1993/packhex.zip					
#3382	20 months ago	fixed	build	Chris Johns	Chris Johns	14 months ago
Summary	Test suite Makefile merge to one per group of tests Author: Mark Gringrich					
Description	Merge the nested Makefiles into a single file per group of tests. * cl/F 1000 packhex.c * 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	20 months ago	fixed	build	Chris Johns	Chris Johns	20 months ago
Summary	Require to enable tools 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	20 months ago	fixed	build	Chris Johns	Chris Johns	20 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	20 months ago	invalid	admin	Chris Johns	Amar Takhar	14 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: <ol style="list-style-type: none"> 900c40730dbec34cd7a6f1c03c80896951bf1b9c/rtems d8de6b9dbe4ab1ef375ecce55e8bfb1028c5dd13/rtems 9704efb4ec088a472842cbc9bc46392685ebc806/rtems and others do not: <ol style="list-style-type: none"> 2afb22b7e1ebcbe40373ff7e0efae7d207c655a9/rtems Notes: <ul style="list-style-type: none"> 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	20 months ago	fixed	config	Joel Sherrill		14 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	20 months ago	fixed	network/legacy	Sebastian Huber	Sebastian Huber	20 months ago
Summary	NFS: Remove support for cexp					
Description	There is some support for cexp and tests in the NFS client directory: <pre> cpukit/libfs/src/nfsclient/src/cexp.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 </pre> 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					
#3392	20 months ago	fixed	tool/rsb	Chris Johns	Chris Johns	20 months ago
Summary	infinite loop in RSB's path when a prefix path is not writable					
Description	The code gets the dirname() of the path stepping up until there is no path however dirname('/') is / so the path never has a length of 0 .					
#3395	20 months ago	fixed	tool	Chris Johns	Chris Johns	20 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.					
#3396	20 months ago	fixed	tool	Chris Johns	Chris Johns	20 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.					
#3397	20 months ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	20 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; } test.cc: In function 'void f()': test.cc:3:15: warning: ISO C++11 does not allow 'register' storage class specifier [-Wregister] register int i; ^ </pre>					

#3401	Remove the use of the register keyword at least in the public header files for C++ compatibility.	20 months ago	fixed	tool	Joel Sherrill	chrisj@...	14 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).						
#3402		20 months ago	fixed	tool	Joel Sherrill	chrisj@...	14 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).						
#3403		20 months ago	fixed	tool/rsb	Sebastian Huber	Sebastian Huber	20 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.						
#3407		20 months ago	fixed	tool	Joel Sherrill		14 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.						
#3410		20 months ago	fixed	arch/i386	Sebastian Huber	Sebastian Huber	20 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.						
#3411		20 months ago	fixed	arch/powerpc	Joel Sherrill	Sebastian Huber	20 months ago
Summary	qemuppc does not install linkcmds.base						
Description	examples-v2 fail to compile qemuppc because linkcmds.base is not installed. They build OK for sparc/erc32. This must be a minor glitch from the build system changes.						
#3415		20 months ago	fixed	admin	Joel Sherrill	Chris Johns	14 months ago
Summary	Add examples and tests as components						
Description	It seems as if we should have tests and examples as components.						
#3417		20 months ago	fixed	tool	Chris Johns	Chris Johns	14 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.						
#3418		19 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	19 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		19 months ago	fixed	network/legacy	Sebastian Huber	Sebastian Huber	19 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 librtemscpu.a.						
#3421		19 months ago	wontfix	admin	Joel Sherrill	chrisj@...	14 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		19 months ago	duplicate	admin	Joel Sherrill		19 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-qorig_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/ckrhaaa.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		19 months ago	fixed	examples	Joel Sherrill	Joel Sherrill	14 months ago
Summary	examples-v2: no MIPS BSPs pass configuration step						
Description							

Summary	Remove nios2gen program					
Description	Rename it to rtems-nios2gen					
#3445	18 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	18 months ago
Summary	Remove multigen script					
Description	This script is unused and out dated.					
#3446	18 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	18 months ago
Summary	Remove cvsignore-add.sh script					
Description	This script is obsolete since moving to Git.					
#3447	18 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	18 months ago
Summary	Remove rtems-testsuite-autostuff script					
Description	It is not used.					
#3451	18 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	18 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	18 months ago	fixed	arch/riscv	Sebastian Huber	Sebastian Huber	16 months ago
Summary	Update RISC-V tool chain to support standard 64-bit chips					
Description	<p>First step is to include this bug fix in Binutils: https://sourceware.org/bugzilla/show_bug.cgi?id=23244</p> <p>Second step is a multilib update. Third step is a merge of the riscv32 and riscv64 tool chains into a single riscv tool chain.</p>					
#3453	18 months ago	fixed	arch/riscv	Sebastian Huber	Sebastian Huber	18 months ago
Summary	Add RISC-V GDB					
#3454	18 months ago	fixed	doc	Vidushi Vashishth	Vidushi Vashishth	10 months ago
Summary	Tracing Framework Documentation in User Manual					
Description	<p>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.</p> <p>2) Expand the chapter to include CTF generation (currently under development) as it evolves.</p>					
#3455	18 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	18 months ago
Summary	Remove install-if-change script					
Description	<p>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.</p> <p>This script is used by the standard Makefile support:</p> <pre>c/src/make/host.cfg.in:INSTALL_CHANGE=\$(PROJECT_BIN)/install-if-change</pre> <p>The INSTALL_CHANGE is used by:</p> <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_VARIANT=\$(INSTALL_CHANGE) -V "\$(LIB_VARIANT)"</pre> <p>Is the variant stuff still supported?</p> <p>I would remove the support for it and replace the "install-if-change" script with the standard "install" program.</p>					
#3458	18 months ago	fixed	tool	Chris Johns	Chris Johns <chrisj@...>	18 months ago
Summary	rtems-test should not use the env PATH to find covoar					
Description	<p>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.</p> <p>There should be no need to run install to use and test <code>rtems-test</code> with coverage.</p> <p>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>.</p> <p>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.</p>					
#3459	18 months ago	fixed	score	Sebastian Huber	Sebastian Huber	9 months ago
Summary	Rework initialization and interrupt stack support					
Description	<p>We need an initialization stack to run the sequential system initialization before multitasking is enabled. The system initialization is done with interrupts disabled.</p> <p>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.</p> <p>The initialization and interrupt stacks are needed for each processor in the system.</p> <p>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.</p> <p>It should be possible to set the stack size via the <code>CONFIGURE_INTERRUPT_STACK_SIZE</code> configuration option and not via some magic stuff in linker command files.</p> <p>Many BSPs set the BSS area to zero during system initialization. Thus, the initialization stack must not be contained in the BSS area.</p> <p>The interrupt stack implementation is currently controlled by the following CPU port defines:</p>					

Description

```

/**
 * 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

/**
 * 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

/**
 * 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

```

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 `_CPU_interrupt_stack_setup()` is still useful to customize the registration of the interrupt stack area in the per-CPU information.

Summary	GDB 8 SIS LEON2 LEON3 Patches					
Description	Jiri patch for gdb-8.0.1.					
#3461	18 months ago	fixed	tool	Sebastian Huber	Sebastian Huber	18 months ago
Summary	Canadian cross compilation of RTEMS tools not supported for x86_64-w64-mingw32					
#3463	18 months ago	fixed	tool	Chris Johns		14 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	17 months ago	fixed	fs/jffs2	Sebastian Huber	Sebastian Huber	14 months ago
Summary	Integrate all changes from Linux v3.11 to v4.17 made in the JFFS2 sources					
Description	<p>The original import version of the JFFS2 sources was Linux v3.11 (September 2013). Update the JFFS2 sources to Linux v4.17.</p> <p>The Git command to generate the patches is:</p> <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> <p>We need a source file transformation in the patches:</p> <pre>sed -i 's%/fs/jffs2%/cpukit/libfs/src/jffs2/src%' 00*</pre> <p>To support the first commit:</p> <pre>From e8bbeeb755a077cfc0f814b07739f9225642d65c 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> <p>we have to a postorder iterator to the red-black tree support code.</p> <p>The remaining 23 patches are easy to apply.</p>					
#3471	17 months ago	fixed	lib	Sebastian Huber	Sebastian Huber	17 months ago
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	17 months ago	fixed	network/libbsd	Sebastian Huber	Sebastian Huber	11 months ago
Summary	Update of libbsd to a version close to the FreeBSD 12 release					
Description	<p>The FreeBSD project is about to prepare the FreeBSD 12 release soon:</p> <p>https://www.freebsd.org/releases/12.0R/schedule.html</p> <p>Use this time frame to update the libbsd stepwise to a FreeBSD trunk version close to the FreeBSD 12 release.</p>					
#3475	17 months ago	fixed	score	Sebastian Huber	Sebastian Huber	17 months ago
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	17 months ago	fixed	arch/riscv	Joel Sherrill	Sebastian Huber	16 months ago
Summary	RISCV BSP Tester Cleanup Needed					
Description	<p>rtems-tools currently has the following bsp testing configurations:</p> <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> <p>rtems-bsps.ini does not include the riscv.</p> <p>tester/rtems/rtems-bsps-tiers.ini does not list the riscv</p>					
#3480	16 months ago	fixed	config	Sebastian Huber	Sebastian Huber	14 months ago
Summary	CONFIGURE_MINIMUM_TASK_STACK_SIZE may affect CONFIGURE_INTERRUPT_STACK_SIZE					
Description	<p>In case an application defines CONFIGURE_MINIMUM_TASK_STACK_SIZE, then this may change the CONFIGURE_INTERRUPT_STACK_SIZE as well:</p> <pre>#ifndef CONFIGURE_INTERRUPT_STACK_SIZE #define 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> <p>I think this is not what a user expects.</p>					
#3482	16 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	16 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					

Descripti on	<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>					
#3484	16 months ago	fixed	fs/rfs	Sebastian Huber	Sebastian Huber	16 months ago
Summar y	<p>Remove the <code>tail_buffers_disable_release_items_at_offset()</code> function. 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?</p>					
Descripti on	<p>The function <code>rtems_rfs_buffer_sync()</code> erroneously calls <code>rtems_disk_release()</code>. This screws up the reference counting of the disk.</p>					
#3486	16 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	16 months ago
Summar y	<p>Use <code>uintptr_t</code> and <code>size_t</code> instead of <code>uint32_t</code> in <code>rtems_partition_create()</code></p>					
Descripti on	<p>Use <code>uintptr_t</code> to specify the length of the partition buffer area instead of <code>uint32_t</code>. This is in line with <code>rtems_region_create()</code>. On 64-bit targets, the length may exceed 4GiB. Use <code>size_t</code> for the buffer size, since on some targets the single object size is less than the overall address range, e.g. m32c <code>sizeof(uintptr_t) > sizeof(size_t)</code>.</p>					
#3488	16 months ago	fixed	config	Sebastian Huber	Sebastian Huber	15 months ago
Summar y	<p>Remove <code>CONFIGURE_HAS_OWN_MOUNT_TABLE</code></p>					
Descripti on	<p>RTEMS has the configuration option <code>CONFIGURE_HAS_OWN_MOUNT_TABLE</code> since 1999. This configuration option is broken since RTEMS 4.11. Remove this broken configuration option.</p>					
#3489	16 months ago	fixed	config	Sebastian Huber	Sebastian Huber	15 months ago
Summar y	<p>Obsolete <code>CONFIGURE_HAS_OWN_CONFIGURATION_TABLE</code></p>					
Descripti on	<p>Obsolete the <code>CONFIGURE_HAS_OWN_CONFIGURATION_TABLE</code> configuration option. The RTEMS configuration should be done via explicit configuration options to allow more freedom for implementation changes.</p>					
#3490	16 months ago	fixed	config	Sebastian Huber	Sebastian Huber	8 months ago
Summar y	<p>Remove <code>CONFIGURE_HAS_OWN_CONFIGURATION_TABLE</code></p>					
Descripti on	<p>This configuration option was obsoleted in RTEMS 5.1.</p>					
#3491	16 months ago	fixed	posix	Sebastian Huber	Sebastian Huber	15 months ago
Summar y	<p>Align <code>mprotect()</code> prototype with POSIX</p>					
Descripti on	<p>The correct prototype is:</p> <pre>int mprotect(void *, size_t, int);</pre>					
#3496	16 months ago	fixed	score	Sebastian Huber	Sebastian Huber	16 months ago
Summar y	<p>Remove superfluous interrupt enable in <code>_Thread_Dispatch_enable()</code></p>					
Descripti on	<p>The <code>_Thread_Dispatch_enable()</code> contains a superfluous interrupt enable. This bug had probably no effect since the interrupt enable is idempotent on all CPU ports.</p> <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	16 months ago	fixed	doc	Jens Schweikhardt	Sebastian Huber	16 months ago
Summar y	<p>Command and Variable Index is empty</p>					
Descripti on	<p>The Command and Variable Index, https://docs.rtems.org/branches/master/cpu-supplement/command.html does not contain any commands or variables.</p>					

Summary	Convert PTY driver to new Termios API					
Description						
#3528	15 months ago	fixed	config	Sebastian Huber	Sebastian Huber	14 months ago
Summary	Remove undocumented and untested CONFIGURE_MAXIMUM_PTYS					
Description	Remove the undocumented and untested CONFIGURE_MAXIMUM_PTYS configuration option. Add a <code>rtems_telnetd_config_table::client_maximum</code> member to the Telnet configuration.					
#3529	14 months ago	fixed	lib	Sebastian Huber	Sebastian Huber	14 months ago
Summary	Fix issues raised by Coverity Scan for Telnet server					
#3531	14 months ago	fixed	unspecified	Joel Sherrill	Joel Sherrill	14 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	14 months ago	fixed	tool/rsb	Chris Johns	Chris Johns	7 months ago
Summary	RSB source only download is host specific					
Description	<p>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.</p> <p>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.</p> <p>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>:</p> <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> <p>The simpler construct in <code>rtems-tools-common-1.cfg</code> of:</p> <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> <p>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:</p> <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> <p>We require the logic to follow the <code>%if True</code> path and the <code>%else</code> path.</p>					
#3533	14 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	14 months ago
Summary	Add <code>rtems_task_exit()</code>					
Description	<p>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.</p> <pre>void rtems_task_exit(void) RTEMS_NO_RETURN;</pre> <p>This is similar to the POSIX equivalent.</p> <pre>void pthread_exit(void * __value_ptr) __dead2;</pre>					
#3535	14 months ago	fixed	lib	Sebastian Huber	Sebastian Huber	14 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	14 months ago	fixed	tool	Chris Johns	Chris Johns	14 months ago
Summary	Move RTEMS configuration data to a common <code>config</code> directory					
Description	<p>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.</p> <p>In time this directory of data can move into the <code>rtems.git</code> repo.</p>					
#3537	14 months ago	fixed	tool	Chris Johns	Chris Johns	12 months ago
Summary	RSB and RTEMS Tools Support for python2 and python3					
Description	<p>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.</p> <p>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.</p>					
#3538	14 months ago	fixed	doc	Joel Sherrill	Joel Sherrill	14 months ago
Summary	Classic API Barrier Wait Section Title Has Wrong Name					
Description	<p>The section title says obtain not wait.</p> <p>Likely also applies to 4.11.</p>					
#3539	14 months ago	fixed	score	Sebastian Huber	Sebastian Huber	14 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	14 months ago	fixed	lib	Sebastian Huber	Sebastian Huber	14 months ago
Summary	Remove <code>keep_stdio</code> feature from Telnet service					

<p> #3543 14 months ago fixed lib Sebastian Huber Sebastian Huber 14 months ago </p> <p> 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. </p> <p> Summary: Change Telnet server to allocate most resources during initialization </p>
<p> #3545 14 months ago fixed lib Sebastian Huber Sebastian Huber 14 months ago </p> <p> 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. </p> <p> Summary: Support <code>O_DIRECTORY</code> <code>open()</code> flag </p> <p> Description: Use this flag in <code>opendir()</code>. </p>
<p> #3546 14 months ago fixed lib Sebastian Huber Sebastian Huber 14 months ago </p> <p> Summary: Support <code>O_NOFOLLOW</code> <code>open()</code> flag </p> <p> Description: </p>
<p> #3547 14 months ago fixed lib Sebastian Huber Sebastian Huber 14 months ago </p> <p> Summary: Support <code>O_CLOEXEC</code> <code>open()</code> flag </p> <p> Description: This is a POSIX flag. Make sure its use causes no open failure. </p>
<p> #3549 14 months ago fixed arch/powerpc Sebastian Huber Sebastian Huber 14 months ago </p> <p> Summary: Obsolete powerpc/virtex BSP </p> <p> Description: This BSP is quite old (was added 1995), unmaintained and likely without users: https://lists.rtems.org/pipermail/users/2018-September/032557.html </p>
<p> #3551 14 months ago fixed lib Sebastian Huber Sebastian Huber 13 months ago </p> <p> Summary: Move default configuration to separate library </p> <p> Description: An RTEMS application default configuration is contained in <code>cpukit/libmisc/dummy/default-configuration.c</code>. This default configuration is contained in <code>librtemscpu.a</code>. This has at least two problems: <ol style="list-style-type: none"> 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 <code>librtemscpu.a</code>. This can be used to reduce the size of the configuration itself. Proposed change: Move the default configuration to a separate library, e.g. <code>librtemsdefaultconfig.a</code>. </p>
<p> #3553 14 months ago fixed build Joel Sherrill 13 months ago </p> <p> Summary: rtems-libbsd Missing waf in Top Directory </p> <p> Description: At least <code>examples-v2</code> and <code>rtems-libbsd</code> use <code>waf</code> to build. <code>examples-v2</code> has a copy of <code>waf</code> known to work for the users' convenience. <code>rtems-libbsd</code> is missing one. Add one to <code>rtems-libbsd</code>. Also (if there are other repos using <code>waf</code>), make sure they have a copy of <code>waf</code> also. </p>
<p> #3554 14 months ago fixed network/libbsd Joel Sherrill Sebastian Huber 11 months ago </p> <p> Summary: rtems-libbsd README.waf Needs an Update Sweep </p> <p> Description: 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. </p>
<p> #3555 14 months ago fixed admin Amar Takhar Amar Takhar 14 months ago </p> <p> Summary: IRC bots need to be registered to join #rtems </p> <p> Description: Due to the spam on Freenode only registered users can join #rtems. The bots both need accounts now. </p>
<p> #3557 14 months ago fixed admin Amar Takhar Amar Takhar 14 months ago </p> <p> Summary: Test ticket </p> <p> Description: Using this as a test ticket to test out my fix. </p>
<p> #3558 14 months ago fixed admin Amar Takhar Amar Takhar 14 months ago </p> <p> Summary: Update TracSpamFilter? </p> <p> Description: 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. </p>
<p> #3559 14 months ago fixed admin Amar Takhar Amar Takhar 14 months ago </p> <p> Summary: Fix NavAdd? plugin. </p> <p> Description: 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: <ul style="list-style-type: none"> • "New Ticket" now goes to <code>/wiki/NewTicket</code> • 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 <code>NavAdd?</code> 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. </p>
<p> #3560 14 months ago fixed admin Amar Takhar Amar Takhar 14 months ago </p> <p> Summary: Fix FlexibleAssignTo? </p> <p> Description: 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. </p>
<p> #3561 14 months ago fixed admin Amar Takhar Amar Takhar 13 months ago </p> <p> Summary: Migrate to CommitTicketUpdater? </p> <p> Description: 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. </p>

#3562	14 months ago	fixed	tool/sb	Chris Johns	Chris Johns	13 months ago
Summary	Add support for the shared temporary build path on Windows					
Description	The <code>%(tmproot)</code> path is currently based on a <code>BuildRoot</code> setting in the build configuration files. The line is: <pre>BuildRoot: %%(tmppath)/%(name)-root-%(id_u) -n</pre> 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	14 months ago	fixed	tool/rsb	Sebastian Huber	Chris Johns	11 months ago
Summary	RSB: UnboundLocalError?: local variable 'build_max_size_human' referenced before assignment					
Description	<pre>../source-builder/sb-set-builder --prefix=/build/rtems/5.5/rtems-or1k</pre> <pre>... 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</pre>					
#3576	13 months ago	fixed	tool/gdb	Joel Sherrill	Joel Sherrill	13 months ago
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	13 months ago	fixed	tool/gcc	Sebastian Huber	Sebastian Huber	13 months ago
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	13 months ago	fixed	admin	Chris Johns	Chris Johns <chrisj@...>	13 months ago
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	13 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	13 months ago
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 getretne() 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	13 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	13 months ago
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	13 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	13 months ago
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-editor.c in RTEMS. Deprecate it in this release.					
#3591	13 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	13 months ago
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	13 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	13 months ago
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	13 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	13 months ago
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	13 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	12 months ago
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: <ul style="list-style-type: none"> <rtems/rtems/XYZ.h> <rtems/rtems/XYZimpl.h> Use <ul style="list-style-type: none"> <rtems/rtems/XYZdata.h> for this new header file.					

<p>Potential new header files are:</p> <ul style="list-style-type: none"> • 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	13 months ago	fixed	arch/m32c	Sebastian Huber	Sebastian Huber	13 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	13 months ago	fixed	arch/or1k	Sebastian Huber	Sebastian Huber	13 months ago
Summary	Update or1k tool chain to use the upstream GCC					
#3603	13 months ago	fixed	score	Sebastian Huber	Sebastian Huber	13 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	13 months ago	fixed	lib/dl	Joseph Hickey	Chris Johns	12 months ago
Summary	RTL Unresolved Symbols from common section on i386/pc686 (cloned)					
Description	<p>Cloned from #3527:</p> <p>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.</p> <p>The RTL reports unresolved symbols, and runtime code that take the address of the global get <code>NULL</code> instead.</p> <p>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.</p> <p>Test platform is QEMU using pc686 BSP, RTEMS source version 4.11.3 (latest on 4.11 git branch as of this writing)</p>					
#3612	13 months ago	fixed	lib/dl	Chris Johns	Chris Johns	12 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	12 months ago	fixed	admin	Sebastian Huber	Amar Takhar	12 months ago
Summary	CommitTicketUpdater? does not process commits in order					
Description	<p>The new <code>CommitTicketUpdater?</code> 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</p> <p>Compare with Git commit order: https://git.rtems.org/rtems/log?id=eea5ea84eaf1b3dab72d7a7a6578f0dc59e55396&qt=range&q=1947449a5d6f01a44ccc61eda3e78ef7e06da952..5fc727fe77a632f9df38161a8474007dab020608</p>					
#3621	12 months ago	fixed	score	Sebastian Huber	Sebastian Huber	12 months ago
Summary	Statically initialize object information structures					
Description	<p>Statically initialize the object information structures to make the configuration easier to review and simplify the debugging.</p> <p>The workspace size estimate generated by <code><rtems/confdefs.h></code> looks currently like this:</p> <pre>const rtems_configuration_table Configuration = { ((((ssize_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> <p>[more than 500 similar lines]</p> <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	12 months ago	fixed	unspecified	Sebastian Huber	Sebastian Huber	12 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					


```

/**
 * @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.

```

#3624	12 months ago	fixed	lib/dl	Joel Sherrill	3 weeks ago
-------	---------------	-------	--------	---------------	-------------

Summary: MSYS2 build fails to build for set.
 void rtems_cache_invalidate_entire_data_processor_set(
 Building m68k/mrm332 on Linux and MSYS2 to compare results. Builds with all tests on Linux. Multiple build failures on MSYS2. Some appear to be because on MSYS2, tests are being build which are marked as exclude in the .tcfg file. For example, <https://git.rtems.org/rtems/tree/bsp/m68k/mrm332/config/mrm332-testsuite.tcfg#n11> says that fsdosfsname01 should be excluded but it is being built as shown below:

```

m68k-rtems5-gcc -mcpu=cpu32 -Os -g -fomit-frame-pointer -Wall -Wmissing-prototypes -Wimplicit-function-declaration -Wstrict-prototypes -Wnested-externs -
B././lib/libbsp/m68k/mrm332 -B/home/jrs007/rtems-work/rtems/bsp/m68k/mrm332/start -specs bsp_specs -qrtems -L././cpukit -L/home/jrs007/rtems-
work/rtems/bsp/m68k/shared/start -Wl,--wrap=printf -Wl,--wrap=puts -Wl,--wrap=putc -o fsdosfsname01.exe fsdosfsname01-init.o
support/fsdosfsname01-ramdisk_support.o ././lib/libbsp/m68k/mrm332/librtemsbsp.a ././cpukit/librtemscpu.a
c:/msys64/home/jrs007/rtems-work/tools/5/bin/./lib/gcc/m68k-rtems5/7.3.0/./././m68k-rtems5/bin/ld.exe: fsdosfsname01.exe section `text' will not fit in region `rom'
c:/msys64/home/jrs007/rtems-work/tools/5/bin/./lib/gcc/m68k-rtems5/7.3.0/./././m68k-rtems5/bin/ld.exe: region `rom' overflowed by 874128 bytes
collect2.exe: error: ld returned 1 exit status
make[5]: *** [Makefile:1910: fsdosfsname01.exe] Error 1

```

#3625	12 months ago	fixed	lib/dl	Kevin Gordon	Chris Johns	12 months ago
-------	---------------	-------	--------	--------------	-------------	---------------

Summary: RTL Allows Unloading a Module other Modules Depend Upon (cloned)
 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.

#3626	12 months ago	fixed	posix	Joel Sherrill	Sebastian Huber	12 months ago
-------	---------------	-------	-------	---------------	-----------------	---------------

Summary: sigtimedwait() needed when POSIX is disabled

	1f 2f 5f 7f	. #Vx				
#3692	10 months ago	fixed	lib/dl	Chris Johns	Chris Johns	10 months ago
Summary	libdl does not honour write unlock/lock for sections					
Description	The allocator does no honour write unlock and lock for read-only sections as it should. This can used to write protect executable memory.					
#3694	10 months ago	fixed	fs	Joel Sherrill	Gedare Bloom	9 months ago
Summary	shm_open has logically unreachable code (Coverity ID: 1399706, 1399714)					
Description	Coverity ID: 1399706 and 1399714 File: shmopen.c Method: shm_open for first					
	<pre> 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 { </pre>					
	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:					
	<pre> 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 { </pre>					
#3699	10 months ago	fixed	arch/arm	Kinsey Moore	Sebastian Huber	10 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	9 months ago	fixed	shell	Sebastian Huber	Sebastian Huber	9 months ago
Summary	mfill shell command uses the wrong arguments for the memset()					
#3724	9 months ago	fixed	arch/arm	Sebastian Huber	Sebastian Huber	9 months ago
Summary	bsp/lpc24xx: Convert SSP driver to Linux API					
#3725	9 months ago	fixed	arch/arm	Sebastian Huber	Sebastian Huber	7 months ago
Summary	bsp/lpc24xx: Convert I2C driver to Linux API					
Description						
#3728	8 months ago	fixed	bsps	Chris Johns	Chris Johns	8 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	8 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	8 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	8 months ago	fixed	rtems	Sebastian Huber	Sebastian Huber	8 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	8 months ago	fixed	lib/debugger	Chris Johns	Chris Johns	8 months ago
Summary	Add general reg support to libdebugger					
Description	Testing master on a Zynq reports:					
	<pre> (gdb) target remote 10.10.5.45:1122 Remote debugging using 10.10.5.45:1122 Truncated register 19 in remote 'g' packet </pre>					
	It looks to me like gdb is now smart enough to know this ARM arch has a NEON and floating point registers:					
Description						

```
(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
f8        24 24 160    4 uint32_t
cpsr     25 25 164    4 uint32_t
```

#3734 8 months ago fixed score Sebastian Huber Sebastian Huber 8 months ago

Summary: Add RTEMS_CONST attribute to make the compiler specific attribute ((const)) available.

Description: Add RTEMS_CONST attribute to make the compiler specific attribute ((const)) available.

#3736 8 months ago fixed arch/powerpc Chris Johns Sebastian Huber <sebastian.huber@...> 3 weeks ago

Summary: PowerPC beatnik SP code generators simplify 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. Looks like I need to sort this out.

Running `cdtest.exe` fails. I am wondering if there is an issue in the `linkcmd` scripts this BSP uses. The psim works.

The trace is:

```
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 0x6cbd0.
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 0x6cbd0.
Derived class - Instantiation order 5
*** TESTING C++ EXCEPTIONS ***

fatal source: RTEMS_FATAL_SOURCE_EXIT
bsp_fatal_extension(): RTEMS terminated
```

Description

#3741 7 months ago fixed lib/dl default Chris Johns 7 months ago

Summary: libdl loading ELF objects from libbsd NFS file system ends in a deadlock

Description: For ELF files the run-time loader calls this chain:

- `rtems_rtl_elf_file_load()`
- `rtems_rtl_alloc_lock()`
- `rtems_rtl_alloc_heap()`
- `_RTEMS_Lock_allocator()`

`_RTEMS_Lock_allocator()` locks all heap operations. RTL then calls `read()` and for NFS file systems the NFS threads try to use the heap, locking up the system.

#3742	7 months ago	fixed	test	Chris Johns	joel@...	7 months ago
Summary	T_config conflicting type qualifiers for 'config'					
Description	<p>Running the <code>rtems-bsp-builder</code> on FreeBSD is give an error in <code>ttest01</code> for bsp:</p> <ul style="list-style-type: none"> <code>arm/csb336</code> <code>arm/csb337</code> <code>arm/csb637</code> <code>arm/kit637_v6</code> <code>mips/csb350</code> <p>The error being reported is:</p> <pre>error: testsuites/libtests/ttest01/init.c:146:23: error: conflicting type qualifiers for 'config'</pre> <p>The builder command line is:</p> <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> <p>A BSP configure command line is:</p> <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	7 months ago	fixed	tool/rsb	Chris Johns	Chris Johns	7 months ago
Summary	RSB os and arch config logic is broken					
Description	<p>The config file processing of conditionals:</p> <ul style="list-style-type: none"> <code>%ifos</code> <code>%ifnos</code> <code>%ifarch</code> <p>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.</p>					
#3746	7 months ago	fixed	lib/dl	Chris Johns	Chris Johns <chrisj@...>	7 months ago
Summary	libdl test dl05.exe failing					
Description	<p>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 <code>libdl</code> for <code>group</code> sections is a factor.</p>					
#3747	7 months ago	fixed	arch/arm	Sebastian Huber	Sebastian Huber	7 months ago
Summary	Address Cortex-M3 Errata 602117					
Description	<p>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:</p> <p>https://www.nxp.com/docs/en/errata/ES_LPC177X_8X.pdf</p> <p>To avoid the issues, you have to compile everything with <code>-mfix-cortex-m3-ldrd</code>. This option is enabled by default, if you use <code>-mcpu=cortex-m3</code>.</p> <p>I think we have to change our GCC multilibs to account for this errata. For example:</p> <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	7 months ago	fixed	lib/dl	Chris Johns	Chris Johns <chrisj@...>	7 months ago
Summary	libdl uses a linear symbol search on object file symbols					
Description	<p>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.</p> <p>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.</p> <p>Change the object file symbol search to a binary search (<code>bsearch</code>). 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.</p>					
#3754	6 months ago	fixed	doc	Joel Sherrill	Joel Sherrill	4 months ago
Summary	Users Guide Ubuntu Instructions Have Typo					
Description	sudo should be sudo					
#3756	6 months ago	fixed	arch/sparc	Sebastian Huber	Sebastian Huber	6 months ago
Summary	Condition codes in PSR are destroyed by lazy FP context switch					
Description	https://lists.rtems.org/pipermail/devel/2019-June/026014.html					

	on					
#3760	6 months ago	fixed	arch/arm	Chris Johns	Chris Johns <chrisj@...>	4 months ago
Summary	BBB MMU update crashes					
Description	<p>Calling <code>arm_cp15_set_translation_table_entries()</code> on a BBB (Cortex-A8) crashes in the call to <code>arm_cp15_tlb_invalidate_entry_all_asids()</code>. There is no HYP support in the BBB's A8. The <code>cp15</code> register is documented in the A8 manual but the BBB device from TI does not have the support built in.</p> <p>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 should be using it on the Zynq. I have no idea why the Zync (A9) does not complain, it may be ignoring the invalidate request.</p> <p>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.</p> <p>Note, following the other path in the call works on a BBB.</p>					
#3762	5 months ago	fixed	arch/arm	Chris Johns	Chris Johns	5 months ago
Summary	Return the current handler from ARM cp15 set exception call					
Description	<p>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.</p> <p>This is need to probe the memory map debug registers for debug v7 implementations.</p>					
#3763	5 months ago	fixed	tool/rsb	Chris Johns	Chris Johns <chrisj@...>	4 months ago
Summary	RSB SIS build fails on FreeBSD					
Description	<p>The RSB SIS build for RISCv fails on FreeBSD with:</p> <pre>+ CFLAGS='-O2 -pipe -fbracket-depth=1024 -l/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 -l/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 -l/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 -l/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 -l/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 -l/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	5 months ago	fixed	build	Chris Johns	Chris Johns	5 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	5 months ago	fixed	tool/rsb	Chris Johns	Chris Johns	5 months ago
Summary	RSB BSP Buildsets					
Description	<p>Add support to the RSB for BSP build sets. The support includes building 3rd party packages for a BSP.</p> <ol style="list-style-type: none"> 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	4 months ago	fixed	arch/arm	Chris Johns	Chris Johns	4 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	4 months ago	fixed	arch/arm	Chris Johns	Sebastian Huber <sebastian.huber@...>	4 months ago

Summary RPI2 SMP does not build

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./lib/libcputkit -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 ./lib/libcputkit/librtemsdefaultconfig.a ./lib/libbsp/arm/raspberrypi/librtemsbsp.a ./lib/libcputkit/librtemsbsp.a ./lib/libcputkit/librtemstest.a /opt/work/rtems5/lib/gcc/arm-rtems5/7.4.0/./lib/./arm-rtems5/bin/ld: calloc.norun.exe section '.rtemsstack' will not fit in region `VECTOR_RAM' /opt/work/rtems5/lib/gcc/arm-rtems5/7.4.0/./lib/./arm-rtems5/bin/ld: section .start VMA [0000000000000800,000000000000085f] overlaps section .rtemsstack VMA [0000000000000040,0000000000000203f] /opt/work/rtems5/lib/gcc/arm-rtems5/7.4.0/./lib/./arm-rtems5/bin/ld: region `VECTOR_RAM' overflowed by 114752 bytes

Configured with ...

/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

#3775 4 months ago fixed lib/dl Chris Johns Chris Johns 4 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 4 months ago fixed lib/dl Chris Johns Chris Johns 4 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 4 months ago fixed lib/dl Chris Johns Chris Johns 4 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.

#3781 4 months ago fixed tool/rsb Sebastian Huber Sebastian Huber 2 days ago

Summary RSB crashes in case the host as an unreadable directory in "/"

butrfeld@elektra:~/rtemsSMP/src/rsb/rtems\$./source-builder/sb-set-builder --source-only-download 5/rtems-sparc RTEMS Source Builder - Set Builder, 5 (29fab0500e22) Traceback (most recent call last): File './source-builder/sb/cmd-set-builder.py', line 26, in <module> setbuilder.run() File '/users/staff/butrfeld/rtemsSMP/src/rsb/source-builder/sb/setbuilder.py', line 674, in run if not check.host_setup(opts): File '/users/staff/butrfeld/rtemsSMP/src/rsb/source-builder/sb/check.py', line 127, in host_setup if not path_check(opts): File '/users/staff/butrfeld/rtemsSMP/src/rsb/source-builder/sb/check.py', line 115, in path_check elif not path.exists(p): File '/users/staff/butrfeld/rtemsSMP/src/rsb/source-builder/sb/path.py', line 131, in exists return _exists(shell(paths)) File '/users/staff/butrfeld/rtemsSMP/src/rsb/source-builder/sb/path.py', line 124, in _exists return basename(p) in ['.'] + listdir(dirname(p)) File '/users/staff/butrfeld/rtemsSMP/src/rsb/source-builder/sb/path.py', line 118, in listdir return os.listdir(hp) OSError: [Errno 13] Permission denied: '/adm'

The root directory "/" looks like this:

butrfeld@elektra:/\$ ls -ls total 89 4 drwxr-x---+ 6 root root 4096 Nov 5 2018 adm 4 drwxr-xr-x 2 root root 4096 Apr 10 06:17 bin

#3783 4 months ago fixed tool/rsb jameszj 3 months ago

Summary MSYS2 RSB build error

Description I tried to update the compiler to RSB master, and encountered an error. command line:

./source-builder/sb-set-builder --dry-run --with-download 5/rtems-arm

Description error message:

config: tools/rtems-gdb-8.2.1-1.cfg error: shell macro failed: sh -c "/mingw64/bin/python2-config --ldflags | awk 'BEGIN{FS=" "}python/{for(i=1;i<NF;+ +)if(match(\$i,"*python.*")) print "lib"substr(\$i,3)*";}"; 1: }python/{for(i=1;i<NF;+ +)if(match(\$i,"*python.*")) print libsubstr(\$i,3)*";}"; -c: line 0: unexpected EOF while looking for matching `}'python/{for(i=1;i<NF;+ +)if(match(\$i,"*python.*")) print libsubstr(\$i,3)*";}"; -c: line 1: syntax error: unexpected end of file Build FAILED Build Set: Time 0:00:47.324763 Build FAILED

#3792 3 months ago fixed admin Jeff Mayes Chris Johns 3 months 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...

\$./source-builder/sb-set-builder --prefix=/home/mayes/dev/rtems/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;+ +)if(match(\$i,"*python.*")) print "lib"substr(\$i,3)*";}"; 1: }python/{for(i=1;i<NF;+ +)if(match(\$i,"*python.*")) print libsubstr(\$i,3)*";}"; -c: line 0: unexpected EOF while looking for matching `}'python/{for(i=1;i<NF;+ +)if(match(\$i,"*python.*")) print libsubstr(\$i,3)*";}"; -c: line 1: syntax error: unexpected end of file Build FAILED Build Set: Time 0:07:19.564000 Build FAILED

This happens when using Python3 and also when using Python2.

#3794 3 months ago fixed posix Joel Sherrill Joel Sherrill 2 months 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.

1. Internal system threads should have no signals enabled. They have no business executing user signal handlers -- especially IDLE.
2. The initial signal mask for other threads needs to follow the implication of a pure C99 environment which only has the methods raise() and signal(). 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).
3. 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.

Descripti
on

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)
{
    int      sc;
    sigset_t mask;

    sc = sigfillset( &mask );
    // check sc == 0

    sc = pthread_sigmask( SIG_BLOCK, &mask, NULL );
    // check sc == 0
}
```

#3800	2 months ago	fixed	posix	Joel Sherrill	Joel Sherrill	8 weeks ago
-------	--------------	-------	-------	---------------	---------------	-------------

Summary
y
termios - Add Capability to Generate SIGINTR and SIGQUIT

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 rtems_termios_posix_isig_handler().

Descripti
on

```
rtems_termios_isig_status_code rtems_termios_register_isig_handler(
    rtems_termios_isig_handler handler
);
```

The method rtems_termios_posix_isig_handler() 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 rtems_termios_default_isig_handler() to return to the default behavior.

The tests termios10 (polled IO) and termios11 (interrupt driven IO) are added to exercise this behavior.

#3805	5 weeks ago	invalid	lib/debugger	Joel Sherrill	Chris Johns	5 weeks ago
-------	-------------	---------	--------------	---------------	-------------	-------------

Summary
y
libdebugger build error on atsamv

This was caught in a build sweep using rtems-bsp-builder.

Configure command:

```
/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
```

Compiler output:

Descripti
on

		<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 \$debase.Tpo -c -o libdebugger/rtems-debugger-arm.o /home/joel/rtems-cron-5/rtems/c/src/././cpukit/libdebugger/rtems-debugger-arm.c && mv -f \$debase.Tpo \$debase.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;</pre>				
#3806	5 weeks ago	fixed	score	Sebastian Huber	Sebastian Huber	4 weeks ago
Summary	<pre> /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 ^ </pre>					
Description	<p>Currently, the following fatal error is generate in case of heap errors:</p> <pre> /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(); static void _Heap_Protection_block_error_default(Heap_Control *heap, Heap_Block *block in #define EXCEPTION_ENTRY_EXC() ^ (void) arm_switch_reg ^ /* FIXME */ /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(ERROR_CORE, 0xdeadbeef); ^ ----- /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] Replace this with a dedicated fatal error source and a context structure (similar to assert()). CPU_Exception_frame frame;</pre>					
#3811	5 weeks ago	fixed	admin	Chris Johns	Chris Johns <chris@...>	3 weeks ago
Summary	<pre> /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 ^ </pre>					
Description	<p>The release snapshot in the release snapshot directory is fetching .. https://ftp.rtems.org/pub/rtems/releases/5/5.0.0-m1911/sources</p>					
#3814	4 weeks ago	fixed	admin	Chris Johns	Chris Johns	2 weeks ago
Summary	<p>Releasing creates 2 copies of the kernel and tools.</p> <pre> /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 ^ </pre>					
Description	<p>The release snapshot m1911 as found here: https://ftp.rtems.org/pub/rtems/releases/5/5.0.0-m1911/ has a kernel rtems-5.0.0-m1911.tar.xz in the top directory and another copy in the sources directory.</p> <p>The top level copy is the head of the branch, in this case master while I suspect the copy in the sources directory is created by the RSB when collecting the source. Which is correct for a release? I am not sure, the tagged version in the RSB is the release packaged version.</p> <p>I tend to think the release packaged version is used and the RSB collected versions should not be collected. They are only useful when working from git.</p>					
#3823	2 weeks ago	fixed	rtems	Jonathan Brandes	Sebastian Huber <sebastianhuber@...>	9 days ago
Summary	<pre> /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 ^ </pre>					
Description	<p>At least, not in some circumstances.</p> <p>For example, for foo/bar/baz.txt, if sub-directory foo/ exists first, then foo/bar/baz.txt does unpack correctly.</p> <p>We only use the 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] EXCEPTION_ENTRY_EXC()</p>					
#3830	2 days ago	fixed	tool/rsb	Sebastian Huber	Sebastian Huber	46 hours ago
Summary	<p>Build problems with user names which contain space characters</p> <pre> /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>					
Description	<p>The RSB uses the user name as path components. This does not work well if the user name contains space characters. Use the user ID number instead.</p>					

Last modified on Nov 9, 2017, 6:38:58 AM

tags
5.1 release