Razorcat Development GmbH
Witzlebenplatz 4
14057 Berlin
Germany

Release Notes

Technical Support

phone	+49 - (30) - 536 357 0
fax	+49 - (30) - 536 357 60
email	support@razorcat.com
www	http://www.razorcat.com

Release v4.2.7 (42 items)

C++
TES-3202

The "this" object was sometimes not visible in test data editor TDE.

C++
TES-3239

Added new attributes 'Declare Constructors' and 'Deleted Constructors' to handle classes without or explicit deleted default constructor.

CTE
TES-3159

Fixed generating classification tree for bit field components.

CTE   *Enhancement*
TES-3217

From now modules can only be analyzed if all its CTE documents are saved. Moreover the CTE documents are closed automatically to force a reopen after module analysis.

CTE   *New Feature*
TES-3254

Now CTE document generation based on C++ sources is available.

CTE
TES-3275

CTE_451 Now it's possible to change the text color.
CTE_54 Now the user can define font styles (type, weight, size) and text color for tree nodes and table entries.

CTE
TES-3277

Fixed updating of test data stemming from parsing CTE class node names with manually assigned test data for CTE tree nodes. All CTE-generated test data will be updated or deleted. Manually assigned test data for CTE class nodes that contain no parsable value will remain untouched.

Release v4.2.7 (42 items)

CTE
TES-3284

Now the Test Data View will show generated test data without reselecting the CTE node.

Compiler/Target/Microcontroller
New Feature

TES-3113

New combination for Wind River TriCore compiler with Lauterbach TRACE32 debugger.

Compiler/Target/Microcontroller
TES-3170

Fixed idb-freescale-s12z.mk to support test object defines.

Compiler/Target/Microcontroller
TES-3178

Fixed idb-microchip-xc8.mak file. On some systems analyzing failed due to special preprocessor entries.

Compiler/Target/Microcontroller
TES-3179

Added support for the latest Green Hills V850 linker.

Compiler/Target/Microcontroller
TES-3183

Added support to TESSY's CLANG parser for __int24 and __uint24 data types for Microchip XC8 compiler.

Compiler/Target/Microcontroller
TES-3188

Fixed Makefile template for Cosmic S12Z in combination with winIDEA.

Compiler/Target/Microcontroller
Enhancement

TES-3189

Prepared GNU Tools for ARM+QEMU as well as all Crosscore Makefile template for parallel build.

Compiler/Target/Microcontroller
TES-3196

Added Compiler Dialect variable to Microchip XC8-CC Makefile template.

Compiler/Target/Microcontroller
New Feature

TES-3201

Implemented support for multiple files in TEE attribute 'Duplicated Defines Header'.

Compiler/Target/Microcontroller
Enhancement

TES-3257

Added option -Xlicense-wait to all Wind River Makefile templates.

Compiler/Target/Microcontroller
Enhancement

TES-3259

Activated optional attribute "Wait Timeout" for GNU GCC/CDT test runs.

Release v4.2.7 (42 items)

Component Test
TES-3182

Fixed component test driver for targets using file communication.

Driver
TES-3218

Fixed error when a pointer member inside a dynamic struct with passing OUT -> OUT is set to a dynamic object in one test case and set to NULL in a second test case.

Environment Editor (TEE)
TES-3169

Fixed TEE attributes with hex format flag.

Import/Export
TES-3211

Fixed errors in PTU import for array type variables.

Instrumenter
TES-3226

Instrumenter failed if a class member was defined "using namespace::class" but not directly inside the namespace.

Instrumenter
TES-3244

The instrumenter could crash if C++14 digit separators are used. [e.g. const double PI = 3.14159'26535'89793; const int MILLION = 1'000'000;]

Instrumenter
TES-3272

Instrumenter failed instrumenting static local variables when multiple variables are defined separated with comma and initialized using curly braces.

Interface Database (IDB)
TES-3197

Enum constants of enums without type name and tagname (enum {A, B, C};) used in test data had different values after automatic reuse.

Interface Database (IDB)
TES-3240

Consider change of bitfield size when comparing interface database.

Interface Database (IDB)
TES-3265

Possibly wrong associations between CTE tree elements and interface objects in test objects without test cases after module analysis.

Makefile Templates   *Enhancement*
TES-3208

Added support for defines using Atollic's GNU ARM compiler.

Release v4.2.7 (42 items)

Parser
TES-3074

Updated all TKS template files and added a new TKS header for the AD compiler.

Parser
TES-3184

The parser could crash when trying to resolve header files from which static and inline functions should be excluded.

Parser
TES-3191

Fixed problem in ARMv6 TKS template file concerning volatile assembler functions.

Parser
TES-3241

Fixed possibly wrong typedef name for struct used in STL container template class.

Report
TES-3288

Fixed error when creating test details reports in non-PDF format for tasks with attachments.

Save/Restore Database (TMB Files)
TES-3210

Fixed possible removal of all CTE files during TMB import.

Scenario Editor (SCE)
TES-3223

Fixed possible test data loss in scenario during time-consuming module analysis.

Scenario Editor (SCE)
TES-3232

When using the mode variable, it was possible to select static local variables. Also, for integer type variables it was not possible to assign a value.

TESSY (General)
TES-3204

Fixed skipping superfluous folder in module backup files saved with TESSY 4.2.5.

Test Database (TDB)
TES-3203

Fixed saving classification tree with pointers to nested unions.

Usercode Editor (UCE)
TES-2807

Apply attributes "Float Precision" and "Double Precision" to eval macros used in usercode.

Variant Management
TES-3238

Fixed purging obsolete comparison interface database to avoid annoying error message.

Release v4.2.6 (23 items)

C++
TES-3132

Fixed inserting stub code for a function following a struct template specialization.

C++
TES-3134

Fixed inserting stub code for static template method.

C++
TES-3153

Fixed generating parameter proxy class name for templates with reference or pointer template parameter.

C++
TES-3175

Fixed erroneous display of class reference parameter in TDE.

CTE
TES-3139

Fixed internal key collision error when using array parameters with "use as pointer".

CTE
TES-3147

Fixed showing result at CTE Testcases in CTE perspective.

CTE
TES-3161

Fix that test data will not be generated automatically on CTE nodes for new pointer targets.

Command Line (tessycmd)
TES-3166

Fixed timestamp of problems.zlog file.

Command Line (tessycmd)   *Enhancement*
TES-3168

The TESSYD option --copy-log now creates the given directory if it does not exist.

Compiler/Target/Microcontroller   *Enhancement*
TES-3094

Reduced number of objects to be built and linked by default within TESSY's master Makefiles.

Compiler/Target/Microcontroller
TES-3155

IAR C-Spy: Settings folder was copied and right away deleted.

Driver
TES-3090

User defines were erroneously visible in slave control file.

Release v4.2.6 (23 items)

Import/Export
TES-3135

Fixed creating synthetic structs and enums with typedef names on test data import.

Instrumenter
TES-3131

Fixed inserting user declarations to file with partly invalid preprocessor file information (in GNU syntax but with missing flag).

Interface Database (IDB)
TES-3158

Possible failure to rename large Interface Database folders when an antivirus software is running.

Metrics
TES-3137

Error enabling ET/AT metric or analyzing module when ET/AT metrics is enabled.

Report
TES-3146

Fixed series names of cyclomatic complexity (CC) metric graphics within overview report.

TESSY (General)
TES-3141

Fixed restoring and importing TMB archives: A superfluous folder was created in TMB archives which caused the restore operation to fail.

TESSY (General)
TES-3157

Fixed potential timeout problem when starting processes.

TESSY hardware adapter interface (THAI)
TES-3142

Fixed evaluation of component tests when there are time steps that do not set signals within a scenario.

Test Database (TDB)
TES-3177

Fixed possible loss of generated test steps for generator test cases after automatic reuse operation.

Variant Management
TES-3140

Fixed wrong test data in variant test objects after synchronization if stub vector size has changed.

Variant Management
TES-3144

Fixed an exception during synchronization if a test object that is marked as removed is present.

Release v4.2.5 (93 items)

Application Notes
TES-2875

Updated TASKING VX application note.

C++
TES-2884

When a typedef of a struct declared inside a class is used in a template it's namespace was missing in the interface database.

C++
TES-2995

Class member variables where not evaluated when a class has a copy constructor or the tested method uses its own class as parameter. This could result in tests being shown as passed even though the member variables did not yield the expected result.

C++
TES-2998

Fixed possible error loading the interface database if a typedef inside a class uses a qualified type that is an inherited type of it's base class.

C++   *Enhancement*
TES-3009

Support references to scalar types in advanced stubs.

C++   *Enhancement*
TES-3013

In certain situations, an object used as a parameter for calling the test object can or must be created in the user code.
To be able to bind that object to the parameter used by TESSY for the test object call, for each parameter that is a reference to a structure or class with passing direction EXTERNAL, TESSY creates a template with the name "TESSY_BIND_PARAMETER_<name of parameter>", e.g. "TESSY_BIND_PARAMETER_foo_param".
This template can be used in the prolog to bind the user-generated object to the parameter. [e.g. MyClass & myVariable = MyFactory::createObject; TESSY_BIND_PARAMETER_myParameter(myVariable);]

Creating these templates will be enabled via the "Generate Parameter Proxies" attribute.

C++
TES-3035

Enabled setjmp/longjmp for C++ test objects.

C++
TES-3037

Pass direction of class members can now be set to EXTERN.

C++
TES-3060

For test objects, that are extern "C" contained in a namespace, TESSY failed to open the coverage flow file.

Release v4.2.5 (93 items)

C++
TES-3098

If the attribute "Generate Parameter Proxies" is enabled an erroneous code was generated for template parameter.

C++
TES-3125

For test objects, that are extern "C" functions contained in a namespace, the stub code was missing.

C++
TES-3127

If a method definition, for that another method with the same name exists, is explicitly specified inline, the instrumenter failed to find the method.

CTE
TES-3051

Fix that the CTE shows an error when saving documents for C++ test objects.

CTE   *Enhancement*
TES-3057

CTE152 Now "Select All" (CTRL+A) selects all marks in the same test table column of the currently selected mark.
CTE457 Fixed that the CTE failed to open a refinement.
CTE477 Fixed typo in the layout preference page.
CTE465 Fixes an error with multiary dependency operators (AND, OR, XOR). Improves error messages when dependency inputs are missing.
CTE456 Fix that marks of refined nodes are sometimes shown as conflicting after all conflicts in the sub tree are solved.
CTE448 Fixed an issue where validation error markers at the top of the table moved downwards.
CTE450 Fixed that it was possible to copy and paste the table itself.
CTE476 Fixes that a group could be moved to itsself or to an own subgroup.
CTE439 Now a test case is converted into a test step when dropping it into a test sequence.
CTE453 The synchronisation of the selected table entry sometimes stopped working.
CTE468 Fixes an error where already existing test cases are added again.
CTE460 Fixed that color is not removable with the red cross next to the color chooser.
CTE454 Fixed an error where opening refinements containing only one composition or classification failed.
CTE342 Now an automatic layout of the changed subtree is triggered when the layout mode was changed via properties view. This feature can be enabled/disabled via Preferences > CTE > Layout Settings
CTE381 Now very fast inserted tree nodes will always be placed side by side.
CTE469 Fixed message text in validation issues view for incomplete dependency operations (NOT, AND, OR, XOR).
CTE447 Optimized the insertion point of new children. Pasted nodes won't hide existing children of the current parent anymore.
CTE479 Fix that sometimes the CTE import of legacy '*.cte' files does not insert refinements in the tree structure.

CTE   *Enhancement*
TES-3064

Now the automatic tree generation creates additional min value nodes for enums with min value > 0.

CTE
TES-3066

Fix that a potential stale CTE is not closed after an external change to a test object.

Release v4.2.5 (93 items)

CTE
TES-3092

Don't try to generate a interface based classification tree for test objects from C++ projects which leads to errors. Currently this operation is only supported for C projects.

CTE
TES-3110

Fixed hidden CTE editor after resetting the CTE Perspective.

CTE
TES-3111

Optimized opening large CTEs.

CTE   *Enhancement*
TES-3130

CTE484 Changed the default for preference "Pin original layout on import" to true.
CTE140 Optimized redraw of CTE while resizing the editor.
CTE488 Optimized time needed to close a CTE document.
CTE486 Newly created test table entries are visible and selected in all open editors of the same resource.

Command Line (tessycmd)
TES-3096

Fixed error reporting for CLI so that all errors/warnings appear within the problems log.

Command Line (tessycmd)   *Enhancement*
TES-3107

Create problems.zlog archive on exit to keep the errors/warnings from multiple subsequent TESSY sessions. Also added "--copy-log <directory>" option to TESSYD to allow copying the problems.zlog to the Jenkins workspace for archiving of artefacts in CLI operation mode.

Compiler/Target/Microcontroller   *New Feature*
TES-2897

Added optional file communication for TRACE32 to speed up execution time on target hardware.

Compiler/Target/Microcontroller
TES-2917

Fixed and updated Wind River makefile templates.

Compiler/Target/Microcontroller   *New Feature*
TES-2929

New combination for GNU Tools for ARM with iSYSTEM winIDEA.

Compiler/Target/Microcontroller   *Enhancement*
TES-2942

Added support for MATLAB TargetLink.

Compiler/Target/Microcontroller   *Enhancement*
TES-2944

New combination for Keil ARM compiler version 6 with SEGGER JLink.

Release v4.2.5 (93 items)

Compiler/Target/Microcontroller

TES-2973

Fixed TEE attribute substitution and validation: It was possible that attributes (e.g. "Compiler Install Path") were substituted with attribut values of lower levels (e.g. "Target Install Path"). Also the error/warning icons were shown in some situations for inherited and not overwritten attributes.

Compiler/Target/Microcontroller

TES-2993

Fixed Boolean value in Renesas RX C++ type table.

Compiler/Target/Microcontroller

TES-3007

Fixed type table entries concerning _Bool.

Compiler/Target/Microcontroller

TES-3016

Added missing compiler Ids to tks-iar.tpl.

Compiler/Target/Microcontroller

TES-3023

Fixed tracing for gdb-file master.

Compiler/Target/Microcontroller   *Enhancement*

TES-3033

Microchip compiler XC8 was set to obsolete. Please use Microchip compiler XC8-CC instead or select "Show Obsolete Entries" from the TEE menu.

Compiler/Target/Microcontroller

TES-3071

Fixed race condition in multiple makefile templates, which occurred when attribute "Make Options" was set to compile in parallel, e.g. '-j 20', with multiple source files attached.

Component Test

TES-2980

Fixed possible loss of test data for dynamic objects if a pointer is removed from the interface.

Coverage Viewer (CV)

TES-2545

Generating the flow chart report failed if the 'Logo Image' path within the report preferences was not empty and did not contain an absolute path name.

Coverage Viewer (CV)

TES-3017

Fixed CPC coverage call position calculation (for display of source locations) for calls directly following a return statement.

Defines

TES-3062

Take "Float Precision" and/or "Double Precision" attribute into account when collecting define values.

Release v4.2.5 (93 items)

Driver
TES-2992

Fixed erroneous struct declaration of typedef struct in old test driver when Enable User Includes is enabled.

Driver
TES-2999

Fixed possible communication error when resolving first union component as pointer target.

Driver
TES-3038

Fixed error generating parameter helper variable of a reference to a template with reference template parameter.

Driver
TES-3043

Declare synthetic variables in all sources where the type is known.

Driver
TES-3084

Fixed generating #undef statements for static variable #define prior to all stub functions having a parameter with the same name as the static variable.

Driver
TES-3101

Fixed generating code for complex reference parameter when attribute 'Generate Constructors' is false.

Environment Editor (TEE)
TES-3055

Fixed using the internal environment variable TESSY_SOURCE_ROOT instead of SOURCEROOT when collapsing a file or directory path.

Import/Export
TES-3089

Restoring projects with C++ Test Objects and CTE documents fails if the test objects have long signatures.

Instrumenter   *Enhancement*
TES-2701

Added support for range based "for" loops [e.g. for (int i : array) { ... }].

Instrumenter
TES-2971

The instrumenter failed to match the destructor in a template class if not inlined. Due to that stub code written for the constructor was also inserted into the destructor.

Instrumenter
TES-2982

The instrumenter failed to stub methods inside a class that follows immediately after a function template.

Release v4.2.5 (93 items)

Instrumenter
TES-2984

The instrumenter failed to find function definitions if a preprocessor line is present between name and parameter list.

Instrumenter   *Enhancement*
TES-3047

Allow wildcards in header file names within TEE attribute "Instrumenter Header Exclude List".

Instrumenter
TES-3053

The instrumenter failed to find function definitions if the return type is a pointer or reference to a qualified template, e.g.:
    std::pair<int,int> & function_name (...
    std::pair<int,int> * function_name (...

Instrumenter
TES-3119

Missing instrumentation if the intialization statement of a "for" loop ends with a function call. [e.g. for (int i = foo();...)]

Instrumenter
TES-3120

If call pair coverage (CPC) is enabled, the initialization expression for a local variable could be missing.

Interface Assigner (IDA)
TES-2983

Fixed automatic assignment of static global variables.

Interface Assigner (IDA)
TES-3027

Fix changed component names for pointer targeting the component in a dynamic struct,

Interface Assigner (IDA)
TES-3114

Test specification (CTE File) was deleted when renaming a test object.

Interface Database (IDB)
TES-2108

Fixed memory and performance problems when comparing large C++ interface databases.

Interface Database (IDB)
TES-2994

Possible missing stub code after auto reuse for external stub functions, if only the scope of that function has changed.

Interface Database (IDB)
TES-3010

Fixed possible loss of test data during comparison of interfaces with more than 500 functions when using the legacy parser.

Release v4.2.5 (93 items)

Interface Database (IDB)
Enhancement

TES-3046

Allowing wildcards in header file names within the TEE attributes "Header File Exclude List" and "Header File Include List".

Interface Database (IDB)

TES-3082

OUT/EXTERN const variables were set to IRRELEVANT after importing TMB files from TESSY v4.0 or prior.

Interface Database (IDB)

TES-3085

Fixed performance problem when reusing interface databases with pointers.

Interface Database (IDB)

TES-3099

Possibly erroneous test driver for const class member variables.

Interface Editor (TIE)

TES-3080

Fixed missing properties view contents for variables within TIE.

Interface Editor (TIE)
Enhancement

TES-3087

Allow pass direction EXTERN for const variables.

Metrics
Enhancement

TES-3103

Update the default formula for estimated time calculation.

Parser

TES-2922

Fixed parser error if ARMv5 builtins __svc, __svc_indirect or __align are used.

Parser

TES-2991

Parser failed to parse file if an initializer expression was neither int nor float.

Parser

TES-3030

Added __int24, __uint24, and __at() to Microchip TKS and header files.

Parser

TES-3091

Fixed storing source number of types when attribute 'Collect All Enums' is true.

Parser

TES-3095

Fixed parsing local static variables of test objects that were declared after a statement block.

Release v4.2.5 (93 items)

Parser
TES-3171

Support usage of gcc option -funsigned-char.

Report
TES-2974

Overview report XML: Fixed percentage attribute value for called function coverage (without '%' now).

Report
TES-3004

Fix plots not being rendered in reports in Windows 10 versions newer than 1803.

Requirements
TES-3003

Test case links could get lost in certain situations: Changes of test case links (adding, updating or deleting links) caused all not altered links of all test cases of the respective test object to be lost if TESSY was restarted. As a workaround, when executing such test objects after changing the links, the changes were persisted correctly and no links were lost.

Requirements
TES-3032

Fix display error in VxV matrix view when adjusting column width.

Save/Restore Database (TMB Files)
TES-2510

If a test object is removed, has interface changes, or does not have a valid interface, it will no longer be attempted to save a script file for it during database backup.

Save/Restore Database (TMB Files)
TES-2986

Allow canceling TESSY shutdown when backing up modules or if any jobs are still running.

Scenario Editor (SCE)
TES-3097

Added alphabetical sorting of functions within the component functions and called functions view.

Scenario Editor (SCE)
TES-3112

Fixed potential exceptions when switching to invalid scenarios or test objects with changed interface.

Script Editor
TES-2854

Committing script editor changes for component tests caused loss of dynamic objects under certain conditions.

Script Editor
TES-3034

Fixed problems when working with the script editor or importing/saving/restoring script files: Special characters within the time unit of component tests and stub functions with array indices within the signature caused problems.

Release v4.2.5 (93 items)

TESSY (General)

Enhancement

TES-2990

Enhanced DOXYGEN comment handling: In case of errors while parsing the DOXYGEN output, existing specification entries will be voided. Comments inside the function will not be collected by default.

TESSY (General)

Enhancement

TES-3014

All source and header files that are shown in the TESSY Message Console are now displayed as hyperlinks and can be opened with a double-click in the C/C++ perspective.

TESSY (General)

TES-3108

Fixed potential race condition when starting TESSY which caused the derby demon to be terminated.

Test Data Editor (TDE)

TES-3011

Fixed missing child elements for pointer and reference objects in the usercode proposal list.

Test Data Editor (TDE)

TES-3012

Fixed wrong entries in the usercode proposal list for "THIS" if the object class is located inside a namespace.

Test Database (TDB)

TES-3028

The unexpected shutdown of the DBD process after module analysis was fixed. This error occurred if no test objects were available after the analysis due to a filter, but they were available after the filter was corrected.

Variant Management

TES-2981

If an expression is used as expected value for an interface object with passing direction INOUT, this value was set to null during test data verification in variant test objects.

Variant Management

TES-2997

Disable "Create Pointer Target Value" for test objects in variant modules (regardless whether inherited or not).

Variant Management

TES-3018

Define values in the test data of variants created with a TESSY version prior to 4.1 were marked as invalid after module synchronization.

Variant Management

TES-3026

For pointers with passing direction OUT pointing into a dynamic object with passing direction IN, these pointers were marked as failed during test evaluation.

Release v4.2.4 (19 items)

CTE
New Feature

TES-2517

A generator for classification trees has been added that generates a new tree based on the interface of a test object. A classification will be generated for each input variable with the possible values as classes according to the equivalence partitioning method.

CTE
Enhancement

TES-2576

Improved version of pair-wise test case generation.

CTE
New Feature

TES-2610

The new project-wide data dictionary provides means to assign application domain related names to implementation variables that can be used throughout all CTE test specifications. Data dictionary entries will be synchronized on interface changes and related CTE classifications will be updated automatically.

Compiler/Target/Microcontroller
Enhancement

TES-2667

IAR C-SPY simulator test runs are executed in parallel now which reduces overall execution time.

Compiler/Target/Microcontroller
New Feature

TES-2716

New combination for GNU Toolchain for PowerPC in conjunction with PLS UDE.

Component Test
Enhancement

TES-1255

Fixed problems with test driver generation when multiple source files were used.

Component Test
New Feature

TES-2002

The component test feature is now also available for C++ modules.

Coverage Measurement
New Feature

TES-2559

The new call pair coverage measurement (CPC) now supports measuring if all call locations of functions or methods within the test object have been exercised at least once. This fulfills the requirements of ISO 26262 as an alternate coverage method for integration testing instead of applying the function coverage (FC) method.

Fault Injection
New Feature

TES-1863

Added option to automatically leave code loops after the first loop iteration using fault injections.

License Manager
Enhancement

TES-1517

Enable and disable license server usage statistic logging by flsutil.

Metrics
New Feature

TES-2792

Added "Test Step To Complexity Ratio" metric.

Release v4.2.4 (19 items)

Requirements
Enhancement

TES-840

The requirement document preview is now available for all TESSY perspectives. The desired document to display can be selected within the view.

Requirements
New Feature

TES-1468

A new task element provides means to protocol external tests and reviews and link them to requirements. This allows full verification coverage of requirements that are not testable with a normal unit or integration test.

Requirements
Enhancement

TES-2913

The default test means "Unit" and "Component" will now only be created on startup of TESSY if there are no other test means defined (e.g. if the default ones have been renamed).

Save/Restore Database (TMB Files)
Enhancement

TES-2624

New option "Use default coverage selection for all modules" added to coverage preference page in order to overwrite coverage selections stored within TMB files being imported.

TESSY (General)
Enhancement

TES-2035

Completely reworked error handling to provide enhanced error messages and logging capabilities for command line execution. New error dialog shows the full exception chain, the context (e.g. the affected test object) and provides easy access to the error log file.

TESSY (General)
New Feature

TES-2117

The new testing effort estimation is based on a customizable formula that is based on the available metrics provided by TESSY. Additional metrics have been added that can also be used within the time estimation formula:
  - Number of statements
  - Number of calls
  - Nesting depth
When analyzing a module, the estimated time is updated based on the given formula. The actual time can be tracked within the test project view for each test object.

TESSY (General)
Enhancement

TES-2586

Enhanced handling and feedback when configuring the TESSY floating license manager.

Test Execution
Enhancement

TES-2715

Added option to automatically retry execution for aborted test objects.