

10.3.1

In this release, we've focused on improving the code analysis capabilities and extended our support for coding standards, including MISRA and Joint Strike Fighter (see [New and Updated Code Analysis Rules](#) for additional information).

This is a minor update to C/C++-test DTP Engine. See the release notes for 10.3.0 for additional information.

New and Updated Code Analysis Rules

Rule ID	Header
CODSTA-MCPP-07	Prefer lambdas over <code>std::bind</code> , <code>std::bind1st</code> and <code>std::bind2nd</code>
CODSTA-MCPP-08_a	Prefer 'auto' to explicit type names in variable declarations
CODSTA-MCPP-08_b	Prefer 'auto' to explicit type names for function return types
CODSTA-MCPP-09	Declare functions 'noexcept' if they will not emit exceptions
CODSTA-MCPP-11_a_cpp11	Use <code>constexpr</code> to declare const variables whenever possible
CODSTA-MCPP-11_b_cpp11	Use <code>constexpr</code> to declare functions whenever possible
CODSTA-MCPP-14	Avoid Overloading on Forwarding References
COMMENT-04	Comment every function
JSF-134	Assumptions (limitations) made by functions should be documented in the function's preamble
JSF-071_c	A class's virtual functions shall not be invoked from any of its constructors
JSF-071.1	A class's virtual functions shall not be invoked from any of its constructors
JSF-071.1_b	A class's virtual functions shall not be invoked from its destructor
JSF-119	Functions shall not call themselves, either directly or indirectly
MISRA2004-16_2	Functions shall not call themselves, either directly or indirectly
MISRA2008-7_5_4	Functions should not call themselves, either directly or indirectly
MISRA2012-RULE-17_2	Functions shall not call themselves, either directly or indirectly
OOP-16	Avoid calling virtual functions from constructors
OOP-16_b	Avoid calling virtual functions from destructors

Updates to the RuleWizard Module

The following nodes and properties have been added to RuleWizard:

- `IsMoveAssignmentOperator` (true for move assignment operator)
- `IsCopyAssignmentOperator` (true for copy assignment operator)
- `HasDefaultValue` property (true for function parameters with default value)
- `IsDeclInCommaList` property (true for variable declared in a comma-separated list of declarators)
- 'Vacuous destructor call' node (represents explicit destructor call for simple type or class that doesn't have one)
- `NewDeclaration` node (represents declaration of a new operator)
- `DeleteDeclaration` node (represents declaration of a delete operator)

See RuleWizard 10.3.1 User's Guide for more details.

Additional Updates and Enhancements

- Improved Flow Analysis execution.
- Updates to Japanese localization.

Resolved FRs and PRs

ID	Description
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1211 09	MachineID is changed frequently on Windows 7
1211 90	BD-PB-UCMETH false positives because of failures in building CFGs
1206 41	BD.EXCEPT.NR false positive when not entering an important function
1190 02	Link error when using data sources with the same names in "type=array" mode
1217 04	COMMENT-04 doesn't trigger
1194 93	Ctrl+S does not work reliably in TC Editor
1209 12	No "Refresh Test Project" action for WRWB-specific Test Projects
1210 20	Visual Studio 2015 support for updates 2 and 3
1213 51	Parsing fails for common UDLs under MSVC-14 (VS2015)
1207 60	Link error for QArrayData(const QArrayData &) - (declared implicitly), required for copy that was eliminated, cannot be referenced -- it is a deleted function
1181 45	CPPTEST_DS_GET_MEM_BUFFER's length should not treat NULL as buffer's end
1169 97	Support for Q suffix
1087 33	Support for __float128
1206 53	Add support for 'getline()' as a source of the tainted data
1207 81	BD-RES-LEAKS false negative on the code containing nested loops
1106 13	BD-RES-LEAKS false positive due to incorrect models for getaddrinfo/freeaddrinfo
1213 71	Subsequent incremental analysis after scope changes are significantly slower
1220 22	Parse error: argument list for class template "F" is missing
1214 34	Outcome of "if (a)" may be incorrectly evaluated to "false" when "a"castedto "int" type is 0, while the original "a" value was != 0 (for C language only, when DC, SCC, MCDC is enabled)