



What's New in QA-MISRA 23.10?

QA-MISRA 23.10, released in October 2023, focuses on practical enhancements, and aligns with the latest MISRA C:2023 standards for optimal code practices. The update ensures heightened security through TLS encryption and offers enhanced call graphs. A new diff-based comment mechanism makes the classification of findings more robust.

This document provides a concise overview of the significant changes in QA-MISRA 23.10.



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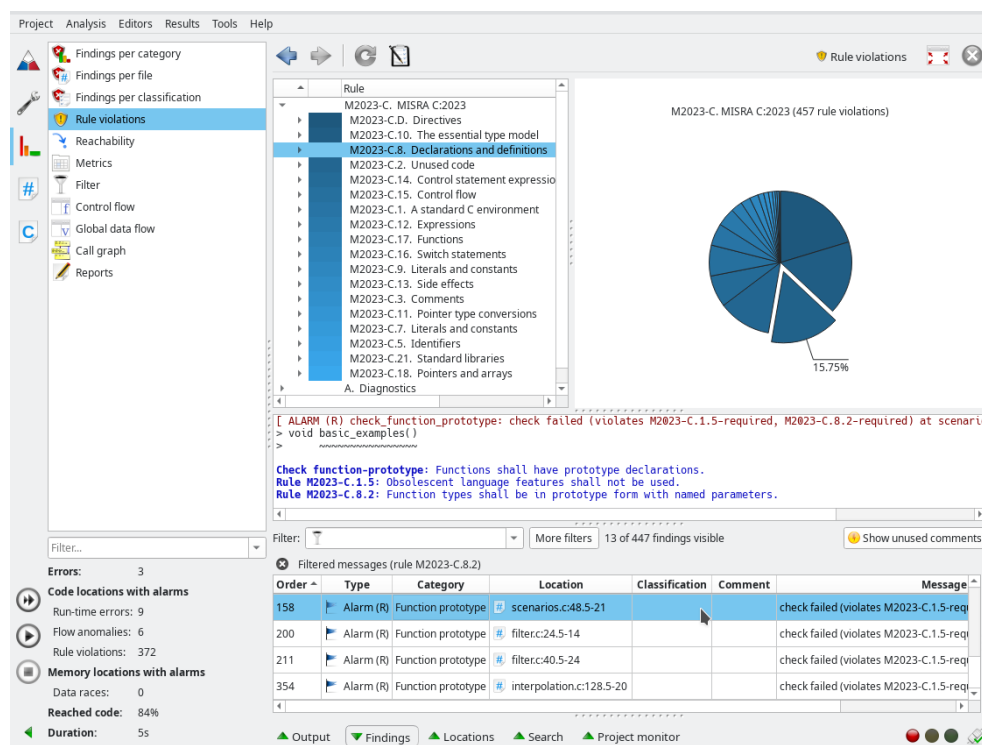
Introduction

QA-MISRA 23.10 is available from October 2023. This update ensures that your codebase aligns seamlessly with the latest industry regulations (including rule checks for MISRA C:2023) and fostering a development environment characterized by enhanced precision and reliability. Alongside this core improvement, other noteworthy features include TLS-encrypted connections for secure interactions between servers, clients, support for external user authentication via OIDC or OAuth 2.0, improved call graphs, a diff-based comment mechanism for streamlined collaboration, and an extended Qualification Support Kit for an overall enriched user experience.

MISRA C:2023 Compliance Checks

In the latest update of QA-MISRA 23.10, users can expect a significant enhancement with the incorporation of support for MISRA C:2023. This pivotal improvement introduces rule checks specifically tailored to adhere to the guidelines set by MISRA C:2023.

With this addition, users can now benefit from an elevated level of code quality and compliance, ensuring that their software aligns seamlessly with the latest industry standards. The inclusion of MISRA C:2023 support underscores QA-MISRA commitment to staying at the forefront of best practices in software development, providing developers with a powerful tool to enhance the reliability and robustness of their codebase.



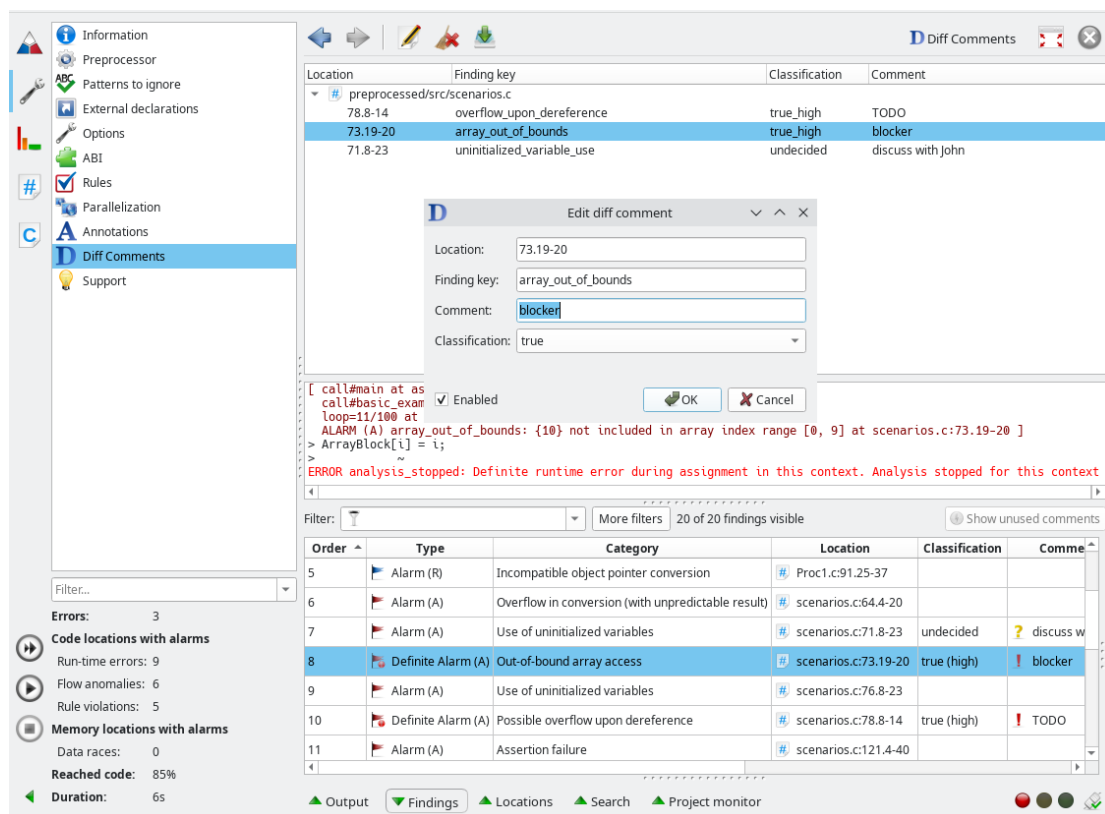
Compliance Checks

Diff-based Comments Mechanism

QA-MISRA 23.10 incorporates a new and improved diff-based comment mechanism. This innovative feature plays a pivotal role in tracking code changes by identifying commented code locations through a meticulous comparison of the currently analysed code with a reference from previous analysis run. The versatility of this mechanism is noteworthy, as it is seamlessly integrated into all analysis modes.

Notably, users can now effortlessly convert existing comments utilizing the AAL or pattern comment modes to the new diff-based comment mode. This transition is facilitated by a user-friendly button in the toolbar of the diff comment's view or through the convenient command line option `--convert-to-diff-comments`.

Additionally, QA-MISRA 23.10 introduces the `--export-diff-comments <dax-file>` command line option, providing users with the capability to export diff-based comments into a DAX file. These enhancements collectively contribute to a more streamlined and efficient workflow, empowering users to manage and track code changes with increased precision and ease.



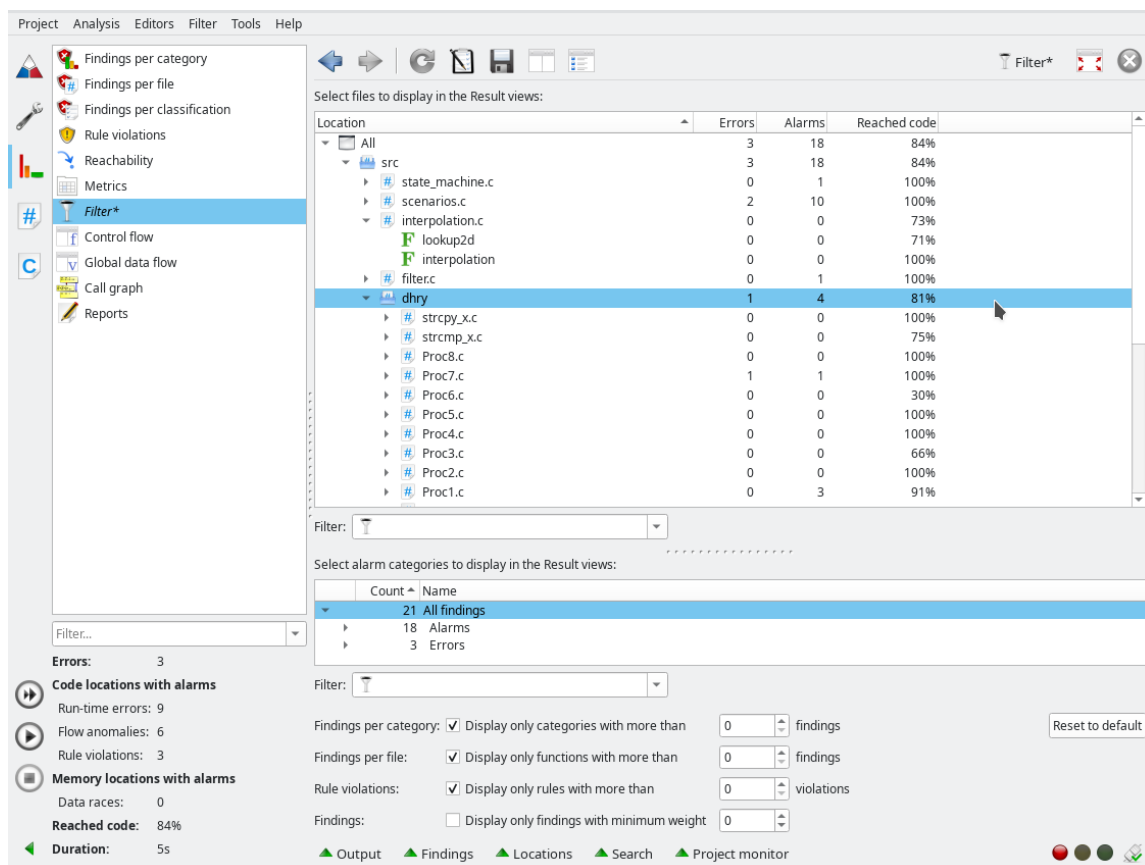
Diff-based comments

Improved File Trees

Significant enhancements have been implemented to streamline and elevate the user experience. One notable improvement lies in the enriched functionality of the context menu within graph nodes. Users can now seamlessly fold subtrees and access options for displaying all callers and callees of a function, providing a more intuitive and efficient navigation process.

Additionally, the left sidebar has undergone enhancements in the tree view for both pre-processed and original source files. Noteworthy optimizations include the collapsing of chains of directories into a single line when appropriate, contributing to a cleaner and more organized display.

Furthermore, the tree view for files in the Results → Filter section has been refined. File paths are now intelligently collapsed when possible, ensuring a more compact and visually appealing layout. These enhancements collectively signify a commitment to refining QA-MISRA user interface and functionality, empowering users with a more seamless and productive development experience.

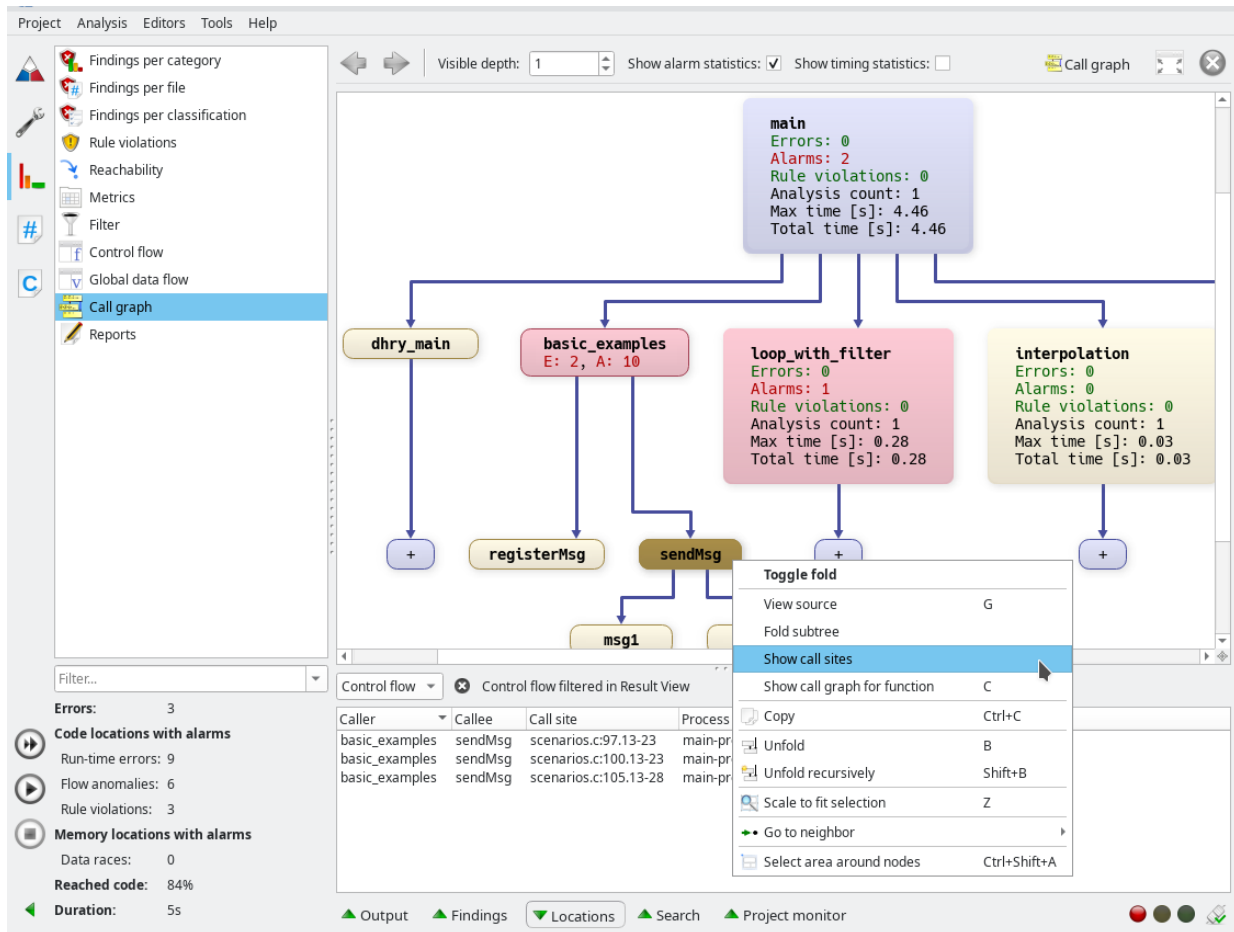


Location	Errors	Alarms	Reached code
All	3	18	84%
src	3	18	84%
state_machine.c	0	1	100%
scenarios.c	2	10	100%
interpolation.c	0	0	73%
lookup2d	0	0	71%
interpolation	0	0	100%
filter.c	0	1	100%
dhry	1	4	81%
strcpy_x.c	0	0	100%
strcmp_x.c	0	0	75%
Proc8.c	0	0	100%
Proc7.c	1	1	100%
Proc6.c	0	0	30%
Proc5.c	0	0	100%
Proc4.c	0	0	100%
Proc3.c	0	0	66%
Proc2.c	0	0	100%
Proc1.c	0	3	91%

Improved File Trees

Enhanced Call Graphs

The call graph view now shows more detailed alarm counters and the analysis time spent per function.



Enhanced Call Graphs



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