PARASOFT

IAR SYSTEMS

Parasoft Integration With IAR Systems Development Tools

IAR Systems is a world-renowned provider of software tools and services for embedded development for ensuring quality, reliability, and efficiency in your embedded applications. Combining with Parasoft's testing solutions for embedded safety- and security-critical systems creates a comprehensive solution to help companies verify, validate, and certify these software systems.

The many years of this strong partnership is no coincidence. The toolchain integration continues to stay step-in-step year after year.

INTEGRATION OVERVIEW

Parasoft C/C++test is available as an Eclipse plugin to install in an existing Eclipse environment or standalone version bundled with Eclipse. There are several scenarios for testing IAR Systems' projects with C++test. Users working with:

- IAR Embedded Workbench IDE can import their project into C/C++test (Eclipse).
- IAR Systems Eclipse plugin can add C/C++test Eclipse plugin to their working environment and test IAR Systems Eclipse plugin projects directly.
- IAR Systems' build tools for Linux for Arm can import their projects to C/C++test standalone (Eclipse) or C/C++test extension for Visual Studio Code editor or can utilize C/C++test's command line interface.

STATIC ANALYSIS FOR SAFETY & SECURITY

Static analysis in Parasoft C/C++test accurately exposes the industry's broadest range of defects, vulnerabilities, and noncompliance issues. C/C++ static code analysis powered by Parasoft:

- Helps you quickly find and fix code defects with complete path analysis for accurate violation detection.
- Supports both preventative (pattern) and detection (flow-based) static analysis techniques, along with a comprehensive set of metrics for code structure.
- Supports the most comprehensive rule coverage and unique compliance reporting on the market.
- Offers comprehensive visibility into compliance across teams and projects: AUTOSAR C++ 14, MISRA C 2023, MISRA C++ 2023, CERT C/C++, CWE, HIC++, and more.
- Supports custom rule creation with a dedicated RuleWizard.

IAR BUILD TOOLS FOR LINUX

IAR Build Tools for Linux uses the complete build tools for IAR Embedded Workbench:

- IAR C/C++ Compiler
- IAR Assembler
- Linker and library tools
- Command line build utility, IARBuild
- Runtime libraries

IAR SYSTEMS SUPPORTED COMPILERS BY PARASOFT

- IAR C/C++ Compiler for Arm, from v. 6.6x
- IAR Build Tools for Linux for Arm v.8.50.x
- IAR C/C++ Compiler for M16C & R8C v. 3.5x
- IAR C/C++ Compiler for MSP430 v. 6.1x
- IAR C/C++ Compiler for RX, from v. 2.5x
- IAR C/C++ Compiler for STM8 v. 1.4x
- IAR C/C++ Compiler for RL78 v. 3.10.x

- Makes deployment easy to integrate with the most popular CI/CD systems and platform. Simple to configure and automate, nonintrusive, and scalable across multiple teams.
- Provides centralized reporting and compliance auditing, including dedicated compliance reporting and process management for coding standards.

IAR EMBEDDED WORKBENCH: ONE TOOLBOX, ONE VIEW, ONE UNINTERRUPTED WORKFLOW

IAR Embedded Workbench gives you a complete integrated development environment. The included IAR C/C++ Compiler generates the fastest performing, most compact code in the industry. The C-SPY Debugger included in the IDE, is a fully integrated debugger with performance analysis, power visualization, and RTOS awareness.

FEATURES

- Leading optimization technology creates smaller, faster, smarter code.
- Comprehensive debugging functionality.
- Power debugging for minimized power consumption.

PARASOFT AND IAR SYSTEMS SUPPORT OF DOCKER CONTAINERS

Containerized deployments of development tools are becoming the bread and butter of embedded development teams. Containers have recently gained popularity among embedded teams — especially big teams that use containers to manage toolchains. With Parasoft and IAR Systems, users can integrate both toolchains into their environments by utilizing provided templates and examples of Dockerfiles and configuration scripts.

CONTINUOUS INTEGRATION AND CONTINUOUS DELIVERY IN AN EFFICIENT WAY

Reduce the time and effort required for testing by seamlessly integrating Parasoft C/C++test and IAR Systems development tools into your CI/CD pipeline.

Not only do our tools integrate into the CI/CD pipeline, but can also be deployed in containers for dynamic build environments.

REQUIREMENTS TRACEABILITY

With the ability to bidirectionally link tests, source code, and code coverage with requirements, Parasoft's reporting dashboard provides full detail of requirements implementation status and traceability required by functional safety standards.

FUNCTIONAL SAFETY & COMPLIANCE

Parasoft C/C++test and IAR Systems development tools provide everything you need to comply with industry standards.

TÜV SÜD CERTIFIED

Parasoft C/C++test and IAR Systems development tools are certified by TÜV SÜD for functional safety according to IEC 61508, IEC 62304, ISO 26262, and EN 50128 standards, helping development teams achieve the desired safety integrity level (SIL/ASIL). Tool qualification kit available for DO-178B/C.

SEE THE SOLUTION IN ACTION

Discover how your team can deliver compliant safety-critical software. Schedule a demo today!

TAKE THE NEXT STEP

Learn more about how IAR Systems' build tools and Parasoft's Embedded Software Testing Solution simplify modern development workflows and ensure safe, secure, and reliable applications.