Coverity Qualification Kit for DO-330 Compliance

The Coverity Qualification Kit ensures that Coverity is configured and operating properly within the customer's build environment.

Organizations working to achieve DO-330 compliance as part of the larger DO-178C standard must ensure that the tools they use to test their safety-critical aerospace software are installed, configured, and operating properly within their software development environments. The Coverity® Qualification Kit addresses this need for Coverity static analysis and helps your organization comply with these standards.

According to DO-330 ("Software Tool Qualification Considerations"), development teams must perform tool validation within their end-user build environment. This helps ensure that safety-critical defects are not missed due to installation or configuration errors.

Coverity Safety Capabilities

Coverity static analysis is certified by TÜV SÜD Product Service GmbH as meeting the requirements for support tools according to IEC 61508-3. It is qualified for use in safety-related software development according to DO-178C, ISO 26262, IEC 61508, EN 50128, and EN 50657. And it is classified for use up to Level A in accordance with DO-178C.

The documentation pack for the Coverity distribution includes the necessary functional safety manual, which describes tool operation and failure modes including the risk of misconfiguration, and false positives and false negatives.

Coverity Qualification Kit

The Coverity Qualification Kit helps prevent errors in safety-critical software development by

- Ensuring Coverity is operating as expected within the end-user build environment that is used to create the software
- Providing a self-test function that describes which tests were run and the results of those tests to validate the tool is configured properly
- Generating a report to show proof of compliance with this requirement

The qualification process is consistent with the recommendations of DO-330.

The Coverity Qualification Kit helps minimize the likelihood of critical issues in accordance with DO-178C requirements.

The Coverity Qualification Kit has been designed to make it easy for Coverity users to verify that the tool is operating properly and configured to identify appropriate safety-critical defects.
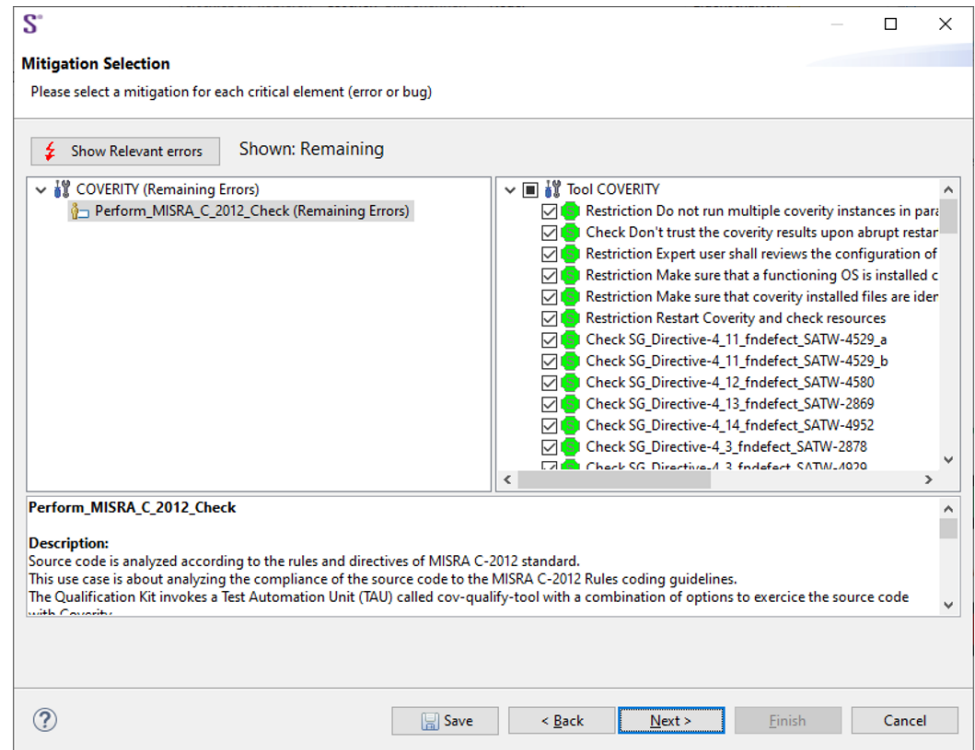
The step-by-step interface allows users to

- Specify which tests are required to run
- Select specific checkers and coding rules for the project
- Provide a summary of test cases
- Report on the pass/fail status of tests that are executed
- Generate reports to validate compliance

Software plays a key role in ensuring the safety, reliability, and performance of aerospace systems. Reducing the risk of defects in these systems is of critical importance, as errors can result in serious consequences. The Coverity Qualification Kit helps minimize the likelihood of critical issues by ensuring that Coverity's static analysis operates effectively to identify software defects in accordance with DO-178C requirements.

To learn more about how Coverity can help development teams meet safety and security standards, see Coverity static application security testing.

The Synopsys difference

Synopsys provides integrated solutions that transform the way you build and deliver software, accelerating innovation while addressing business risk. With Synopsys, your developers can secure code as fast as they write it. Your development and DevSecOps teams can automate testing within development pipelines without compromising velocity. And your security teams can proactively manage risk and focus remediation efforts on what matters most to your organization. Our unmatched expertise helps you plan and execute any security initiative. Only Synopsys offers everything you need to build trust in your software.

For more information about the Synopsys Software Integrity Group, visit us online at www.synopsys.com/software.