Synopsys Customer Success for DO-178C

With the assistance of the Synopsys Customer Success team, organizations can accelerate their DO-178C certification process by deploying and adopting Coverity

Overview

DO-178C, Software Considerations in Airborne Systems and Equipment Certification, is the standard by which certification authorities such as FAA, EASA, and Transport Canada approve commercial aerospace system software content. DO-178C was published in 2011 by RTCA, Inc., in a joint effort with EUROCAE, and replaced DO-178B.

Coverity by Synopsys is a static analysis tool that simplifies the DO-178C compliance process. With the assistance of the Synopsys Customer Success team, organizations can accelerate their DO-178C certification process by deploying and adopting Coverity.

Activities and goals

As part of our Customer Success for DO-178C compliance package, Synopsys supports customers through major areas of DO-178C compliance planning and implementation:

- Installing Coverity, configuring compilers, and testing builds
- Configuring and testing to enable "clean before code review" and/or "clean before commit" policies
- Delivering training on Coverity and MISRA, assisting with the selection of MISRA rules and Coverity checkers, and configuring Coverity to enforce those rules
- Integrating Coverity tools and configuration files as part of the DO-178C Software Configuration Management Process
- Producing reports providing evidence that Coverity was run, contributing to Software Conformity Review
- Developing a strategy to incorporate updates to the Coverity platform

Outcomes

After the engagement, the customer should expect these outcomes:

- The scope and process of Coverity's contribution to DO-178C compliance are fully defined.
- The programming standard to follow is defined, and the solution to enforce the standard is identified and implemented.

- Coverity is fully deployed, and the workflow to support DO-178C compliance is implemented and optimized.
- The customer understands the impact of Coverity adoption, key decisions made in the organization's DO-178C compliance goal, and the safety goals achieved.
- The developer workflow is optimized such that developers can take instant action to correct coding defects and violations.The customer can generate compliance artifacts, including metrics reports, to accompany software component deliverables.

Services delivery approach

Synopsys will assist the customer with DO-178C compliance planning and implementation. Synopsys will organize the performance of services into the following phases of work:

Deliverables

This section documents the deliverables that Synopsys will provide during the completion of the project.

Deliverable	Deliverable
D1	Synopsys consulting report

Customer roles and responsibilities

The following customer resources shall be identified before Synopsys begins performing services:

Role	Contact name
Management sponsor: the management point of contact responsible for successful implementation of the licensed product	
Engagement lead: the main point of contact for coordinating activities and tracking the status for the statement of work	
Licensed product administrator: the person responsible for the administration and maintenance of the licensed product	
Compliance owner: the person responsible for compliance planning and implementation	