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Reviewing Polyspace Results

SciEngineer's training courses are designed to help organizations and individuals close skills gaps, keep up-to-date with the industry-accepted best practices and achieve the greatest value from MathWorks® and COMSOL® Products.

Reviewing Polyspace Results

This one-day, hands-on course discusses the interpretation and review of Polyspace Bug Finder and Polyspace Code Prover results in Polyspace Access to remove algorithmic defects, improve software quality metrics, and improve product integrity. The course is intended for engineers who review results with Polyspace Access and need to change their software in response to those results.

Prerequisites

Knowledge of C or C++ is recommended.

DURATION

1 Day

LEVEL

Medium

TOPICS

Day 1

• Polyspace Bug Finder Analysis
• Analyzing Polyspace Code Prover Results
• Managing Polyspace Code Prover Results
• Integration and Application Analysis

Polyspace Bug Finder Analysis

OBJECTIVE: Fix defects and coding rule violations.

• Polyspace Access dashboard overview
• Analyzing and managing Polyspace Bug Finder defects
• Reviewing coding rule violations
• Reviewing code metrics

Analyzing Polyspace Code Prover Results

OBJECTIVE: Become proficient at interpreting Polyspace Code Prover results.

• Overview of abstract interpretation
• Call tree analysis
• Source code navigation
• Execution paths
• Variable ranges
• Global variables

Managing Polyspace Code Prover Results

OBJECTIVE: Handle verification results that contain unproven checks. Understand how appropriate setup can add more information on the execution context.

• Determining verification effort
• Checking assumptions
• Performing a selective orange review
• Prioritizing and reviewing orange checks
• Review context-specific results with constraints
• Finding indicators that analysis options should be changed

Integration and Application Analysis

OBJECTIVE: Interpret integration issues found by Polyspace Bug Finder and Polyspace Code Prover. Compare single unit verification with verification of an integrated component.

- Understanding impact of integration on verification
- Reviewing issues apparent after integrating a component
- Collaborating with colleagues in the web interface

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