

Coverity Test Advisor – Development Edition

Coverity[®] Test Advisor – Development Edition improves the efficiency of automated testing, such as unit, regression and integration testing, by focusing time and resources on the most critical parts of the code.

Focus testing on high-risk areas of the code and surface violations in the developer workflow.

Product Overview

Coverity Test Advisor – Development Edition is part of the Coverity Software Testing Platform, which empowers developers to build testing into the development process at the earliest stage. Automated testing can be effective but is often inefficient in practice. Code coverage is commonly used as the metric to determine “adequate vs. inadequate” testing but it can be misleading. Without the proper insight into the code, coverage is just an arbitrary number that wastes time and increases risk. Effective testing requires code intelligence, and Coverity Test Advisor – Development Edition can define meaningful test policies based on specific high-risk code criteria, automatically analyze the code with every change and accurately identify critical areas of the code that are not covered by an automated test.

Key Features

Intelligent Code and Test Analysis

The Coverity platform provides sophisticated source code analysis, leveraging patented techniques for a deep understanding of behavior, criticality and change impact. It automatically maps code and function dependencies to analyze all impacted code related to a change – both code that has been directly modified and unmodified code impacted by the code change. Risk and code change go hand-in-hand, so the only way to ensure complete testing coverage over high-risk code is to understand the full scope and impact of a change. It can also identify dead code segments and untestable code, as well as specific code fragments that should be excluded from testing, for example debug code or certain exception handling.

IMPROVE AUTOMATED TESTING

- Define what code needs to be tested based on high-risk criteria
- Prioritize the most critical tests based on changes in the source code
- Analyze high-risk code using patented techniques to understand code behavior and change impact
- Remediate test rule violations alongside quality and security defects for efficient management-to-closure
- Govern test completeness in development and enforce a stage gate

Test Prioritization

Accelerate testing time with insight into what needs attention and what can be ignored. Coverity Test Advisor – Development Edition provides a list of recommended tests based on changes in the source code since the last analysis was run, and identifies which tests to run first.

Test Rule Configurator

Establish and enforce consistent testing rules across projects and teams based on pre-defined criteria. This ensures high-risk and changed code is tested sufficiently as part of a standardized process. Coverity Test Advisor – Development Edition provides sample rules to help users get started, and supports the creation of customized rules based on the organization and codebase. Testing rules guide users on what tests they need – and don't need – to write.

Test Data Correlation Analysis

Automatically correlate discrete data from multiple sources, including the Coverity platform, test coverage and source control management, turning data into actionable testing intelligence so test rule violations can be easily identified.

Automated Test Violation Management

Coverity Connect is the collaborative issue management interface where test rule violations are surfaced for quick and easy remediation. Coverity Connect provides information and guidance to help users efficiently manage test rule violations to closure, including violation prioritization to help users focus on the most critical test issues and automated assignment of violations to the developer responsible for the change. Users get specific guidance including level of coverage, covering tests, code age, code not requiring coverage and rich source-control management data such as code author and revision date to enable swift remediation of testing violations.

As part of the platform, Coverity Connect provides a collaborative interface to efficiently manage all issues surfaced by the Coverity platform from triage to resolution within a unified workflow. The platform provides seamless bi-directional integration with existing lifecycle tools to make development testing a natural part of the software development lifecycle process.

Supported Platforms

IDE Support	SCM System Support
<ul style="list-style-type: none"> Eclipse Microsoft Visual Studio 	<ul style="list-style-type: none"> Accurev ClearCase CVS Git Mecurcial Perforce Subversion Team Foundation Server

Coverity Test Advisor for C/C++*

Platform Support	Compiler Support
<ul style="list-style-type: none"> Linux Windows** 	<ul style="list-style-type: none"> GNU GCC, G++

* Refer to the Coverity Deployment Guide for additional platform and compiler support.

** Support for Windows systems requires a licensed installation of the Bullseye Coverage tool.

Coverity Test Advisor for Java

Platform Support	Compiler Support
<ul style="list-style-type: none"> Linux Windows 	<ul style="list-style-type: none"> Sun/Oracle JDK

Coverity Test Advisor for C#

Platform Support	Compiler Support
<ul style="list-style-type: none"> Windows 	<ul style="list-style-type: none"> Microsoft C# compiler

Coverity Connect

Server Platform Support	Browser Support
<ul style="list-style-type: none"> Linux Mac OS X Solaris Windows 	<ul style="list-style-type: none"> Internet Explorer 8, 9, 10 and 11 Firefox: Mozilla supported versions Google Chrome: Google supported versions Safari 5.1.5 or later