

Understand, Define, and Control Software Architecture

Software development organizations have not had the tools they need to maintain architectural integrity throughout the software development life cycle. Increasing software complexity, distributed development, and shorter project cycles have caused software to become brittle and difficult to maintain, with small changes leading to major software defects. Teams are losing the visibility and control they need to ensure software meets design specifications and quality standards.

Coverity Architecture Analysis automatically visualizes architectural structure and dependencies in large, C/C++ and Java code bases. It leverages Coverity's Software DNA Map analysis system to gain a complete understanding of your code. Architecture Analysis provides actionable information that allows you to meet the challenges of building today's complex software, speed development cycles, and protect investments in your code base.

Benefits of Coverity Architecture Analysis:

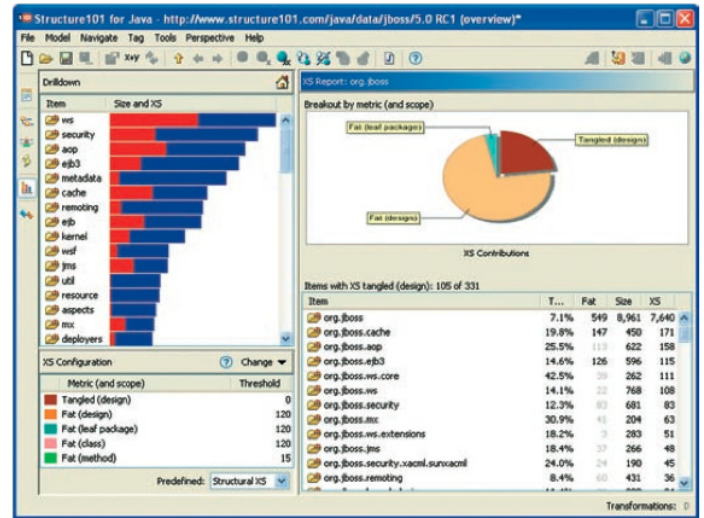
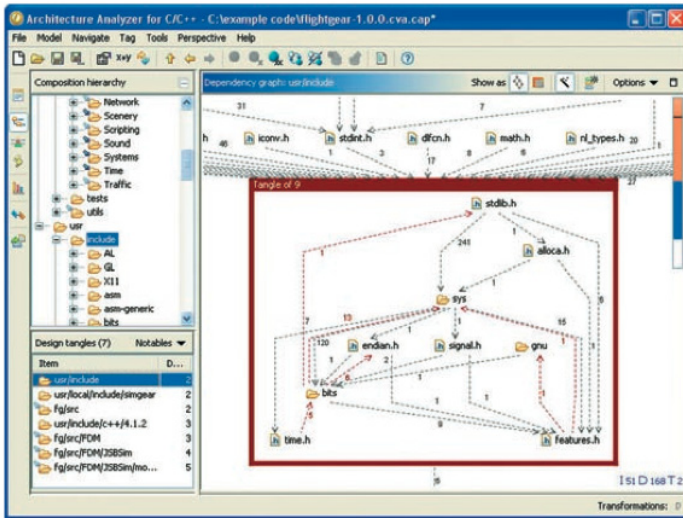
- Understand quickly the existing hierarchy and dependencies of large, complex code bases
- Identify areas of excessive complexity which will be hard to change and vulnerable to defects
- Define and enforce architectural design rules to ensure that unwanted dependencies aren't introduced during development
- Determine the impact of changes before committing them
- Understand legacy code bases that lack documentation
- Lower the cost of ownership by increasing maintainability and reducing defects

Architecture Analysis makes software architecture easy to define, communicate and control. You can use it to assign limits to the structural complexity of your code and measure it at every level, highlighting regions that are excessively complex. You can define the architecture—how the code should be structured—in such a way that your entire team can easily understand it, build towards it, and maintain it.

Architecture Analysis provides critical information such as how your current structure has changed from a reference structure—for example, what are the new dependencies, new architecture violations, complexity trends? Additionally, with its web-based interface and IDE plugin for Java, Architecture Analysis ensures that your whole team gets just the information they need, when they need it, making it easier to manage and control the evolution of your large code bases.

Key Capabilities

- Visualize existing legacy architectures with all dependencies
- Automatically flag and detect design rule violations
- Identify excess complexity including cyclic dependencies and cyclomatic complexity
- Browse function, class, module, component dependency graphs
- Use “auto-partitioning” to find the hidden structure in large graphs
- View dependency graphs as diagrams or matrices
- Discover everything an item uses (or is used by) at any level
- Discover the underlying cause of dependencies at any level
- Analyze slices through your code-base at class, folder or design levels
- Identify dependency tangles at any level
- Find unused code clusters at any level
- Drill down on areas of over-complexity in the code-base
- Edit and extend architecture diagrams during iteration planning



Coverity Architecture Analysis makes it easy to understand code complexity, interdependencies and the impact of changes.

Coverity Architecture Analysis

Supported Platforms

- Windows
- Linux

Supported Languages

- C/C++
- Java

System Requirements

- Coverity Static Analysis
- 512 Mb of RAM
- 1GB of free HD space

Free Trial

Request a free Coverity trial and see first hand how to rapidly detect and remediate serious defects and vulnerabilities. No changes to your code are necessary. There are no limitations on code size, and you will receive a complimentary report detailing actionable analysis results. Register for the on-site evaluation at www.coverity.com or call us at (800) 873-8193.

About Coverity

Coverity (www.coverity.com), the leader in improving software quality and security, is a privately held company headquartered in San Francisco. Coverity's ground breaking technology enables developers to control complexity in the development process by automatically finding and helping to repair critical software defects and security vulnerabilities throughout the application life cycle. Hundreds of companies worldwide including ARM, Phillips, RIM, Rockwell-Collins, Samsung, and UBS rely on Coverity to help them ensure the delivery of superior software.

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