diffblue
AI for Code

Diffblue Cover Reports: Understand Java Unit Test Coverage; Identify Risk

Use AI for Code to visualize the state of unit testing and pinpoint unique, actionable insights that improve quality and efficiency.

Visualize coverage and risk

Cover Reports delivers valuable insights about your Java codebase. It visualizes the state of unit testing and pinpoints unique, actionable insights that improve quality and efficiency.

It can be hard to understand how good your Java unit test coverage is, especially in large, complex legacy applications. And even a reliable measure of coverage does not provide all the information you need to manage risk effectively. Knowing what code is being tested, and how important it may be, is just as critical.

Cover Reports leverages the comprehensive code analysis provided by Cover's core AI for Code engine to visualize the health and quality of Java code.

Cover Reports allows Java teams to identify gaps in unit test coverage and the reasons for them. With Cover Reports you can realize more value from unit testing by understanding exactly where risk lies and what to do about it. Target available development resources more precisely to improve code quality faster and reduce the risk of regressions.
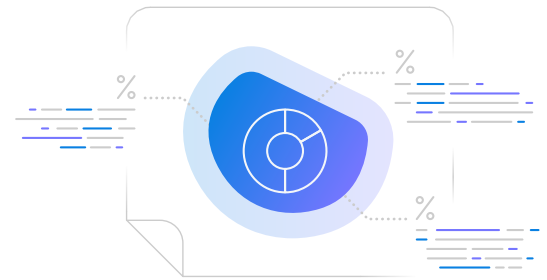
Actionable insights

Cover Reports provides a range of tables and dashboards that make it easy to understand coverage levels. It's simple to drill down from a project-level overview to specific packages or classes.

But Cover Reports also visualizes key factors like why code has no unit tests, how much of it is untestable and why, and where quick coverage wins may lie. Cover Reports' Risk Index identifies the importance of different parts of your code so you can understand the risk where coverage is lacking.

Coverage can be tracked over time across teams, applications and projects to benchmark performance and track improvements.

Cover Reports provides insights into how and where Diffblue Cover is being used, to help you maximize the value it delivers.

COVER REPORTS SPOTLIGHT

✓ **More than a number**

Cover Reports delivers granular coverage reporting that gives you more than a simple percentage. The insights it provides are based on the deep code analysis executed by Cover Core.

✓ **Understand risk**

Coverage is an imperfect proxy for risk. Cover Reports also shows you exactly what code isn't tested, how important it is, and why tests might not have been written. A Risk Index score provides a quick way to see what's most important.

✓ **Maximize efficiency**

The insights provided by Cover Reports allow scarce developer expertise to be targeted more efficiently, either at areas of most risk or those where additional coverage can most easily be delivered.

✓ **Benchmark and track**

With Cover Reports you can record and benchmark the effectiveness of your Java unit testing over time. For the first time it's possible to track progress and the impact of change on coverage, across teams, applications and projects.

✓ **Cover Telemetry**

Cover Reports can be used to show how Diffblue Cover is being used in your organization - something that isn't always easy when hundreds of developers, millions of lines of code and an automated CI pipeline are involved.
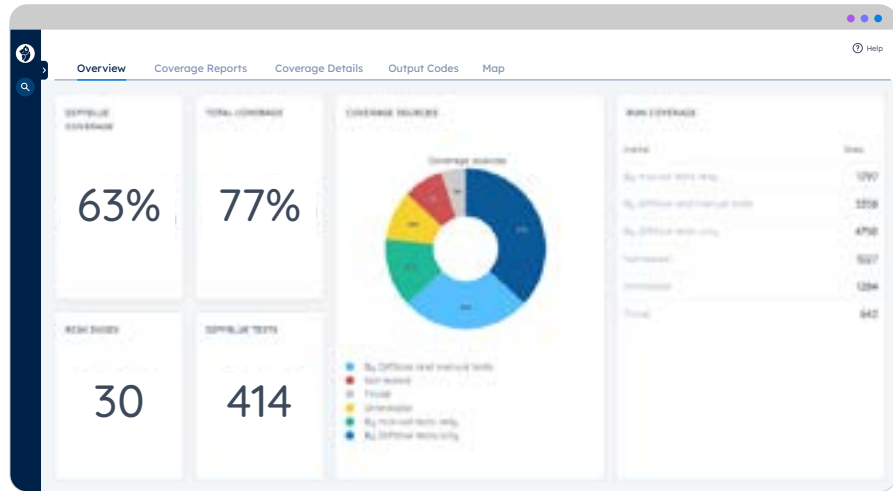
Cover Reports Dashboards: Examples

Cover Reports provides a range of dashboards which visualize unit test coverage and related risk.

Coverage and risk overview

This project-level example shows that 33% of the code is not covered by unit tests; related risk has been assessed as 30/100.
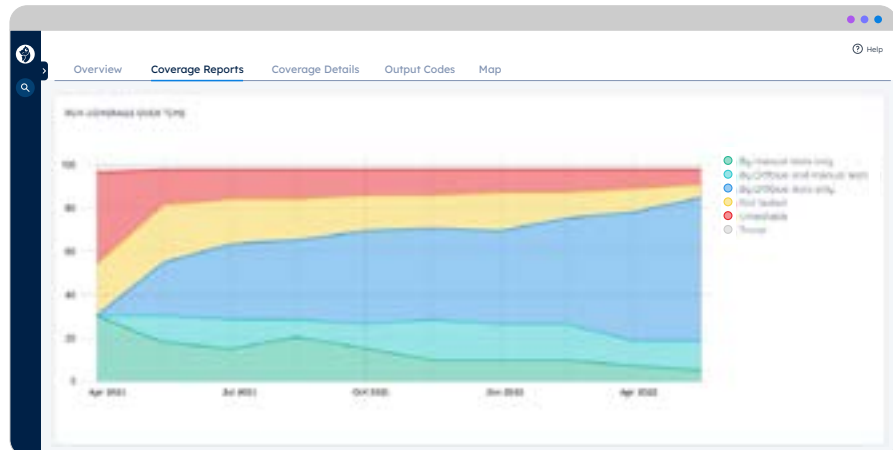

Granular treemaps

Projects can also be represented as more granular treemaps which show coverage in different parts of an application.

Coverage progress

Changes in unit test coverage can be tracked over time to measure progress.

"Citi Markets uses its deep software expertise to move faster and be more competitive. We find value in Diffblue's auto-generation of test cases. It helps drive test consistency and coverage of our software - freeing up developers to focus on delivering higher quality software, faster – and improves our developers' experience"

Jonathan Lofthouse, Managing Director & Global Head of Markets Technology, Citi

The Diffblue Cover Platform

Diffblue Cover includes a range of features that let you extract more value from Java unit testing:

Diffblue Cover helps you increase business agility and accelerate transformation

Optimize the velocity and quality of Java teams; catch regressions early

Reduce software development costs and increase productivity

Untangle the complexity of refactoring legacy code

Accelerate modernization and cloud migration of core applications

ABOUT DIFFBLUE

Founded by leading computer scientists from the University of Oxford, Diffblue is changing the way code is developed. The company's flagship developer tool, Diffblue Cover, uses AI to automatically write unit tests that help Java development teams and organizations deliver better, more modern software at higher speed. Diffblue: AI for Code. Learn more at Diffblue.com or contact us at info@diffblue.com

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