

Code Coverage

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Basics

Measuring code coverage is available for testing, applications, and application server run/debug configurations.

The code coverage measuring can be performed using the following runners:

- IntelliJ IDEA code coverage runner (recommended).
- [EMMA](#)  open-source toolkit. Note that EMMA is not supported by the author any more, and works with Java 7 only when frame validation turned off (pass `-noverify` to the process).
- [JaCoCo](#) .

IntelliJ IDEA code coverage runner enables multi-mode analysis:

- *Sampling* mode enables collecting line coverage with negligible slow-down.
- *Tracing* mode enables accurate collection of the branch coverage, with the ability to track tests, view [coverage statistic](#), and get additional information on each covered line.

For the other runners, only sampling mode is available.

Code coverage results are reflected in the dedicated [Coverage tool window](#), in the Project view of the [Project tool window](#), and in the editor. The tool windows show the following information:

- For a directory: the percentage of the covered classes and lines.
- For a class: the percentage of the covered methods and lines.

When a file is opened in the editor, each line is highlighted with regard to its code coverage status:

- Lines executed during simulation are marked green.
- Lines not executed during simulation are marked red.
- Covered lines with conditions are marked yellow in the tracing mode.

The coverage measurement results comprise a *coverage suite*. You can have the results of a new simulation merged with any existing suite. In this case, a line will be considered covered if it is covered by at least one of the simulations.

A *coverage suite* is generated every time a test or application with code coverage measurement is executed. It is possible to have an unlimited amount of coverage suites.

Prerequisite

Code Coverage plugin should be enabled in project. This plugin is bundled with IntelliJ IDEA and activated by default. If it is not, [enable the plugin](#).

If the coverage plugin is disabled, the code coverage tabs will not be visible in the run/debug configuration dialogs.

To use code coverage in project, follow these general steps

1. Specify how you want to [process the coverage results](#).
2. [Create tests](#) for the target code, if you are going to measure code coverage for testing.
3. [Configure code coverage measurement](#) in the desired run/debug configuration.
4. [Run with coverage](#), using the dedicated command on the main menu **Run | Run with Coverage**, or .
5. Once the run with coverage has been executed, you can
 - Use the [various coverage suites](#).
 - [View code coverage data](#).
 - [Generate code coverage report](#).

See Also

Concepts:

- [Run/Debug Configuration](#)

Reference:

- [Run/Debug Configurations](#)
- [Coverage](#)
- [Coverage Tool Window](#)

External Links:

- <http://emma.sourceforge.net/> 
- <http://www.eclemma.org/jacoco/> 

Web Resources:

- [Developer Community](#) 