

# Testing

This page describes how do testing with the help of [GitHub Actions](#).

- [Configuring workflows to run](#)
- [Triggering builds and tests](#)
- [Analyzing results](#)
- [Conditionally enable/disable builds and tests](#)
- [Running locally](#)
- [Definitions](#)
- [Builds](#)
  - [GNU/Linux](#)
    - [x86-64](#)
  - [macOS](#)
    - [x86-64](#)
  - [Windows](#)
    - [x86-64](#)
- [Tests](#)
  - [tier1](#)

## GitHub Actions

[GitHub Actions](#) is a way to describe workflows that should be triggered when certain events occur, such as the push of a commit to personal fork. For contributors that have a personal fork of the [jdk](#) repository then builds and tests will be executed when a commit is pushed to the contributor's personal fork.

### Configuring workflows to run

When you create a new personal fork of the [jdk](#) repository, GitHub Actions are disabled by default. When you visit the Actions tab for your personal fork, you will see a message similar to this: "Workflows aren't being run on this forked repository". Click on the green button labelled "I understand my workflows, go ahead and enable them" to allow the [jdk](#) builds and tests to execute for branches in your personal fork.

### Triggering builds and tests

When GitHub Actions are enabled for a personal fork, the builds and tests will be automatically run whenever a contributor pushes a commit to a branch in their personal fork. Contributors can also manually re-run the actions for a certain commit, see the [GitHub documentation](#) for details.

### Analyzing results

If a contributor has run testing with the help of GitHub Actions then the Skara bots will automatically display a summary of the build and test results in checks area. Please see the [GitHub documentation](#) for how to view the logs from a build and/or test run. Additional output from the test execution is preserved as a artefact that can be downloaded.

### Conditionally enable/disable builds and tests

Contributors who wishes to push commits to their personal fork *without* triggering automatic builds and tests being run can do so by opting out from automatic testing. A contributor who wishes to disable automatic builds and tests for all changes can disable GitHub Actions for their personal fork. See the [GitHub documentation](#) for how to disable GitHub Actions completely for a repository.

Contributors can choose to *only enable* automatic builds and tests for commits pushed to branches whose names are prefixed with **submit/**. To enable this the contributors creates a [GitHub Secret](#) with the name `JDK_SUBMIT_FILTER`. The value of `JDK_SUBMIT_FILTER` should be set to a non-empty string, preferably something random (instead of 1 or true) as the GitHub log viewer will hide any occurrences of this string (as it could potentially be an actual secret like a password). When this is set, testing can be triggered manually by a command such as this:

```
git push origin <name-of-my-branch>:submit/<name-of-my-branch> # Replace <name-of-my-branch> with an actual branch name
```

It is also possible to only run tests on a subset of platforms. To enable this the contributors creates a [GitHub Secret](#) with the name `JDK_SUBMIT_PLATFORMS`. The value of `JDK_SUBMIT_PLATFORMS` should be set to a string listing the enabled platforms. Include one or more of the following platform names:

- Linux x64
- Linux x86
- Linux additional (hotspot only)
- Windows x64
- macOS x64

### Running locally

The run the same tests that are being run using GitHub Actions locally, run the following command:

```
make test-tier1
```

Note that the GitHub Actions runs the above tests both with release and debug builds. For more information about how to run tests locally, see [doc/testing.md](#).

## Definitions

The definitions for the GitHub Actions for the [jdk](#) repository are available in the [.github/workflows](#) directory.

## Builds

### GNU/Linux

x86-64

- Release
- Debug ("fastdebug")
- Release *without* [precompiled headers](#)

### macOS

x86-64

- Release
- Debug ("fastdebug")

### Windows

x86-64

- Release
- Debug ("fastdebug")

## Tests

### tier1

- GNU/Linux x86-64
- macOS x86-64
- Windows x86-64