

# Diffblue Test Quality Agent Summary Findings

netflix-commons

## HIGH RISK

<p>LINE COVERAGE</p> <p><b>65.0%</b></p> <p><b>C</b></p>	<p>BRANCH COVERAGE</p> <p><b>39.2%</b></p> <p><b>D</b></p>	<p>TEST STRENGTH</p> <p><b>73.8%</b></p> <p><b>B</b></p>	<p>MUTATION SCORE</p> <p><b>28.4%</b></p> <p><b>F</b></p>
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netflix-commons · Java 8 · 8 modules · 595 source units · Assessed 6 May 2026 at 11:41

### Executive Summary

The regression detection power of the current unit test suite for **netflix-commons** creates a **high risk** that defects will not be caught and may have negative consequences when the code is deployed to production.

This assessment is based on the analysis performed by the Diffblue Test Quality Agent on **netflix-commons** as of 6 May 2026 at 11:41. The primary function of the agent is to execute mutation testing on the project in question to quantify the regression detection capacity of the unit tests in place. The mutation score is a function of line coverage, branch coverage, and test strength.

One option for improving test quality and coverage is to use the [Diffblue Testing Agent](#) to automatically generate unit tests for your entire project without constant developer oversight. To learn more about this option - including downloading a free trial - visit [diffblue.com/try-testing-agent](#).

### Results Analysis

Across netflix-commons, line coverage ranges from a critical low of 9.0% in netflix-commons-util to 73.1% in netflix-eventbus-bridge, but mutation scores reveal that coverage figures alone overstate test effectiveness. The starkest example is netflix-infix, which achieves 67.6% line coverage yet only a 24.3% mutation score — meaning the existing tests execute the code but largely fail to validate its logic; test strength of 80.5% confirms that the small portion of code actually reached by tests is well-exercised, but the majority of the module's behavior remains unverified. The three modules with mutation data average a mutation score of roughly 39%, well below the 60% threshold typically expected for shared infrastructure libraries.

As a foundational library consumed by Netflix OSS projects, gaps in netflix-commons test coverage translate directly into undetected regressions that propagate downstream. netflix-commons-util is the most acute exposure point: with 9.0% line coverage, 0% branch coverage, and a 5.1% mutation score, any change to that module carries effectively unmeasured risk across every dependent service.

### Coverage Analysis

Coverage measures what proportion of your code is executed when tests run. Line coverage tracks individual executable lines; branch coverage checks that conditional paths (if/else, switch) are also tested. High line coverage with low branch coverage can mask untested edge cases.

Module	Language	Line Cov	Branch Cov
netflix-eventbus	Java 8	65.3%	64.7%
netflix-lifecycle	Java 8	69.2%	100.0%
netflix-statistics	Java 8	0.0%	0.0%
netflix-jersey-guice	Java 8	0.0%	0.0%
netflix-eventbus-bridge	Java 8	73.1%	37.5%
netflix-infix	Java 8	67.6%	32.9%
netflix-eventbus-rx	Java 8	42.9%	0.0%
netflix-commons-util	Java 8	9.0%	0.0%

### Per-Package Breakdown

#### netflix-eventbus

Package	Line Cov
com.netflix.eventbus.filter	0.0%
com.netflix.eventbus.filter.lang	0.0%
com.netflix.eventbus.filter.lang.infix	75.9%
com.netflix.eventbus.impl	62.7%
com.netflix.eventbus.spi	78.7%
com.netflix.eventbus.utils	96.5%

#### netflix-lifecycle

Package	Line Cov
com.netflix.lifecycle.concurrency	69.2%

#### netflix-eventbus-bridge

Package	Line Cov
com.netflix.eventbus.bridge	73.1%

#### netflix-infix

Package	Line Cov
com.netflix.infix	40.3%
com.netflix.infix.lang.infix.antr	73.8%

#### netflix-eventbus-rx

Package	Line Cov
com.netflix.eventbus.rx	42.9%

#### netflix-commons-util

Package	Line Cov
com.netflix.util	3.6%
com.netflix.util.concurrent	34.8%

### Mutation Testing

Mutation testing introduces small artificial defects (mutants) into the source code and checks whether existing tests detect them. The mutation score measures what proportion of mutants were killed (i.e. detected by a failing test). Test strength measures what proportion of mutants covered by at least one test were killed — reflecting the quality of the assertions, not just execution coverage.

Module	Language	Line Cov	Branch Cov
netflix-eventbus	Java 8	66.0%	44.1%
netflix-eventbus-bridge	Java 8	65.0%	48.1%
netflix-infix	Java 8	80.5%	24.3%
netflix-eventbus-rx	Java 8	100.0%	25.0%
netflix-commons-util	Java 8	80.0%	5.1%

### Per-Package Breakdown

#### netflix-eventbus

Package	Test Strength	Mutation Score
com.netflix.eventbus.filter	0.0%	0.0%
com.netflix.eventbus.filter.lang.infix	27.3%	17.6%
com.netflix.eventbus.impl	66.2%	44.6%
com.netflix.eventbus.spi	58.3%	43.8%
com.netflix.eventbus.utils	87.0%	87.0%

#### netflix-eventbus-bridge

Package	Test Strength	Mutation Score
com.netflix.eventbus.bridge	65.0%	48.1%

#### netflix-infix

Package	Test Strength	Line Cov
com.netflix.infix	67.6%	12.1%
com.netflix.infix.lang.infix.antr	85.4%	34.9%

#### netflix-eventbus-rx

Package	Test Strength	Mutation Score
com.netflix.eventbus.rx	100.0%	25.0%

#### netflix-commons-util

Package	Test Strength	Line Cov
com.netflix.util	0.0%	0.0%
com.netflix.util.concurrent	80.0%	57.1%

### Recommendations


#### Project-wide

Enforce a minimum mutation score threshold — recommended 60% — as a hard CI quality gate across all netflix-commons modules; the current state where modules can merge with single-digit mutation scores (netflix-commons-util at 5.1%) means the test suite provides no reliable protection against logic regressions in shared infrastructure code.

Module	Recommendation
netflix-eventbus	Raise the mutation score from 44.1% by adding assertion-rich tests that verify the correctness of event routing and dispatch logic, not just that methods execute without exceptions; undetected mutations in an event bus core directly risk silent message loss or misrouting in downstream consumers.
netflix-infix	Address the branch coverage gap — 67.6% line coverage against only 32.9% branch coverage and a 24.3% mutation score — by adding tests that exercise conditional parsing paths and error-handling branches; untested expression-evaluation branches are a latent source of incorrect query results in consuming services.
netflix-lifecycle	Resolve the mutation testing configuration error ('No mutations.xml files found') so mutation coverage can be measured; without this data, the apparent strength of the 100% branch coverage cannot be validated and provides a false sense of assurance for lifecycle event handling.
netflix-eventbus-bridge	Expand tests to cover the untested conditional branches driving the 37.5% branch coverage score, particularly around bridge failure and fallback scenarios; with a mutation score of only 48.1%, roughly half of all logic faults in the bridge layer would go undetected before reaching production.
netflix-commons-util	Treat this module as a testing priority: 9.0% line coverage, 0% branch coverage, and a 5.1% mutation score mean it is essentially untested; establish a baseline test suite covering all public utility methods to eliminate unquantified change risk for every project depending on this library.

### Analysis Errors

Module	Error
netflix-lifecycle	No mutations.xml files found in provided paths
netflix-statistics	No test files found in src/test/java. Mutation testing requires existing tests that exercise the code under test.
netflix-jersey-guice	No test files found in src/test/java. Mutation testing requires existing tests that exercise the code under test.



**Improve your test suite with Diffblue Testing Agent**

Automatically generate and maintain tests to close coverage and mutation score gaps — without manual effort.

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