

# Changes in results post upgrade - 8.2.4

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## Target audience:

CAST AI Administrator



**Summary:** this page lists:

- impacts of changes made in CAST AIP 8.2.4 on Quality Model results
- other impacts of changes made in CAST AIP 8.2.4
- miscellaneous result changes

The changes listed assume that an upgrade from CAST AIP 8.2.3 to CAST AIP 8.2.4 has taken place.

## Introduction

Each CAST AIP release provides new features which improve the value of the platform and justify an upgrade. However, there are a number of changes or improvements which can impact the measurement results/grades:

- New or improved Quality Rules to perform deeper analysis
- Updates to the Assessment Model, e.g. changes to rule weights, severity or thresholds. This can be mitigated by using the "Preserve assessment model" option during the [upgrade](#).
- Improvements of the language analysis, e.g. more fine-grained detection of objects or links
- Extended automatic discovery of files included in the analysis
  
- Bug fixes to improve the precision of results
- And, unfortunately, a new release may also introduce new bugs which may impact the results until they are discovered and removed

Below is a list of changes made to the current release of CAST AIP that are known to cause impacts to results. You can also consult [Case Study - Measurement changes after upgrade for selected customer applications](#) which provides a more detailed analysis based on a few sample applications.

## Analyzing the root causes of impacts to measurement results/grades

The following is a general description of the steps that should be taken in order to compare pre and post upgrade results:

- **Step 1:** Take a snapshot (including a source code analysis) with the previous release of CAST AIP before upgrading to the new release of CAST AIP
  - Check the list of applications to be analyzed, the list of files per application and list of SQL objects from the Analysis Service.
- **Step 2:** Compare the source code in version 1 (before upgrade) with the source code in the new version 2 (after upgrade)
  - Compare the list of analyzed files, list of files per application and list of SQL objects between the two Analysis Services
- **Step 3:** Compare the results of the application analysis and snapshot post upgrade. This can be done by comparing the snapshots available in the Dashboard Service to find the differences in:
  - Quality rules
  - Violations
  - Grades at Business Criteria level
  - Function Points
  - Transactions
  - Lines of code
- **Step 4:** Compare the data functions and transactions across the source Analysis Service and the target Analysis Service post upgrade.

# Impacts of changes made in CAST AIP 8.2.4 on Quality Model results post upgrade

## JEE

### Close database resources ASAP - 8104

A bug has been discovered that could cause the number of critical violations to drop between successive snapshots on the same unchanged source code. While nothing specific has been done to fix this issue, related AIP source code has been modified and the issue is unlikely to now re-occur. Therefore after an upgrade to CAST AIP 8.2.4 and the generation of a post upgrade snapshot, results may differ for this Quality Rule.

### Avoid instantiations inside loops - 7210

A bug has been discovered that is causing the Quality Rule "Avoid instantiations inside loops - 7210" to be incorrectly violated (i.e. false positive violations are returned). These false positives relate to the situations where an object is created/instantiated when adding to an ArrayList. This bug has now been fixed, therefore after an upgrade to CAST AIP 8.2.4 and the generation of a post upgrade snapshot, results may differ for this Quality Rule, i.e. there will be a reduction in the number of violations for the Quality Rule.

### Collection must be the same between getter and setter - 7498

A bug has been discovered that is causing the Quality Rule "Collection must be the same between getter and setter - 7498" to be incorrectly violated (i.e. false positive violations are returned). These false positives are returned despite the same collection being used. This bug has now been fixed, therefore after an upgrade to CAST AIP 8.2.4 and the generation of a post upgrade snapshot, results may differ for this Quality Rule, i.e. there will be a reduction in the number of violations for the Quality Rule.

### Pages should use error handling page - 2232

A bug has been discovered that is causing the Quality Rule "Pages should use error handling page - 2232" to be incorrectly violated (i.e. false positive violations are returned). These false positives are returned despite the fact that the web.xml files have a specific error handling section and correctly link to a JSP error page. The bug was caused by the fact that the web.xml files were contained in third-party JAR files, and the resulting extraction during the analysis incorrectly marked them as internal objects, instead of [external objects](#). This bug has now been fixed, therefore after an upgrade to CAST AIP 8.2.4 and the generation of a post upgrade snapshot, results may differ for this Quality Rule, i.e. there will be a reduction in the number of violations for the Quality Rule.

## SAP SQL

### Database table naming convention - prefix control - 7854

An improvement has been made to the Quality Rule "Database table naming convention - prefix control - 7854" for SAP SQL. In addition to the prefix "YT", the Quality Rule now takes into account "ZT" and "/" prefixes for table naming. Therefore after an upgrade to CAST AIP 8.2.4 and the generation of a post upgrade snapshot, results may differ for this Quality Rule, i.e. there may be a change in the number of violations for the Quality Rule.

## Other impacts of changes made in CAST AIP 8.2.4

### .NET

#### Generated code detection

A change has been made to the .NET analyzer to enhance the way in which generated code is detected. In previous releases of CAST AIP (since 8.0.x) generated code has been detected using a combination of the following methods

- file name
- file path
- various attributes present in the source code

Starting from CAST AIP 8.2.4, an additional method is used alongside the existing methods:

- the presence of the string "autogenerated" in the header comments of the file

Therefore after an upgrade to CAST AIP 8.2.4 and the generation of a post upgrade snapshot, results may differ for multiple Quality Rules/metrics.

## Miscellaneous result changes

N/A