

CAST Engineering Dashboard - Metrics - Lines of Code - Incorrect value - RPG DB400 - Lines of Code LOC is doubled

Description

This page describe an issue when the analysis of RPG is done using RPG package < 1.0.4. When looking at the dashboard results, you find out that LOC is double that of the expected one for DB400 logical files.

Observed in CAST AIP

Release	Yes/No
8.3.x	✓

Observed on RDBMS

RDBMS	Yes/No
CSS	✓

Step by Step Scenario

Below is the step-by-step scenario leading to the problem:

1. Do Analysis and snapshot for RPG language using RPG package < 1.0.4
2. While Validating the dashboard, you find out that LoC is the double of the expected one for DB400 logical files.

Impact of the Problem

The impact of the problem on the analysis or the dashboard is: the LoC pf DB400 logical files is doubled.

Action Plan

Issue is due to the fact that LOC is counted twice in the "File which contains the source code" and in the one of the 2 types ("DB400 Physical File", "DB 400 Logical File") when they only should be counted only once. To check that this is your case, you can

1. Run the following query on KB

```
select distinct object_type_description, sum(case when t1.metric_id=10151 then t1.metric_num_value
end) as code_lines
  from dss_metric_results t1, dss_objects t2 , dss_object_types t3
 where t1.object_id = t2.object_id
       and t2.object_type_id = t3.object_type_id
       and t3.object_group = 0
 group by 1 order by 1 desc
```

Here is an example of the results for the query

Query result example

```
"File which contains source code";3003
"DDS400 Printer File";691
"DDS400 Display File";117
"DB400 Physical File";1803 --not expected
"DB400 Logical File";392 --not expected
```

From the first line, this means that LoC computed for "File which contains source code" type is 3003

As you can see in the results of the query above, the LOC is counted twice: once in the "File which contains source code" and then in "DB400 Physical File" or "DB400 Logical File" which is not expected. This results in the overall LoC to be doubled.

To fix the problem, proceed as follows

- a. For %appdata%\CAST\CAST\7.3\Configuration\Languages\DB400\DB400MetaModel.xml, do the following 2 modifications :

```
put following line in comment, changing:
<inheritedCategory name="APM Sources"/> --in line 11
to
<!--inheritedCategory name="APM Sources"/-->
```

```
In the DB400LogicalFile type, change:
<inheritedCategory name="APM SQL Language Artifacts"/> --in line 65
to
<inheritedCategory name="APM SQL Artifacts"/>
```

Note that you should apply this modification (putting <!--inheritedCategory name="APM Sources"/--> into comment to all the RPG technologies you have at your side modifying associated meta model.

- b. Once modification done, in servman, load metamodel from disk for the 3 schemas CB/KB/MB for the changes to be taking into account,
- c. Then run the analysis and generate the snapshot.
- d. When running the same query on KB:

```
select distinct object_type_description,
sum(case when t1.metric_id=10151 then t1.metric_num_value end) as code_lines
from dss_metric_results t1, dss_objects t2 , dss_object_types t3
where t1.object_id = t2.object_id
and t2.object_type_id = t3.object_type_id
and t3.object_group = 0
group by 1
order by 1 desc
```

We can see that LOC is now no longer computed for "DB400 Physical File" and "DB400 Logical File" only at "File which contains source code" level:

Query result example

```
"File which contains source code";3003
"DDS400 Printer File";691
"DDS400 Display File";117
"DB400 Physical File";
"DB400 Logical File";
```

Impact of the solution on the analysis or the dashboard is:

LoC is no longer doubled for RPG DB400 technologies.

Notes/comments

Issue is planned to be fixed in RPG 1.0.4 package

Ticket # 4919, 12497

Related Pages

[CAST Engineering Dashboard - Metrics - Lines of code - Unexpected increase or decrease](#)