# **Information**

**Version 1.5.0**

**All placeholders are always working for one application and one snapshot**

**You can copy/paste each placeholder below by selecting the full content.**

**Some of placeholders could have parameters to modify**

**Sample, you can choose the number of lines you want to display and you can decide for which Business Criteria, you want to link your placeholder**

## **Text placeholders**

Select the text box, right click for the contextual menu, then Format Shape.

In the Format Shape menu, Shape Options, Layout & Properties, Alt Text, fill the Description field with the component options



## **Graph placeholders**

Select the chart, right click for the contextual menu, then Format Chart Area.

In the Format Chart Area menu, Chart Options, Layout & Properties, Alt Text, fill the Description field with the component options



## **Table placeholders**

Select the table, right click for the contextual menu, then Table Properties.

Alt Text tab, fill the Description field.



# **List of available Place Holders**

## **TEXT Format Blocks**

🡪 Type = **TEXT**

### **Date of the day**

🡪 Block Name = **TODAY\_DATE**  
 🡪 Options: *none*

Monday, xx July 2012

### **Dashboard Website Url**

🡪 Block Name = **DASHBOARD\_SERVICE\_URL**  
 🡪 Options: none – this Text block might be empty and will only work on an analytics database. Engineering databases do not contain this information.

http://host/AED

### **Application Version**

🡪 Block Name = **CAST\_VERSION**  
 🡪 Options: *none*

My Application Version

### **System Name**

🡪 Block Name = **SYSTEM\_NAME**  
 🡪 Options: none

My System Name

*This Text block is only relevant on engineering databases. There is no real system on analytics database, just a fake one called “All Applications”.*

### **Application Name** 🡪 Block Name = **APPLICATION**\_**NAME** 🡪 Options: **none**

My Application Name

### **Last Snapshot Version Name**

🡪 Block Name = **LAST\_SNAPSHOT\_VERSION**  
 🡪 Options: ***none***

Version Number

### **Last Snapshot Date**

🡪 Block Name = **LAST\_SNAPSHOT\_DATE**  
 🡪 Options: none

Snapshot Date

### **Previous Snapshot Version Name**

🡪 Block Name = **PREVIOUS\_SNAPSHOT\_VERSION**  
 🡪 Options: *none*

Version Number

### **Previous Snapshot Date**

🡪 Block Name = **PREVIOUS\_SNAPSHOT\_DATE**  
 🡪 Options: none

Snapshot Date

### **Size Application Category**

🡪 Block Name = **APPLICATION\_SIZE\_TYPE**  
 🡪 Options: none

Small/Medium/Large/ExtraLarge

### **Quality Application Category** 🡪 Block Name = **APPLICATION\_QUALITY\_TYPE** **🡪** Options: **none**

VeryLow/Low/Medium/Good/VeryGood

### **Grade for a quality rule (id can be changed)**

🡪 Block Name = APPLICATION\_RULE

This block has been replaced by the following APPLICATION\_METRIC. It is kept only for backward compatibility. Its options and behaviour are the same than APPLICATION\_METRIC text block.

### **Result for a metric id**

🡪 Block Name = APPLICATION\_METRIC

🡪 Options:

* ID=QualityRuleId, TechnicalCriterionId, BusinessCriterionId, Sizing Measure Id, Background Fact Id or Category Id
* SNAPSHOT=PREVIOUS | CURRENT (CURRENT by default)
* FORMAT = N0 | N2 (only for sizing measure or background fact)
* MODULE=name of the module for which you want the metric evolution (optional)
* TECHNO=name of the technology for which you want the metric evolution (optional)
* PARAMS=SZ a SZ b, (SZ for sizing measure or category, QR for quality rule, BF for background fact)
* EXPR=a/b, (operators can be +, -, \*, / , (, ) )
  + a=MetricId, (sample 67011 – all critical violations)
  + b=MetricId, (sample 10202 – Total AFP)

Either ID, either PARAMS and EXPR for custom expression should be specified.

If no module and no technology this is the value for the application that is taken.

0.00

### **Technical Debt Result – Deprecated (Old Cast formula)**

🡪 Block Name = **METRIC\_TECHNICAL\_DEBT**  
 🡪 Options = none

0.00

### **OMG Technical Debt Result (based on a scope of rules)**

🡪 Block Name = **OMG\_TECHNICAL\_DEBT**  
 🡪 Options:  
*- ID:AIP|CISQ|ISO (by default or if nothing selected, ISO)  
- SNAPSHOT:CURRENT|PREVIOUS (by default or if nothing, CURRENT)*

0.00

Notes :

- ISO option is the recommended technical debt to be used. Requires installation of OMG Technical Debt Measure (>2.0.0 funcrel) and ISO-5055 Index extensions during analysis

- CISQ option required installation of OMG Technical Debt Measure and CISQ Index extensions during analysis. Scope of rules is reduced

### **Unadjusted Data Function Metric Value**

🡪 Block Name = **METRIC\_AFP\_DF**  
 🡪 Options = *none*

0.00

### **Unadjusted Transactional Function Metric**

🡪 Block Name = **METRIC\_AFP\_TF**   
 🡪 Options = *none*

0.00

### **Rule Total Checks**

🡪 Block Name = **RULE\_TOTAL\_CHECKS**  
 🡪 Options =   
*RULID=quality rule Id,   
SNAPSHOT=CURRENT|PREVIOUS (CURRENT by default)*

0.00

### **Rule Failed Checks**

🡪 Block Name = **RULE\_FAILED\_CHECKS**  
 🡪 Options =   
*RULID=quality rule Id,   
SNAPSHOT=CURRENT|PREVIOUS (CURRENT by default)*

0.00

### **Rule Failed checks on Total Checks**

🡪 Block Name = **RULE\_FAILED\_ON\_TOTAL\_CHECKS**  
 🡪 Options =   
*RULID=quality rule Id,   
SNAPSHOT=CURRENT|PREVIOUS (CURRENT by default)*

0.00

### **Added EFP Metric Value**

🡪 Block Name = **METRIC\_EFP\_ADDED**  
 🡪 Options = *none*

0.00

### **Deleted EFP Metric Value**

🡪 Block Name = **METRIC\_EFP\_DELETED**  
 🡪 Options = *none*

0.00

### **Modified EFP Metric Value**

🡪 Block Name = **METRIC\_EFP\_MODIFIED**  
 🡪 Options = *none*

0.00

### **Aggregated EFP Metric Value**

🡪 Block Name = **METRIC\_EFP**   
 🡪 Options = *none*

0.00

### **Report Generator version**

🡪 Block Name = **REPGEN\_VERSION**   
 🡪 Options = *none*

0.00

### **Custom Expression**

🡪 Block Name = **CUSTOM\_EXPRESSION**   
 🡪 Options =

* PARAMS=SZ a SZ b, (SZ for sizing measure or category, QR for quality rule, BF for background fact)
* EXPR=a/b, (operators can be +, -, \*, / , (, ) )
* a=MetricId, (sample 67011 – all critical violations)
* b=MetricId, (sample 10202 – Total AFP)
* FORMAT=N0 (N2 by default, if nothing or erroneous format is set),
* SNAPSHOT = CURRENT|PREVIOUS with CURRENT by default (or if erroneous or nothing is set) to get the custom expression for the current snapshot or the previous one

0.00

Note:   
You are not limited in the number of parameters to be used in your expression (a, b, c, d…)  
/!\ don’t put blank char in the definition of parameters (,a=67011,b=67010,c=…)

You can put a category id instead of a sizing measure, for example 65104 for very large size artifact.

### **Metric Evolution**

🡪 Block Name = **METRIC\_EVOLUTION**   
 🡪 Options =

* ID= can be quality indicator id (BC, TC or QR), or sizing measure, or background fact, or category
* FORMAT=ABSOLUTE or PERCENT to get the variation either direct value, either percentage. Default is percent. (optional)
* MODULE=name of the module for which you want the metric evolution (optional)
* TECHNO=name of the technology for which you want the metric evolution (optional)
* PARAMS=SZ a SZ b, (SZ for sizing measure or category, QR for quality rule, BF for background fact)
* EXPR=a/b, (operators can be +, -, \*, / , (, ) )
* a=MetricId,
* b=MetricId

Either ID, either PARAMS and EXPR (for custom expression) should be specified.

This component display the evolution of a metric, in percentage or in absolute, for the application, or for a module or a technology if specified.

If no module and no technology this is the value for the application that is taken.

Variation in percent = (current - previous) / previous

Variation in absolute = current - previous

0.00

## **GRAPH Format**

🡪 Type = **GRAPH**

### **Distribution of technology by Lines of code**

🡪 Block Name = **TECHNO\_LOC**  
 🡪 Options: **COUNT=N** where N is the shown technologies count (default value=5)

### **Health Factors Radar**

🡪 Block Name = **RADAR\_HEALTH\_FACTOR\_2\_LAST\_SNAPSHOTS**

🡪 Options: *none*

### **Compliance Radar**

🡪 Block Name = **RADAR\_COMPLIANCE\_2\_LAST\_SNAPSHOTS**

🡪 Options: *none*

### **Health Factors Trending**

🡪 Block Name = **TREND\_HEALTH\_FACTOR** 🡪 Options: **ZOOM=N.N** (added value to the max value of the graph as superior border and removed value to the min value of the graph as inferior border ; no zoom by default)

### **Compliance Trending**

🡪 Block Name = **TREND\_COMPLIANCE** 🡪 Options: **ZOOM**: if text “ZOOM” is present in options, it indicates that the min border value of the graph is the floor of the min value of the graph and the top border value is the ceiling of the max value (by default : min = 1 and max = 4)

### **Technical Debt Trending progression – Deprecated (old Cast formula)**

🡪 Block Name = **TREND\_TECH\_DEBT** 🡪 Options: *none*

### **OMG Technical Debt Trending progression – based on a scope of rules**

🡪 Block Name = **TREND\_OMG\_TECH\_DEBT** 🡪 Options:

* *ID:AIP|CISQ|ISO (by default or if nothing selected, ISO)*
* *SNAPSHOT:CURRENT|PREVIOUS (by default or if nothing, CURRENT)*

Notes :

- ISO option is the recommended technical debt to be used. Requires installation of OMG Technical Debt Measure (>2.0.0 funcrel) and ISO-5055 Index extensions during analysis

- CISQ option required installation of OMG Technical Debt Measure and CISQ Index extensions during analysis. Scope of rules is reduced

### **Cast Complexity**

🡪 Block Name = **CAST\_COMPLEXITY**  
 🡪 Options: none

🡪 Definition: CAST provides a distribution of objects based on several distributions:

-Algorithm Complexity (based on Cyclomatic complexity

-SQL Complexity

-Coupling (Fan in, Fan out)

-Ratio of documentation

-Size of components

For more information, go on chapter “Cost”

<http://doc.castsoftware.com/help/index.jsp?topic=%2Fcurrent%2FHow+Complexity+metrics+are+calculated+by+CAST.html>

This component is only relevant on an engineering database.

### **Cast Distribution**

🡪 Block Name = **CAST\_DISTRIBUTION**  
 🡪 Options: **PAR** = distribution id

🡪 Definition:

CAST provides a distribution of objects based on the chosen distribution.

PAR = 65501 by default because if PAR is omitted, the CAST\_DISTRIBUTION display the CAST\_COMPLEXITY distribution

This graph is relevant only on engineering databases, it is empty on analytics databases.

### **Technical Debt Trending Bubble – Deprecated (old Cast formula)**

🡪 Block Name = **BUBBLE** 🡪 Options: **M=*ModuleId***, if present, only data from indicated module will be shown, obviously data from the entire snapshot will be shown.

### **OMG Technical Debt Trending Bubble (based on a scope of rules)**

🡪 Block Name = **OMG\_TECH\_DEBT\_BUBBLE** 🡪 Options:

* **ID**:AIP|CISQ|ISO (by default or if nothing selected, ISO)
* **SNAPSHOT**:CURRENT|PREVIOUS (by default or if nothing, CURRENT)
* **M=*ModuleId***, if present, only data from indicated module will be shown, obviously data from the entire snapshot will be shown.

Notes:

- ISO option is the recommended technical debt to be used. Requires installation of OMG Technical Debt Measure (>2.0.0 funcrel) and ISO-5055 Index extensions during analysis

- CISQ option required installation of OMG Technical Debt Measure and CISQ Index extensions during analysis. Scope of rules is reduced

### **Module artifacts**

🡪 Block Name = **MODULE\_ARTIFACTS** 🡪 Options: ***COUNT=N*** *where N indicates the number of top N*

### **Generic Trending**

🡪 Block Name = **TREND\_METRIC\_ID** 🡪 Options: - QID=60017|66031|7126 : list BC, TC or QR metric id separated by | (max 10)

* Or SID=10151|67211 : list of sizing measures id separated by | (max 10)
* Or BID=66061|66062 : list of background facts id separated by | (max 10)

### **Generic Radar**

🡪 Block Name = **RADAR\_METRIC\_ID**

🡪 Options:

* ***ID****=list of metric id (BC, TC or QR) separated by ‘|’, for example ID=ID=60017|60016|66031|61007|7156|3566*
* ***SNAPSHOT****=CURRENT or PREVIOUS or BOTH*

### **Transactions Bar Chart**

🡪 Block Name = **TRANSACTIONS\_CHART**

🡪 Options:

* ***SNAPSHOT*** *: CURRENT or PREVIOUS, current by default*
* ***COUNT****: to restrict the list of transactions, -1 for all transactions, by default 20.*
* ***FILTER****:SECU or EFF or ROB to sort the transactions , ROB by default*
* ***NAME****: FULL or SHORT to display transactions by their short name or full name, SHORT by default*

## **TABLE Format**

🡪 Type = **TABLE**

### **Top Technologies – Size**

🡪 Block Name = **TECHNO\_LOC** 🡪 Options:

* **COUNT=N** where N is the shown technologies count (default value=5)
* **NOSIZE** to hide the “LoC” column (default)
* **HEADER**=NO to not display headers (useful for excel report when you want to define your own customized headers). By default if option is not present or different from NO, headers are displayed

**Top 5 Technologies**

|  |  |  |
| --- | --- | --- |
| Name |  | LOC |
| Techno 1 |  | 000,000 |
| Techno 2 |  | 000,000 |
| Techno 3 |  | 000,000 |
| Techno 4 |  | 000,000 |
| Techno 5 |  | 000,000 |

### **Top Modules - Size**

🡪 Block Name = **LOC\_BY\_MODULE**

🡪 Options : **FORMAT=LOC|KLOC**, by default or if omitted, format is LOC

**Top 5 Modules**

|  |  |  |
| --- | --- | --- |
| Name | | LOC |
| Module 1 | 000,000 | |
| Module 2 | 000,000 | |
| Module 3 | 000,000 | |
| Module 4 | 000,000 | |
| Module 5 | 000,000 | |

### **Top Technologies - Grades**

🡪 Block Name = **BC\_BY\_TECHNO** 🡪 Options:

* **ID=BC ID** (by default ID is 60017)

**Top 5 Technologies**

|  |  |
| --- | --- |
| Name | Value |
| Techno 1 | 000,000 |
| Techno 2 | 000,000 |
| Techno 3 | 000,000 |
| Techno 4 | 000,000 |
| Techno 5 | 000,000 |

### **Top Technologies – Size Evolution**

🡪 Block Name = **TECHNO\_LOC\_EVOLUTION** 🡪 Options: **COUNT=N** where N is the shown technologies count (default value=5)

**Top 5 Technologies**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Previous LOC | Current LOC | Evolution | Evolution % |
| Techno 1 | 0,000 | 0,000 | 0,000 | 0.00 |
| Techno 2 | 0,000 | 0,000 | 0,000 | 0.00 |
| Techno 3 | 0,000 | 0,000 | 0,000 | 0.00 |
| Techno 4 | 0,000 | 0,000 | 0,000 | 0.00 |
| Techno 5 | 0,000 | 0,000 | 0,000 | 0.00 |

### **Technologies – LoC by Module**

🡪 Block Name = **TECHNO\_LOC\_BY\_MODULE** 🡪 Options: *none*

**Technologies – LoC by Module**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Techno1 | Techno2 | Techno3 | Techno4 |
| Module 1 | 0,000 | 0,000 | 0,000 | 0.00 |
| Module 2 | 0,000 | 0,000 | 0,000 | 0.00 |
| Module 3 | 0,000 | 0,000 | 0,000 | 0.00 |
| Module 4 | 0,000 | 0,000 | 0,000 | 0.00 |
| Module 5 | 0,000 | 0,000 | 0,000 | 0.00 |

### **Technical Size information**

🡪 Block Name = **TECHNICAL\_SIZING** 🡪 Options: **HEADER**=NO to not display headers (useful for excel report when you want to define your own customized headers). By default if option is not present or different from NO, headers are displayed

**Technical Size**

|  |  |
| --- | --- |
| Name | Number |
| kLOCs | 000 |
| Files | 0,000 |
| Classes | 0,000 |
| SQL Art. | 00 |
| Tables | 00 |

### **Technical Size Evolution information**

🡪 Block Name = **TECHNICAL\_SIZING\_EVOLUTION** 🡪 Options: none

**Technical Size Evolution**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Prev. Number | Cur. Number | Evolution | Evolution % |
|  |  |  |  |  |
| kLOCs | 000 | 000 | 000 | 0.00% |
| Files | 0,000 | 0,000 | 0,000 | 0.00% |
| Classes | 0,000 | 0,000 | 0,000 | 0.00% |
| SQL Art. | 00 | 00 | 00 | 0.00% |
| Tables | 00 | 00 | 00 | 0.00% |

### **Functional Weight information**

🡪 Block Name = **FUNCTIONAL\_WEIGHT** 🡪 Options: *none*

**Function Weight**

|  |  |
| --- | --- |
| Name | Number |
| Automated Function Points | 000 |
| Decision Points (Total CC) | 0,000 |
| Back Fire Function Points | 0,000 |

### **Functional Weight Evolution Information**

🡪 Block Name = **FUNCTIONAL\_WEIGHT \_EVOLUTION** 🡪 Options: none

**Functional Weight Evolution**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Prev. Number | Cur. Number | Evolution | Evolution % |
| Automated Function Points | 000 | 000 | 000 | 0.00% |
| Decision Points (Total CC) | 0,000 | 0,000 | 0,000 | 0.00% |
| Back Fire Function Points | 0,000 | 0,000 | 0,000 | 0.00% |

### **Health Factors Grades & Evolution on Previous Snapshot, header can be changed (short, long)**

🡪 Block Name = **HEALTH\_FACTOR** 🡪 Options:

* **HEADER=SHORT** (indicates that short headers will be shown, obviously long
* **SHOW\_EVOL=1** (displays a row indicating evolution as absolute values (delta), by default this row IS NOT displayed)
* **SHOW\_EVOL\_PERCENT=0** (displays a row indicating evolution as relative values (percent), by default this row IS displayed)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | TQI | Robu | Efcy | Secu | Trans | Chang |
| Curr. Vers | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |
| Prev. Vers | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Variation | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % |

### **Health Factors Grades & Evolution by Module on Current Snapshot, Previous Snapshot, header can be changed (short, long)**

🡪 Block Name = **HF\_BY\_MODULE** 🡪 Options: **HEADER=SHORT** (indicates that short headers will be shown, obviously long header will be shown)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | TQI | Robu | Efcy | Secu | Trans | Chang |
| Curr. Vers |  |  |  |  |  |  |
| Module 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Module 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Module 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Module 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
|  |  |  |  |  |  |  |
| Prev. Vers |  |  |  |  |  |  |
| Module 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Module 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Module 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Module 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
|  |  |  |  |  |  |  |
| Variation |  |  |  |  |  |  |
| Module 1 | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % |
| Module 2 | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % |
| Module 3 | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % |
| Module 4 | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % |

### **Compliance Grades & Evolution**

🡪 Block Name = **COMPLIANCE** 🡪 Options: **HEADER=SHORT** (indicates that short headers will be shown, obviously long header will be shown)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Prog. | Arch. | Doc. |
| Curr. Vers | **0.00** | **0.00** | **0.00** |
| Prev. Vers | 0.00 | 0.00 | 0.00 |
| Variation | 0.00 % | 0.00 % | 0.00% |

### **Statistics on Violations**

🡪 Block Name = **VIOLATION\_STATISTICS** 🡪 Options: *none*

|  |  |
| --- | --- |
| Name | Number |
| Critical Violations | 0,000 |
| per File | 0.00 |
| per kLOCs | 0.00 |
| Complex Objects | 0,000 |
| with violations | 000 |

### **Statistics on Violations**

🡪 Block Name = **VIOLATION\_STATISTICS\_EVOLUTION** 🡪 Options: *none*

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Current | Previous | Evolution |
| Critical Violations | 0.000 | 0,000 | 0.00 % |
| per File | 0.00 | 0.00 | 0.00 % |
| per kLOCs | 0.00 | 0.00 | 0.00 % |
| Complex Objects | 0.000 | 0,000 | 0.00 % |
| with violations | 0.00 | 0.00 | 0.00 % |

### **Top Critical Violations (number of rules can be changed in Properties)**

🡪 Block Name = **TOP\_CRITICAL\_VIOLATIONS** 🡪 Options:

* **COUNT=N** where N indicate the number of the top N,
* **PAR=**BC-ID where BC-ID indicate the id of the business criterion

|  |  |
| --- | --- |
| Rules | Count |
| Rule 1 | 0 |
| Rule 2 | 0 |
| Rule 3 | 0 |
| Rule 4 | 0 |
| Rule 5 | 0 |

### **Evolution of Top Critical Violations (number of rules can be changed in Properties)**

🡪 Block Name = **TOP\_CRITICAL\_VIOLATIONS\_EVOLUTION**  
 🡪 Options:

* COUNT=N where N indicate the number of the top N,
* PAR=BC-ID where BC-ID indicate the id of the business criterion

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Rules | Current | Previous | Evolution | Evolution % |
| Rule 1 | 0 | 0 | 0 | 0.00% |
| Rule 2 | 0 | 0 | 0 | 0.00% |
| Rule 3 | 0 | 0 | 0 | 0.00% |
| Rule 4 | 0 | 0 | 0 | 0.00% |
| Rule 5 | 0 | 0 | 0 | 0.00% |
| Rule 6 | 0 | 0 | 0 | 0.00% |
| Rule 7 | 0 | 0 | 0 | 0.00% |
| Rule 8 | 0 | 0 | 0 | 0.00% |
| Rule 9 | 0 | 0 | 0 | 0.00% |
| Rule 10 | 0 | 0 | 0 | 0.00% |

### **Top Non Critical Violations (number of rules can be changed in Properties)**

🡪 Block Name = **TOP\_NON\_CRITICAL\_VIOLATIONS** 🡪 Options: **COUNT=N** where N indicate the number of the top N

|  |  |
| --- | --- |
| Rules | Count |
| Rule 1 | 0 |
| Rule 2 | 0 |
| Rule 3 | 0 |
| Rule 4 | 0 |
| Rule 5 | 0 |
| Rule 6 | 0 |
| Rule 7 | 0 |
| Rule 8 | 0 |
| Rule 9 | 0 |
| Rule 10 | 0 |

### **Evolution of Top Non Critical Violations (number of rules can be changed in Properties)**

🡪 Block Name = **TOP\_NON\_CRITICAL\_VIOLATIONS\_EVOLUTION** 🡪 Options: **COUNT=N** where N indicate the number of the top N

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Rules | Prev. Count | Cur. Count | Evolution | Evolution % |
| Rule 1 | 0 | 0 | 0 | 0.00% |
| Rule 2 | 0 | 0 | 0 | 0.00% |
| Rule 3 | 0 | 0 | 0 | 0.00% |
| Rule 4 | 0 | 0 | 0 | 0.00% |
| Rule 5 | 0 | 0 | 0 | 0.00% |
| Rule 6 | 0 | 0 | 0 | 0.00% |
| Rule 7 | 0 | 0 | 0 | 0.00% |
| Rule 8 | 0 | 0 | 0 | 0.00% |
| Rule 9 | 0 | 0 | 0 | 0.00% |
| Rule 10 | 0 | 0 | 0 | 0.00% |

### **For a Business Criterion, list of technical criteria listed by highest improvement opportunity (by Business criteria, indicator that could be changed in the properties)**

🡪 Block Name = **TC\_IMPROVEMENT\_OPPORTUNITY** 🡪 Options: **PAR=N** where N indicate the Business Criterion Id  
 **COUNT=N** where N is the number of the top N

🡪 Formula is – Sum (rule weight x technical criterion weight) \* (4 – technical criterion grade)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Technical Criterion | Total Violation (#) | | Total Check (#) | Grade |
| Criteria1 | | 1 | 1 | 2.2 |
| Criteria2 | | 2 | 2 | 1.4 |
| Criteria3 | | 3 | 3 | 3.23 |
| Criteria4 | | 4 | 4 | 3.45 |
| Criteria5 | | 5 | 5 | 2.2 |
| Criteria6 | | 6 | 6 | 1.4 |
| Criteria7 | | 7 | 7 | 3.23 |
| Criteria8 | | 8 | 8 | 3.45 |
| Criteria9 | | 9 | 9 | 2.3 |
| Criteria10 | | 10 | 10 | 3.5 |

### **For a Business Criterion, list of rules listed by highest improvement opportunity (by Business criteria, indicator that could be changed in the properties)**

🡪 Block Name = **RULE\_IMPROVEMENT\_OPPORTUNITY** 🡪 Options:

* **PAR=N** where N indicate the Business Criterion Id
* **COUNT=N** where N is the number of the top N
* **C=N** where N represents the order of the result :

C=0 or nothing indicates a descending *Improvement gap* order

C=1 indicates a descending *Improvement variation* order

C=2 indicates a descending *Degradation variation* order

🡪 Formula is - (quality rule weight x technical criterion weight) \* (4 – quality rule grade)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Rule | Critical | Current violation | Previous violation | Evol. | Grade | Evol. |
| Rule1 | N | 1 | 1 | 1 | 2.2 | 1 |
| Rule2 | N | 2 | 2 | 2 | 1.4 | 2 |
| Rule3 | Y | 3 | 3 | 3 | 3.23 | 3 |
| Rule4 | Y | 4 | 4 | 4 | 3.45 | 4 |
| Rule5 | N | 5 | 5 | 5 | 2.2 | 5 |
| Rule6 | N | 6 | 6 | 6 | 1.4 | 6 |
| Rule7 | N | 7 | 7 | 7 | 3.23 | 7 |
| Rule8 | N | 8 | 8 | 8 | 3.45 | 8 |
| Rule9 | N | 9 | 9 | 9 | 2.3 | 9 |
| Rule10 | Y | 10 | 10 | 10 | 3.5 | 10 |

### **List of rules for list of criterias (could be adapted in Properties)**

🡪 Block Name = **RULES\_LIST** 🡪 Options:

* **PAR=N[|N]\*** where each submitted N indicate a business criterion ID
* **COUNT**= number of results, if omitted, all results are returned
* **NOVIOLATIONS**=true|false to not display rules that do not have violations. By default if option is not present or different from false, it will be true (we display everything)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Criticality | Weight | Grade | Technical Criteria | Rule Name | # Violation | # Total |
| Y | 9 | 4.00 | Tech Criteria | Avoid direct instanciation | 12 | 200 |
| Y | 2 | 1.50 | Tech Criteria 2 | Avoid second rule 2 | 4 | 31242 |

### **For a business criteria, List of technical criteria with grade**

🡪 Block Name = **CRITERIA\_GRADE** 🡪 Options: - **PAR=N** where N indicates the business criterion Id  
 - **COUNT**= number of results, if omitted, all results are returned

|  |  |  |
| --- | --- | --- |
| Technical Criteria Name | Grade | Evolution |
| Architecture - Multi-Layers and Data Access | 2.2 | 1.23 % |
| Architecture - Object-level Dependencies | 1.4 | 0.00 % |
| Architecture - OS and Platform Independence | 3.23 | 0.00 % |
| Architecture - Reuse | 3.45 | 0.00 % |
| Complexity - Algorithmic and Control Structure Complexity | 2.2 | 0.00 % |
| Complexity - Dynamic Instantiation | 1.4 | 0.00 % |
| Complexity - OO Inheritance and Polymorphism | 3.23 | 0.00 % |
| Complexity - SQL Queries | 3.45 | 0.00 % |
| Dead code (static) | 2.3 | 0.00 % |
| Programming Practices - Error and Exception Handling | 3.5 | 0.00 % |
| Programming Practices - OO Inheritance and Polymorphism | 1 | 0.00 % |
| Programming Practices - Structuredness | 2.2 | 0.00 % |
| Programming Practices - Unexpected Behaviour | 1.4 | 0.00 % |
| Secure Coding - Time and State | 3.23 | 0.00 % |
| Volume - Number of Components | 1 | 0.00 % |

### **Rule Name Details & Violation Count**

🡪 Block Name = **RULE\_NAME\_DESCRIPTION** 🡪 Options: **RULID=N** where N indicates the rule Id

|  |  |
| --- | --- |
| Lorem ipsum dolor sit amet, consectetur adipiscing elit (Sed et accumsan felis etiam pharetra semper suscipit) | |
| Description | Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed et accumsan felis. Etiam pharetra semper suscipit. Mauris hendrerit placerat lorem sit amet commodo. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Aliquam erat volutpat. |
| Remediation | Aliquam erat volutpat. Vestibulum quam ante, venenatis at bibendum vitae, viverra eget nulla. Donec pulvinar consequat varius. Morbi eget adipiscing lacus. Sed et libero odio, eget tempus massa. Phasellus venenatis commodo enim eget aliquet. Quisque posuere elit sed nunc aliquam eu ornare elit lacinia. Curabitur luctus, eros id venenatis lacinia, dolor libero tincidunt nibh, eget dapibus orci lectus pellentesque nisl. Ut quis velit est. |

### **Rule Name Details & Violation Count For Top Critical Violations Rules**

🡪 Block Name = **RULE\_NAME\_DESCRIPTION\_TOPCRITVIOL**  
 🡪 Options:

* COUNT=N where N indicate the number of the top N,
* PAR=BC-ID where BC-ID indicate the ID of the business criterion

PAR also supports several business criteria. Multiple business criteria are indicated as a list of BCID separated by “|”, for instance PAR=60011|60012

* IDX=i where i indicates the index of the specific rule wanted, for instance

i=0 🡪 1st rule

i=1 🡪 2nd rule

i=3 🡪 3rd rule…

|  |  |
| --- | --- |
| Rules Descriptions for Top Critical Violations for Business Criterion | |
| Rule Name | Lorem ipsum dolor sit amet, consectetur adipiscing elit (Sed et accumsan felis etiam pharetra semper suscipit) |
| Description | Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed et accumsan felis. Etiam pharetra semper suscipit. Mauris hendrerit placerat lorem sit amet commodo. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Aliquam erat volutpat. |
| Remediation | Aliquam erat volutpat. Vestibulum quam ante, venenatis at bibendum vitae, viverra eget nulla. Donec pulvinar consequat varius. Morbi eget adipiscing lacus. Sed et libero odio, eget tempus massa. Phasellus venenatis commodo enim eget aliquet. Quisque posuere elit sed nunc aliquam eu ornare elit lacinia. Curabitur luctus, eros id venenatis lacinia, dolor libero tincidunt nibh, eget dapibus orci lectus pellentesque nisl. Ut quis velit est. |

### **List of artefacts with violations to business criteria**

🡪 Block Name = **METRIC\_TOP\_ARTEFACT** 🡪 Options:

* **COUNT=N** where N indicate the number of the top N,
* **PAR=BC-ID** where BC-ID indicate the ID of the business criterion

**PAR** also supports several business criteria. Multiple business criteria are indicated as a list of BCID separated by “|”, for instance PAR=60011|60012

* **IDX=i** where i indicates the index of the specific rule wanted, for instance

i=0 🡪 1st rule

i=1 🡪 2nd rule

i=3 🡪 3rd rule…

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

|  |  |
| --- | --- |
| Rules Descriptions for Top Critical Violations for Business Criterion | # of # |
| C:\SRC\MODULE\artefact1.cs |  |
| C:\SRC\MODULE\artefact2.cs |  |
| C:\SRC\MODULE\artefact3.cs |  |

### **How to link the two previous blocks**

🡪 Block Name = RULE\_NAME\_DESCRIPTION\_TOPCRITVIOL  
 🡪 Block Name = METRIC\_TOP\_ARTEFACT  
 🡪 Options:

* COUNT=N where N indicate the number of the top N,
* PAR=BC-ID where BC-ID indicate the ID of the business criterion

PAR also supports several business criteria. Multiple business criteria are indicated as a list of BCID separated by “|”, for instance PAR=60011|60012

* IDX=i where i indicates the index of the specific rule wanted, for instance

i=0 🡪 1st rule

i=1 🡪 2nd rule

i=3 🡪 3rd rule…

|  |  |
| --- | --- |
| Rules Descriptions for Top Critical Violations for Business Criterion | |
| Rule Name | Lorem ipsum dolor sit amet, consectetur adipiscing elit (Sed et accumsan felis etiam pharetra semper suscipit) |
| Description | Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed et accumsan felis. Etiam pharetra semper suscipit. Mauris hendrerit placerat lorem sit amet commodo. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Aliquam erat volutpat. |
| Remediation | Aliquam erat volutpat. Vestibulum quam ante, venenatis at bibendum vitae, viverra eget nulla. Donec pulvinar consequat varius. Morbi eget adipiscing lacus. Sed et libero odio, eget tempus massa. Phasellus venenatis commodo enim eget aliquet. Quisque posuere elit sed nunc aliquam eu ornare elit lacinia. Curabitur luctus, eros id venenatis lacinia, dolor libero tincidunt nibh, eget dapibus orci lectus pellentesque nisl. Ut quis velit est. |

|  |  |
| --- | --- |
| Rules Descriptions for Top Critical Violations for Business Criterion | # of # |
| C:\SRC\MODULE\artefact1.cs |  |
| C:\SRC\MODULE\artefact2.cs |  |
| C:\SRC\MODULE\artefact3.cs |  |

### **List of rules by Technical Criteria**

🡪 Block Name = **TECHNICAL\_CRITERIA\_RULES** 🡪 Options :  
 - **CNT=N** where N indicates the shown rule number; if this item missed, no   
limitation will be applied  
 - **TCID=N** where N indicates the technical criterion Id  
 - **BZID=N** where N indicates the business criterion Id  
 🡪 Behavior : if no new violation appeared on rule, rule description is not loaded.

|  |  |  |
| --- | --- | --- |
| Rule | Desc. | # Violations |
| Rule1 | Desc1 | 1 |
| Rule2 | Desc2 | 2 |
| Rule3 | Desc3 | 3 |

### **Top riskiest transactions**

🡪 Block Name = **TOP\_RISKIEST\_TRANSACTIONS** 🡪 Options:  
 - **SRC=PERF**|**ROB**|**SEC** : indicates the transaction type where top riskiest transactions will be searched   
 - **COUNT=N** where N indicates the top N number ; default value = 10

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

|  |  |
| --- | --- |
| Artefact name | TwRI |
| Artefact one | Twri value 1 |
| Artefact two | Twri value 2 |

### **Top riskiest components**

🡪 Block Name = **TOP\_RISKIEST\_COMPONENTS** 🡪 Options :  
 - **SRC= PERF| ROB|SEC** : indicates the searched business criterion type  
 - **MOD=N** where N indicates the searched result will be applied on the module identified by this Id, and on the entire snapshot if this value isn’t indicated  
 - **COUNT=N** where N indicates the top N number ; default value = 10

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

|  |  |
| --- | --- |
| Artefact name | PRI |
| Artefact one | PRI value 1 |
| Artefact two | PRI value 2 |

### **Action Plans**

🡪 Block Name = **ACTION\_PLANS** 🡪 Options: noneNote : This component is only relevant on an engineering database. It is empty on an analytics database.

|  |  |  |
| --- | --- | --- |
| Rule | Still Violation (#) | New Violation (#) |
| Rule | 1 | 1 |
| Rule | 2 | 2 |
| Rule | 3 | 3 |
| Rule | 4 | 4 |
| Rule | 5 | 5 |
| Rule | 6 | 6 |
| Rule | 7 | 7 |
| Rule | 8 | 8 |
| Rule | 9 | 9 |
| Rule | 10 | 10 |

### **Cast Complexity**

🡪 Block Name = **CAST\_COMPLEXITY** 🡪 Options: none This component is only relevant on an engineering database.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Cast complexity | Current total | Previous total | Evol. | Evol. % | % on total elements |
| Low | A2 | A1 | A2-A1 | (A2-A1)/A1 | 100\*A2/(A2+B2+C2+D2) |
| Average | B2 | B1 | B2-B1 | (B2-B1)/B1 | 100\*B2/(A2+B2+C2+D2) |
| High | C2 | C1 | C2-C1 | (C2-C1)/C1 | 100\*C2/(A2+B2+C2+D2) |
| Very High | D2 | D1 | D2-D1 | (D2-D1)/D1 | 100\*D2/(A2+B2+C2+D2) |

### **Cast Distribution**

🡪 Block Name = **CAST\_DISTRIBUTION** 🡪 Options:

* ***PAR=ID*** where ID is the distribution ID
* ***MODULES****=Y or N (N by default) to list all the modules*
* ***TECHNOLOGIES****=Y or N (N by default) to list all the technologies*

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Distribution | Current total | Previous total | Evol. | Evol. % | % on total elements |
| Low | A2 | A1 | A2-A1 | (A2-A1)/A1 | 100\*A2/(A2+B2+C2+D2) |
| Average | B2 | B1 | B2-B1 | (B2-B1)/B1 | 100\*B2/(A2+B2+C2+D2) |
| High | C2 | C1 | C2-C1 | (C2-C1)/C1 | 100\*C2/(A2+B2+C2+D2) |
| Very High | D2 | D1 | D2-D1 | (D2-D1)/D1 | 100\*D2/(A2+B2+C2+D2) |

### **Cast High and Very High Complexity**

🡪 Block Name = **CAST\_HIGH\_COMPLEXITY** 🡪 Options: none This component is only relevant on an engineering database.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cast complexity | Current total | Previous total | Evol. | % on total elements |
| High and Very High Complexity | C2+D2 | C1+D1 | (C2+D2)-(C1+D1) | 100\*(C2+D2)/(A2+B2+C2+D2) |

### **Cast High and Very High Distribution**

🡪 Block Name = **CAST\_HIGH\_DISTRIBUTION** 🡪 Options: ***PAR*=*ID*** where ID is the distribution ID

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cyclomatic Complexity Distribution | Current total | Previous total | Evol. | % on total elements |
| High and Very High Complexity | C2+D2 | C1+D1 | (C2+D2)-(C1+D1) | 100\*(C2+D2)/(A2+B2+C2+D2) |

### **Module list**

🡪 Block Name = **MODULE\_LIST** 🡪 Options: HEADER=SHORT (here HEADER=SHORT) Indicates that short headers will be shown, obviously long headers will be shown

|  |
| --- |
| Modules |
| My Module 1 |
| Their Module 2 |

### **TQI: Technical Quality Index grade & evolution**

🡪 Block Name = **TQI** 🡪 Options: None

|  |  |  |
| --- | --- | --- |
| Statisticss | Current | Previous |
| - | **-** | **-** |

### **TQI by module**

🡪 Block Name = **TQI\_BY\_MODULE**🡪 Options: **HEADER=SHORT** (here HEADER=SHORT) Indicates that short headers will be shown, obviously long headers will be shown

|  |  |  |  |
| --- | --- | --- | --- |
| Module | Current QI | Previous QI | Variation |
| Module | - | - | - |
| Module | - | - | - |
| Module | - | - | - |
| Module | - | - | - |

### **Complexity with violations: Statistics about Artifacts – CAST Complexity & Violations**

🡪 Block Name = **CAST\_COMPLEXITY\_WITH\_VIOL**🡪 Options: **HEADER=SHORT** (here HEADER=SHORT) Indicates that short headers will be shown, obviously long headers will be shown

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

|  |  |  |
| --- | --- | --- |
| Module | Artifacts | W/violations |
| Externe | - | - |
| High |  | - |
| Average | - | - |
| Low | - | - |

### **Critical Violations by Module, header can be changed (short, long)**

🡪 Block Name = **CRITICAL\_VIOL\_BY\_MODULE**  
 🡪 Options: **HEADER=SHORT** (indicates that short headers will be shown, obviously long header will be shown)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | TQI | Robu | Efcy | Secu | Trans | Chang |
| Curr. Vers |  |  |  |  |  |  |
| Module 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Module 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Module 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Module 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
|  |  |  |  |  |  |  |
| Prev. Vers |  |  |  |  |  |  |
| Module 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Module 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Module 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Module 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
|  |  |  |  |  |  |  |
| Variation |  |  |  |  |  |  |
| Module 1 | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % |
| Module 2 | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % |
| Module 3 | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % |
| Module 4 | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % | 0.00 % |

### **Compliance to Objectives**

🡪 Block Name = **COMPLIANCE\_TO\_OBJ\_TABLE**🡪 Options: **HEADER=SHORT** (here HEADER=SHORT) Indicates that short headers will be shown, obviously long headers will be shown

**Compliance to objectives. This component is based on:**

* **Objectives – list of critical rules**
* **Achievement : if there is 0 violation for a critical rule**
* **Achievement ratio: # critical rules with 0 viol. / # critical rules**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Module | Objectives | Achievement | Achievement ratio | |
| Entire Application (whole code) | - | -- | | - |
| Last Delivery (new and modified) | - | - | | - |

### **Technical debt (If selected « previous snapshot » in Report Generator interface is not the n-1 version, results will sum the Technical Debt Added and removed) – Deprecated (old Cast formula)**

🡪 Block Name = **TECHNICAL\_DEBT**🡪 Options: **HEADER=SHORT** (here HEADER=SHORT) Indicates that short headers will be shown, obviously long headers will be shown

|  |  |
| --- | --- |
| Name | Value |
| Technical debt | - |
| Technical Debt added | - |
| Echnical Debt removed | - |

### **OMG Technical debt (based on a scope of rules)**

🡪 Block Name = **OMG\_TECHNICAL\_DEBT\_TABLE**🡪 Options:

* **ID**:AIP|CISQ|ISO (by default or if nothing selected, ISO)
* **SNAPSHOT**:CURRENT|PREVIOUS (by default or if nothing, CURRENT)
* **HEADER:SHORT** (here HEADER=SHORT) Indicates that short headers will be shown, obviously long headers will be shown

|  |  |
| --- | --- |
| Name | Value |
| Technical debt (Days) | - |
| Technical Debt added (Days) | - |
| Echnical Debt removed (Days) | - |

Notes:  
- ISO option is the recommended technical debt to be used. Requires installation of OMG Technical Debt Measure (>2.0.0 funcrel) and ISO-5055 Index extensions during analysis  
- CISQ option required installation of OMG Technical Debt Measure and CISQ Index extensions during analysis. Scope of rules is reduced

### **OMG Technical debt Information on contributing TC**

🡪 Block Name = **OMG\_TECHNICAL\_DEBT\_DETAILS\_TABLE**🡪 Options:

* **ID**:AIP|CISQ|ISO (by default or if nothing selected, ISO)
* **SNAPSHOT**:CURRENT|PREVIOUS (by default or if nothing, CURRENT)

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Technical Debt (Days) | Technical Debt Added (Days) | Technical Debt Removed (Days) |
| TC1 | - | - | - |
| TC2 | - | - | - |
| TC3 | - | - | - |

Notes:  
- ISO option is the recommended technical debt to be used. Requires installation of OMG Technical Debt Measure (>2.0.0 funcrel) and ISO-5055 Index extensions during analysis  
- CISQ option required installation of OMG Technical Debt Measure and CISQ Index extensions during analysis. Scope of rules is reduced  
- If a TC has no omg technical debt, it will not be displayed in the table  
- This component can also display the list of rules for a TC (for that you can put the ID of the TC instead of AIP/CISQ or ISO)

### **List of All Versions**

🡪 Block Name = **LIST\_OF\_ALL\_VERSIONS** 🡪 Options: **COUNT=N** where N indicate the number of the top N (no limit by default: all versions will be shown)

|  |  |
| --- | --- |
| Version | Date |
| V3 | 1/1/2015 |
| V2 | 1/1/2014 |
| V1 | 1/1/2013 |

### **Critical Violations by Application**

🡪 Block Name = **CRITICAL\_VIOL\_BY\_APPLICATION** 🡪 Options:

* **HEADER=SHORT** (by default HEADER=SHORT)
* **SHOW\_PREVIOUS=1** (by default SHOW\_PREVIOUS=0)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | TQI | Robu. | Efcy | Secu. | Trans. | Chng. |
| Version actuelle | 0 | 0 | 0 | 0 | 0 | 0 |
| Ajoutées | +0 | +0 | +0 | +0 | +0 | +0 |
| Supprimées | -0 | -0 | -0 | -0 | -0 | -0 |

### **IFPUG Functions**

🡪 Block Name = **IFPUG\_FUNCTIONS** 🡪 Options:

* **COUNT=N** where N indicate the number of the top N (default value is all rows)
* **TYPE=T** where T is ‘TF’ for transactional functions, or ‘DF’ for data functions. If TYPE is not present (default), both types will be displayed
* **PREVIOUS=YES|NO** to display the AFP value for previous snapshot (no by default)
* **ZERO**=YES|NO to display the function with 0 AFP (yes by default)

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Element Type | Object Name | AFP | FP Details | Object Type | Nom du module | Technology |
| Data Function | Object Name | 7 | DET: 1, RET: 1, ILF: 7 (Internal) | NodeJS Mongoose model | Module | HTML5 |

### **Violation Summary per application or modules**

The following block provides violation information (grades, counts, compliance ratios…) for critical and/or non-critical rules, for the whole application or per module

[This block is configured from the Alt text description field or the table properties]

🡪 Block Name = **VIOLATION\_SUMMARY**🡪 Options:  
 - **MODULES=1|0** to display violations for the whole application (=0 by default) or per modules (=1)  
 - **CRITICAL=1|0** to include critical violations (=1 by default) or not (=0)  
 - **NONCRITICAL=1|0** to include the non-critical violations (=1) or not (=0 by default)  
 - **GRADE=1|0** to show (=1 by default) or hide (=0) the “Grade” column - **TOTAL=1|0** to show (=1 by default) or hide (=0) the “Total Checks” column  
 - **FAILED=1|0** to show (=1) or hide (=0 by default) the “Failed Checks” column  
 - **SUCCESSFUL=1|0** to show (=1) or hide (=0 by default) the “Successful Checks” column  
 - **ADDEDREMOVED=1|0** to show (=1) or hide (=0 by default) the “Added” and “Removed” columns  
 - **COMPLIANCE=1|0** to show (=1) or hide (=0 by default) the “Compliance Ratio” column

- **COUNT**=-1|N to display only N results, or all results if -1 (5 by default)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rule Name | Grade | #Violations | Added | Removed | Critical |
| Rule 1 | 2.9 | 432 | 3 | 1 | X |
| Rule 2 | 3.0 | 21 | 2 | 1 | X |
| Rule 3 | 3.1 | 1 | 1 | 0 | X |

### **List of violations for a quality rule**

🡪 Block Name = **QUALITY\_RULE\_VIOLATIONS** 🡪 Options :  
 - **BCID=** The Id of the business criterion. If this id correspond to efficiency (60014), robustness (60013), or security (60016), the propagatedRiskIndex is displayed. By default, BCID = 60013  
 - **ID=** The Id of the quality rule for which you want to display the list of violations. By default, ID=7788 (Avoid empty catch block)  
 - **COUNT=N** where N indicates the top N number ; default value = 10

- **NAME=FULL|SHORT** to display short name or full name of objects (full name by default)

- **SNAPSHOT=CURRENT|PREVIOUS** to select from which snapshot we take results; default is Current

If there is no previous snapshot, column Status is not displayed

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

|  |  |  |
| --- | --- | --- |
| Object name | PRI | Status |
| Artefact one | PRI value 1 | updated |
| Artefact two | PRI value 2 | added |

### **List of violations in action plan**

🡪 Block Name = **ACTION\_PLAN\_VIOLATIONS** 🡪 Options :  
 - **COUNT=N|ALL** where N indicates the top N number ; default value = 10 (ALL for all violations)

- **NAME=FULL|SHORT** to display short name or full name of objects (full name by default)

- **FILTER=ADDED|SOLVED|PENDING|ALL** to filter the list by the remedial action status; default is ALL

- **TAG**=YES|NO, to display the priority using tag or priority (tag by default as this is this value that is set in ED)

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rule Name | Object name | Comment | Priority | Status | Last Updated |
| Rule 1 | Artefact one | Comment 1 | Low | updated | 01/01/2010 |
| Rule 2 | Artefact two | Comment 2 | Extreme | added | 02/02/2012 |

### **List of violations for health factor**

🡪 Block Name = **VIOLATIONS\_LIST** 🡪 Options :  
 - **BCID=** list of ids of business criterion, separated by | : **60011|60012|60013|60014|60016|60017** one or several ; default value = 60016 (Security)

- **COUNT=N|ALL** where N indicates the top N number ; default value = 10 (ALL for all violations)

- **NAME=FULL|SHORT** to display short name or full name of objects (full name by default)

- **FILTER=ADDED|UNCHANGED|UPDATED|ALL** to filter the list by the violation status; default is ALL

- **VIOLATIONS=CRITICAL|ALL** by default, only CRITICAL violations are listed

-  **MODULE=ModuleName**, parameter used to restrict the list for one module, by default violation are listed for the application

- **TECHNOLOGIES=techno1|techno2**, parameter used to restrict the list of violations, by default all technologies

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Violation Status | PRI | Exclusion Status | Action Status | Rule Name | Business Criterion | Object Name | Object Status |
| Added | **1,236** | n/a | Pending | Rule 1 | Security | Object 1 | updated |
| Unchanged | **12** | Added | n/a | Rule 2 | Security | Object 2 | unchanged |

### **Mapping Name/ Id indicator**

The following block provides numbers to use for ID values.

🡪 Block Name = **ID\_NAME\_INDICATOR\_MAPPING**

|  |  |
| --- | --- |
| Name | Id |
| TechnicalQualityIndex | 60017 |
| Security | 60016 |
| Robustness | 60013 |
| Performance | 60014 |
| Changeability | 60012 |
| Transferability | 60011 |
| ProgrammingPractices | 66031 |
| ArchitecturalDesign | 66032 |
| Documentation | 66033 |
| SEIMaintainability | 60015 |
| CostComplexityDistribution | 67001 |
| CyclomaticComplexityDistribution | 65501 |
| OOComplexityDistribution | 65701 |
| SQLComplexityDistribution | 65801 |
| CouplingDistribution | 65350 |
| ClassFanOutDistribution | 66020 |
| ClassFanInDistribution | 66021 |
| SizeDistribution | 65105 |

### **List of violations for a quality rule with bookmarks**

🡪 Block Name = **QUALITY\_RULE\_VIOLATIONS\_BOOKMARKS** 🡪 Options :  
 - **ID=** The Id of the quality rule for which you want to display the list of violations. By default, ID=7788 (Avoid empty catch block)  
 - **COUNT=N** where N indicates the top number of violations ; by default 5 (-1 correspond to all violations). All bookmarks from a violation are displayed.

If there is no previous snapshot, status is not displayed

- **DESC**=no|simple|full to display or not the description of the rule. No to not display, simple for only rationale, description and remediation; full for all description fields (rationale, description, remediation, reference, sample, remediation sample, output, associated value, total). No description by default for this component.

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

|  |
| --- |
| Object name |
| Violation #1 |
| …. |

### **List of violations for a list of rules with bookmarks**

🡪 Block Name = **LIST\_RULES\_VIOLATIONS\_BOOKMARKS** 🡪 Options :  
 - **METRICS=**List of metrics id (BC, TC or QR) or quality standards tags separated by ‘|’. It can also be the name for a BC or a shortName for a TC

- **CRITICAL**=true : add this option if you have selected a BC or a TC and want only critical rules to be selected (by default it is false). This option has no effect on selection by QR or quality standard tag.

- **OMG**=true : add this option if you have selected an ISO index and want only rules with omg tech debt to be selected (by default it is false). This option has no effect on selection by QR or quality standard tag.

- **COUNT=N** where N indicates the top number of violations ; by default 5 (-1 correspond to all violations). All bookmarks of a violation are displayed.

- **WITHCODELINES=Y|N** by default (or option not present) source code is displayed, if you don’t want to see it, set this option to N

- **HEADER**=NO to not display headers (useful for excel report when you want to define your own customized headers). By default if option is not present or different from NO, headers are displayed

- **DESC**=no|simple|full to display or not the description of the rule. No to not display, simple for only rationale, description and remediation; full for all description fields (rationale, description, remediation, reference, sample, remediation sample, output, associated value, total). Simple by default for this component.

If there is no previous snapshot, status is not displayed

To use the quality standard tags selection, the Quality Standards Support extension should be installed on the central where the application resides.  
When you select the metric id for a BC or TC, all the QRs belonging to this BC or TC is added for displaying violations.

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

This component exists only for word document. The results would not be readable on powerpoint.

|  |
| --- |
| Object name |
| Violation #1 |
| …. |

### **List of violations statistics by BC, TC or Standard Quality Tag**

🡪 Block Name = **RULES\_LIST\_STATISTICS\_RATIO**

🡪 Options :  
 - **METRICS=**List of metrics id (BC, TC or QR) or quality standards tags separated by ‘|’. It can also be the name for a BC or a shortName for a TC.

- **CRITICAL**=true : add this option if you have selected a BC or a TC and want only critical rules to be selected (by default it is false). This option has no effect on selection by QR or quality standard tag.

- **COMPLIANCE=**true : add this option if you want to display the compliance score column ; by default this column is not displayed.

- **SORTED=**COMPLIANCE : add this option if you want to sort the data by compliance score, from worse to better ; by default the sort of data is from the max number of total violations to the min.

- **LBL=**violations or vulnerabilities (vulnerabilities if not set), this change the headers from Vulnerabilities to Violations

- **EVOLUTION**=true|false. For display of added and removed columns. If not exists, the colums are displayed only if there is a previous snapshot

- **DESC**=true|false. For display rationale, description and remediation of the rule. By default if not present, it is false.

- **HEADER**=NO to not display headers (useful for excel report when you want to define your own customized headers). By default if option is not present or different from NO, headers are displayed

**- NOVIOLATIONS**=true|false to not display rules that do not have violations. By default if option is not present or different from false, it will be true (we display everything)

To use the quality standard tags selection, the Quality Standards Mapping extension should be installed on the central where the application resides.  
When you select the metric id for a BC or TC, all the QRs belonging to this BC or TC is added for displaying violations.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Rule Name | Total Violation | Added Violations | Removed Violations | Compliance Score (%) |
| Rule 1 | 0 | 0 | 0 | 0% |
| Rule 2 | 0 | 0 | 0 | 0% |

### **Evolution of category or tag for a quality standard**

🡪 Block Name = **QUALITY\_STANDARDS\_EVOLUTION**

🡪 Options :  
 - **STD=** Name of the parent quality standard you want the details, for example, CWE-2011-Top25 will list total, added and removed violations for standards CWE-22, CWE-78, CWE-79, CWE-89, CWE-134, CWE-327, CWE-434 and CWE-798. It can take also the name, shortName or ID of a Business Criterion

- **LBL=**violations or vulnerabilities (vulnerabilities if not set), this change the headers from Vulnerabilities to Violations

- **MORE**=true : add this one if you have specified a category in STD and want the evolution of the tags associated to this category (not specified by default)

- **EVOLUTION**=true|false to display added and removed violations columns. By default or if not exists, is true if there is a previous snapshot.

- **HEADER**=NO to not display headers (useful for excel report when you want to define your own customized headers). By default if option is not present or different from NO, headers are displayed

**- NOVIOLATIONS**=true|false to not display rules that do not have violations. By default if option is not present or different from false, it will be true (we display everything)

To use this component, the Quality Standards Mapping extension should be installed on the central where the application resides, with minimum version 20181030.

|  |  |  |  |
| --- | --- | --- | --- |
| CWE-2011-Top 25 | Total Violation | Added Violations | Removed Violations |
| CWE-22 | 0 | 0 | 0 |
| CWE-78 | 0 | 0 | 0 |

### **List of Top components with properties**

🡪 Block Name = **TOP\_COMPONENTS\_BY\_PROPERTIES**

🡪 Options :  
 - **PROP1** = name of first property, cyclomaticComplexity if not exists

- **PROP2** = name of second property, fanOut if not exists

- **ORDER1 =** asc or desc for PROP1, desc by default

- **ORDER2 =** asc or desc for PROP2, desc by default

- **LOWER1 =** components should have prop1 value lower than this value

- **GREATER1 =** components should have prop1 value greater than this value

- **LOWER2 =** components should have prop2 value lower than this value

- **GREATER2 =** components should have prop2 value greater than this value

- **COUNT =** the number of lines to display, 50 by default (-1 or all is not allowed, it will take too much time and paper)

Notes :

* For PROP1 and PROP2, the available values are : codeLines, commentedCodeLines, commentLines, coupling, fanIn, fanOut, cyclomaticComplexity, ratioCommentLinesCodeLines, halsteadProgramLength, halsteadProgramVocabulary, halsteadVolume, distinctOperators, distinctOperands, integrationComplexity, essentialComplexity. If PROP1 and/or PROP2 is not correctly set,list of available values is displayed.
* When using LOWER and GREATER parameters, the ORDER parameter can be overridden to get the most accurate components corresponding to the request. As the filter can be done only after requesting data from the RestAPI, the list can be truncated. So the option NBSET define the number of objects returns from the rest api before the filtering and the limitation of display (COUNT), this option is set to 500 by default, to avoid too long server response time.
* This component is only relevant on an engineering database. It is empty on an analytics database.

|  |  |  |
| --- | --- | --- |
| Object Name | Cyclomatic Complexity | Documentation Ratio |
| Object 1 | 563 | 0 |
| Object 2 | 75 | 0 |

### **List of Rules with largest variation**

🡪 Block Name = **RULES\_LIST\_LARGEST\_VARIATION**

🡪 Options :  
 - **BCID** = name of the BCID to get the rule’s compounded weight (60017 by default)

- **VARIATION** = increase or decrease (decrease by default)

- **DATA =** number or percent (number by default)

- **COUNT =** the number of lines to display, 50 by default (-1 for all rules)

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

The formula are taken from the ones from CED :

|  |  |
| --- | --- |
| Configuration | Formula |
| Decrease number | previous failed checks - current failed checks |
| Decrease percent | current failed checks / current total checks - previous failed checks / previous total checks , display in percentage (\*100) |
| Increase number | current failed checks - previous failed checks |
| Increase percent | previous failed checks / previous total checks - current failed checks / current total checks , display in percentage (\*100) |

|  |  |  |
| --- | --- | --- |
| Weight | Variation | Rule Name |
| 96 | 563 | Rule 1 |
| 42 | 75 | Rule 2 |

### **List of Removed Violations by Business Criterion**

🡪 Block Name = **REMOVED\_VIOLATIONS\_LIST**

🡪 Options :  
 - **BCID** = name of the BCID to get the rule’s compounded weight and to filter results (60017 by default)

- **COUNT =** the number of lines to display, 50 by default (-1 for all removed violations)

- **CRITICITY =** c for only critical violations, nc for only non critical violations, all for critical and non critical violations (all by default if not configured)

Note : This component is only relevant on an engineering database. It is empty on an

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Violation status | Exclusion status | Action status | Rule Name | Weight | Object Name | Object Status |
| Corrected | n/a | Added | Rule 1 | 100 | MyMethod1 | updated |
| Disappeared | Added | n/a | Rule 2 | 72 | MyClass2 | deleted |

### **List of added, deleted or updated components in application, module or technology**

🡪 Block Name = **DELTA\_COMPONENTS\_LIST\_BY\_STATUS**

🡪 Options :

- **STATUS** = status of the components to display, “added”, “deleted” or “updated”, “added” by default

- **COUNT =** the number of lines to display, 10 by default (-1 for all components)

- **MODULE** = <module\_name> if you want to filter components by module

- **TECHNOLOGY** = <technology\_name> if you want to filter components by technology

- **COMPLEXITY** = to choose between “low”, “moderate”,”high” or “very high” if you want to filter by complexity (all by default)

- **CURRENT** = first snapshot name for the comparison if different from the current selected snapshot

- **PREVIOUS** = second snapshot name for the comparison if different from the previous selected snapshot

Notes :

This component is only relevant on an engineering database. It is empty on an analytics database.  
By default (without options), the list displayed the top ten added components for the application, between current and previous snapshots.

If module and technology are set in the same time, they will not be taken into account and list will be displayed for entire application

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Object name | Complexity | SQL Complexity | Granularity | Lack of comments | Coupling | Number of object updates | Object full name |
| Object 1 | Low risk | Moderate risk | High risk | Very high risk | Low risk | 0 | Object 1 full name |
| Objec 2 | High risk | Very high risk | High risk | Low risk | Low risk | 0 | Object 2 full name |

### **List of AEFP**

🡪 Block Name = **AEFP\_LIST**

🡪 Options :  
 - **TYPE** = type of the function to display, DF for data function, TF for transactions, by default both are listed

- **STATUS** = status of the function to display, ADDED, MODIFIED or DELETED, all statuses by default

- **COUNT =** the number of lines to display, 10 by default (-1 for all functions)

- **PREVIOUS**=YES|NO to display the AEP value for previous snapshot (no by default)

* **ZERO**=YES|NO to display the function with 0 AEP (yes by default)

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Element Type | Function Name | Object Name | AEP | Complexity Factor | Updated Artifacts | Object Type | Module Name | Technology |
| Added Data Function AEFP | Function 1 | Object 1 | 1 | 2 | - | Type 1 | Module 1 | Techno 1 |
| Modified Transactional AEFP | Function 2 | Object 2 | 1 | 3 | 2 | Type 2 | Module 2 | Techno 2 |

### **List of AETP**

🡪 Block Name = **AETP\_LIST**

🡪 Options :

- **COUNT =** the number of lines to display, 10 by default (-1 for all functions)

- **FORMAT** = The number of decimals for effort complexity, ratio and AETP count (N2 for 2 decimals, N5 for 5 decimals), by default N2.

Note : This component is only relevant on an engineering database. It is empty on an analytics database.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Object Name | Object full name | Oject Type | Status | Effort complexity | Equivalence ratio | AEP |
| Object 1 | Object1 full name | Object 1 type | Added | 0 | 0 | 0 |
| Object 2 | Object 2 full name | Object 2 type | Updated | 0 | 0 | 0 |

### **Evolution of CAST rules associated to a quality standard category**

🡪 Block Name = **QUALITY\_TAGS\_RULES\_EVOLUTION**

🡪 Options :  
 - **STD=** Name of the quality standard category, or BC name, or BC id, for which you want the details per tag or TC, for example, STIG-V4R8-CAT1 will list total, added and removed violations for cast rules associated to all tags belonged to category STIG-V4R8-CAT1.

- **LBL=**violations or vulnerabilities (vulnerabilities if not set), this change the headers from Vulnerabilities to Violations

- **DESC**=true|false. For display rationale, description and remediation of the rule. By default if not present, it is false

- **HEADER**=NO to not display headers (useful for excel report when you want to define your own customized headers). By default if option is not present or different from NO, headers are displayed

- **NOVIOLATIONS**=true|false to not display rules and TC that do not have violations. By default if option is not present or different from false, it will be true (we display everything)

To use this component, the following extensions should be installed : Quality standards mapping extension >= 20240212.0.0-funcrel;CISQ index extension >= 20240201.0.0-funcrel;ISO-5055 index extension >= 20240202;Security Standards extension >= 20240209.0.0-funcrel.

| STIG-V4R8 | Total Vulnerabilities | Added Vulnerabilities | Removed Vulnerabilities |
| --- | --- | --- | --- |
| STIG-V-70207 The application must destroy the session ID value and/or cookie on logoff or browser close. | 0 | 0 | 1 |
| Ensure that HTTP Session is invalidated during logout | 0 | 0 | 1 |
| STIG-V-70245 The application must protect the confidentiality and integrity of transmitted information. | 4 | 0 | 0 |
| Avoid mixing trusted and untrusted data in HTTP requests | 0 | 0 | 0 |
| Avoid providing password in Web Service URL | 0 | 0 | 0 |

### **List of quality tags applicability by quality standard category**

🡪 Block Name = **LIST\_TAGS\_DOC\_BYCAT**

🡪 Options :  
 - **CAT=** Id of the standard quality category, for example, STIG-V4R8-CAT1, or a list separated by ‘|’

To use this component, the Quality Standards Mapping extension should be installed on the central where the application resides, with minimum version 20190909.

| Standard Quality Tag | Definition | Applicability |
| --- | --- | --- |
| STIG-V-70207 | The application must destroy the session ID value and/or cookie on logoff or browser close. | true |
| STIG-V-70245 | The application must protect the confidentiality and integrity of transmitted information. | false |

### **List of violations in action plan, with bookmarks**

🡪 Block Name = **ACTION\_PLAN\_BOOKMARKS**

🡪 Options :  
 - **COUNT=** number of violations to display, 10 by default or if not set, ALL for displaying all the violations in action plan

- **FILTER=** added | solved | pending| all to filter the violations by their status (all by default)

Note : This component is only relevant on an engineering database. It is empty on an analytics database. This component is only relevant for word document. The results would not be readable on powerpoint or excel

|  |
| --- |
| Violations in action plan |
| Violation #1 |
| …. |

### **Evolution of OMG Technical Debt**

🡪 Block Name = **OMG\_TECHNICAL\_DEBT\_EVOLUTION**

🡪 Options :  
 - **ID=**ISO or CISQ

- **MORE**=true : add this one if you want to get the BC attached to ISO or CISQ with their contributors (if false or not specified you will directly have the contributors for the ID)

- **EVOLUTION**=true|false to display added and removed technical debt columns. By default or if not exists, is true if there is a previous snapshot.

- **HEADER**=NO to not display headers (useful for excel report when you want to define your own customized headers). By default if option is not present or different from NO, headers are displayed

Requires installation of OMG Technical Debt Measure (>2.0.0 funcrel) (and ISO-5055 Index extensions and/or CISQ Index extensions).

ISO option is the recommended technical debt to be used. Requires installation of OMG Technical Debt Measure (>2.0.0 funcrel) and ISO-5055 Index extensions during analysis

CISQ option required installation of OMG Technical Debt Measure and CISQ Index extensions during analysis. Scope of rules is reduced

|  |  |  |  |
| --- | --- | --- | --- |
| ISO | Technical Debt (Days) | Technical Debt Added (Days) | Technical Debt Removed (Days) |
| ISO-5055-Security | 0 | 0 | 0 |
| CWE-78 | 0 | 0 | 0 |

### **Evolution of quality rules associated to ISO-5055 or CISQ indexes regarding the OMG Technical Debt**

🡪 Block Name = **OMG\_TECHNICAL\_DEBT\_RULES\_EVOLUTION**

🡪 Options :  
 - **ID=**name of index, like ‘ISO-5055-Security’

- **DESC**=true : add this one if you want to display the rules descriptions (false by default)

- **HEADER**=NO to not display headers (useful for excel report when you want to define your own customized headers). By default if option is not present or different from NO, headers are displayed

Requires installation of OMG Technical Debt Measure (>2.0.0 funcrel) (and ISO-5055 Index extensions and/or CISQ Index extensions).

ISO option is the recommended technical debt to be used. Requires installation of OMG Technical Debt Measure (>2.0.0 funcrel) and ISO-5055 Index extensions during analysis

CISQ option required installation of OMG Technical Debt Measure and CISQ Index extensions during analysis. Scope of rules is reduced

|  |  |  |  |
| --- | --- | --- | --- |
| ISO | Technical Debt (Days) | Technical Debt Added (Days) | Technical Debt Removed (Days) |
| ISO-5055-Security | 0 | 0 | 0 |
| CWE-78 | 0 | 0 | 0 |