

Generic components in Report Generator 1.22

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Generic Tables for Application Mode

Axis and Values

Axis	Values
SNAPSHOTS	CURRENT, PREVIOUS, EVOL, EVOL_PERCENT, ALL
METRICS	<ID>, HEALTH_FACTOR, BUSINESS_CRITERIA, TECHNICAL_CRITERIA, QUALITY_RULES, CRITICAL_QUALITY_RULES, FUNCTIONAL_WEIGHT, TECHNICAL_SIZING, VIOLATION, CRITICAL_VIOLATION, TECHNICAL_DEBT (deprecated), RUN_TIME, <STANDARD_TAG_NAME> (1)
MODULES	<NAME>, ALL
TECHNOLOGIES	<NAME>, ALL
VIOLATIONS (2)	TOTAL, ADDED, REMOVED, ALL
CRITICAL_VIOLATIONS (2)	TOTAL, ADDED, REMOVED, ALL
CUSTOM_EXPRESSIONS	<EXPRESSIONS>(3)
OMG_TECHNICAL_DEBT (4)	TOTAL, ADDED, REMOVED, ALL – New in 1.22.0



- (1): The selection of metrics by standard quality tag name should only be used for an application where the extension **Quality Standards Mapping** is installed. If not, no metrics will be selected and the table will be empty.
- (2): To get results on violations or critical violations on a specific metric, add the axis "METRICS=M" where M is a metric id referenced in the Assessment Model.
- (3): in this axis, you can configure custom expressions as we do in the other components based on (cf sample 12)
 - CUSTOM_EXPRESSIONS=a/b|c/d=a/b|(c+d)/2, (operators can be +, -, *, /, (,), list of custom expressions separated by |
 - PARAMS=SZ a SZ b QR c QR d, (SZ for sizing measure or category - since 1.17, QR for quality rule, BF for background fact)
 - a=MetricId, (sample 67211 – all violations)
 - b=MetricId, (sample 10151 – number of code lines)
 - c = MetricId, 60013 for Robustness
 - d = MetricId, 60014 for Efficiency
 - FORMAT=N0 | N2 (N2 by default, if nothing or erroneous format is set), the first format is associated to the first custom expression,...
- (4):
 - Requires installation of OMG Technical Debt Measure (>2.0.0 funcrel) (and ISO-5055 Index extensions and/or CISQ Index extensions)
 - To get results on Omg Technical Debt on a specific metric, add the axis "METRICS=M" where M is a index id (ISO, CISQ or AIP)

Table Structure

- COL 1: (1st axis of information, mandatory)
- COL 11: (2nd axis of information, optional)
- ROW 1: (1st axis of information, mandatory)
- ROW 11: (2nd axis of information, optional)

	COL1 value 1- COL11 value1	COL1 value1 - COL11 value2	COL1 value2 - COL11 value 1	COL1 value2 - COL11 value 2
ROW1 value 1				
ROW11 value 1				
ROW11 value 2				
ROW1 value 2				
ROW11 value 1				
ROW11 value 2				

Alt Text configuration

```
TABLE;GENERIC_TABLE;COL1=A, COL11=B, ROW1=C, ROW11=D, A=a, B=b, C=c | d, D=e | f | g
```

- where A,B,C and D are one of the axis above
- and a, b, c, d, e, f, g is one or multiple tags of the axis

Notes



- **No space can be left** on the configuration (except if your module or technology contains it).
- **MODULES**: if no information filled, then default value is "ALL"
- **TECHNOLOGIES**: if no information filled, then default value is "ALL"
- **SNAPSHOTS**: When a snapshot is displayed in a table, we display "Snapshot Name -Snapshot version". if no information filled, then default value is "ALL"
- **VIOLATIONS**: if no information filled, then default value is "ALL"
- **CRITICAL_VIOLATIONS**: if no information filled, then default value is "ALL"
- **METRICS**: if no information filled, then default value is "HEALTH_FACTOR"
- **OMG_TECHNICAL_DEBT**: if no information filled, then default value is "ALL"

Samples

SAMPLE 1

Simple table to get Efficiency, TQI, Robustness scores for current snapshot only

TABLE ; GENERIC_TABLE ; COL1=METRICS , ROW1=SNAPSHOTS , METRICS=60014 | 60017 | 60013 , SNAPSHOTS=CURRENT

Snapshots	Efficiency	Total Quality Index	Robustness
ADGAutoSnap_Dream Team_4 - 4	2.33	2.20	2.10

SAMPLE 2

Simple table to get Efficiency, TQI, Robustness scores for current and previous snapshot

TABLE ; GENERIC_TABLE ; COL1=METRICS , ROW1=SNAPSHOTS , METRICS=60014 | 60017 | 60013 , SNAPSHOTS=CURRENT | PREVIOUS

Snapshots	Efficiency	Total Quality Index	Robustness
ADGAutoSnap_Dream Team_4 - 4	2.33	2.20	2.10
ADGAutoSnap_Dream Team_3 - 3	2.33	2.21	2.11

SAMPLE 3

Simple table to get all Health Factors scores for current and previous snapshot and their evolution

TABLE ; GENERIC_TABLE ; COL1=METRICS , ROW1=SNAPSHOTS , METRICS=HEALTH_FACTOR , SNAPSHOTS=ALL

Snapshots	Transferability	Changeability	Robustness	Efficiency	Security
ADGAutoSnap_Dream Team_4 - 4	2.67	2.04	2.10	2.33	1.97
ADGAutoSnap_Dream Team_3 - 3	2.68	2.06	2.11	2.33	1.96
Evolution	-0.01	-0.02	-0.01	0.00	0.01
% Evolution	-0.28 %	-1.01 %	-0.43 %	0 %	+0.33 %

SAMPLE 4

Table to get all Health Factors scores to benchmark modules for current and then previous snapshot

TABLE ; GENERIC_TABLE ; COL1=METRICS , ROW1=SNAPSHOTS , ROW11=MODULES , METRICS=HEALTH_FACTOR , SNAPSHOTS=CURRENT | PREVIOUS , MODULES=ALL

Snapshots	Transferability	Changeability	Robustness	Efficiency	Security
ADGAutoSnap_Dream Team_4 - 4					
Adg	2.79	2.31	2.20	2.33	1.77
Central	n/a	n/a	n/a	n/a	n/a
DssAdmin	3.00	3.20	3.39	3.28	3.45
Pchit	2.87	2.55	3.15	2.50	2.87
ADGAutoSnap_Dream Team_3 - 3					
Adg	2.80	2.32	2.20	2.33	1.77
Central	n/a	n/a	n/a	n/a	n/a
DssAdmin	3.00	3.20	3.39	3.28	3.45
Pchit	2.80	2.65	3.24	2.38	2.82

SAMPLE 5

Table to get all Health Factors scores to monitor modules regarding current and previous snapshot

```
TABLE ; GENERIC_TABLE ; COL1=METRICS , ROW1=MODULES , ROW11=SNAPSHOTS , METRICS=HEALTH_FACTOR , SNAPSHOTS=CURRENT | PREVIOUS ,  
MODULES=ALL
```

Modules		Transferability	Changeability	Robustness	Efficiency	Security
Adg						
ADGAutoSnap_Dream	Team - 4	2.79	2.31	2.20	2.33	1.77
ADGAutoSnap_Dream	Team - 3	2.80	2.32	2.20	2.33	1.77
Central						
ADGAutoSnap_Dream	Team - 4	n/a	n/a	n/a	n/a	n/a
ADGAutoSnap_Dream	Team - 3	n/a	n/a	n/a	n/a	n/a
DssAdmin						
ADGAutoSnap_Dream	Team - 4	3.00	3.20	3.39	3.28	3.45
ADGAutoSnap_Dream	Team - 3	3.00	3.20	3.39	3.28	3.45
Pchit						
ADGAutoSnap_Dream	Team - 4	2.87	2.55	3.15	2.50	2.87
ADGAutoSnap_Dream	Team - 3	2.80	2.65	3.24	2.38	2.82

SAMPLE 6

Table to get all Health Factors critical violations numbers with risk introduced regarding previous snapshot

```
TABLE ; GENERIC_TABLE ; COL1=METRICS , ROW1=CRITICAL_VIOLATIONS , METRICS=HEALTH_FACTOR , CRITICAL_VIOLATIONS =ALL ,  
SNAPSHOTS=CURRENT
```

Critical Violations	Transferability	Changeability	Robustness	Efficiency	Security
Total Critical Violations	38	158	222	139	245
Added Critical Violations	0	6	3	10	3
Removed Critical Violations	0	0	0	10	0

SAMPLE 7

Table to benchmark module on Health Factors critical violations numbers with risk introduced regarding previous snapshot

```
TABLE ; GENERIC_TABLE ; COL1=METRICS , ROW1=CRITICAL_VIOLATIONS , ROW11=MODULES , METRICS=HEALTH_FACTOR ,  
CRITICAL_VIOLATIONS =ALL , MODULES=ALL , SNAPSHOTS=CURRENT
```

Critical Violations	Transferability	Changeability	Robustness	Efficiency	Security
Total Critical Violations					
Adg	37	153	216	126	235
Central	0	0	0	0	0
DssAdmin	0	0	0	4	4
Pchit	1	5	6	9	6
Added Critical Violations					
Adg	0	3	3	7	3
Central	0	0	0	0	0
DssAdmin	0	0	0	0	0
Pchit	0	3	0	3	0
Removed Critical Violations					
Adg	0	0	0	9	0
Central	0	0	0	0	0
DssAdmin	0	0	0	0	0
Pchit	0	0	0	1	0

SAMPLE 8

Table to monitor technologies on added and removed critical violations for Health Factors

```
TABLE ; GENERIC_TABLE ; COL1=METRICS , ROW1=TECHNOLOGIES , ROW11=CRITICAL_VIOLATIONS , METRICS=HEALTH_FACTOR ,
CRITICAL_VIOLATIONS =ADDED|REMOVED , TECHNOLOGIES=ALL , SNAPSHOTS=CURRENT
```

Technologies	Transferability	Changeability	Robustness	Efficiency	Security
.NET					
Added Critical Violations	0	3	0	3	0
Removed Critical Violations	0	0	0	1	0
C++					
Added Critical Violations	0	0	0	0	0
Removed Critical Violations	0	0	0	0	0
JEE					
Added Critical Violations	0	3	3	7	3
Removed Critical Violations	0	0	0	9	0
PL/SQL					
Added Critical Violations	0	0	0	0	0
Removed Critical Violations	0	0	0	0	0

SAMPLE 9

Table to monitor sizing information regarding previous snapshot

```
TABLE ; GENERIC_TABLE ; COL1=SNAPSHOTS , ROW1=METRICS , METRICS=TECHNICAL_SIZING , SNAPSHOTS=CURRENT | PREVIOUS
```

Metrics	ADGAutoSnap_Dream Team_4 - 4	ADGAutoSnap_Dream Team_3 - 3
Number of Comment Lines	7,412	7,239
Number of Commented-out Code Lines	1,529	1,603
Number of Code Lines	70,296	66,585
Number of Artifacts	5,748	5,600
Number of Files	485	461
Number of Classes	482	458
Number of Programs	0	0
Number of Forms	0	0
Number of SQL Artifacts	0	0
Number of WEB Pages	1	1
Number of Interfaces	86	85
Number of Methods	6,039	5,891
Number of Functions	77	77
Number of Tables	0	0
Number of Views	0	0
Number of Triggers	0	0
Number of Packages	55	54
Number of Events	0	0
Number of Macros	329	329

SAMPLE 10

Table to monitor specific sizing metrics with evolution regarding previous snapshot

```
TABLE ;GENERIC_TABLE ;COL1=SNAPSHOTS ,ROW1=METRICS ,METRICS=10151 | 10107 | 10152 | 10154 | 10161 ,SNAPSHOTS=ALL
```

Metrics	ADGAutoSnap_Dream Team_4 - 4	ADGAutoSnap_Dream Team_3 - 3	Evolution	% Evolution
Number of Code Lines	70,296	66,585	3,711	+5.57 %
Number of Comment Lines	7,412	7,239	173	+2.39 %
Number of Artifacts	5,748	5,600	148	+2.64 %
Number of Files	485	461	24	+5.21 %
Number of Methods	6,039	5,891	148	+2.51 %

SAMPLE 11

Table to monitor quality standard violations evolution

```
TABLE ;GENERIC_TABLE ;COL1=VIOLATIONS ,ROW1=METRICS ,METRICS=CWE ,VIOLATIONS=ALL
```



The selection of metrics by standard quality tag name should only be used for an application where the extension **Quality Standards Mapping** is installed. If not, no metrics will be selected and the table will be empty.

Metrics	Total Violations	Added Violations	Removed Violations
Pages should use error handling page (2232)	6	0	2
Avoid using 'java.System.exit()' (4600)	1	0	0
Avoid using native Methods (JNI) (4612)	0	0	0
Proper overriding of 'clone()' (4614)	0	0	0
Proper overriding of 'finalize()' (4616)	0	0	0
Avoid using 'System.err' and 'System.out' within a try catch block (4696)	0	0	0
Avoid using 'System.err' and 'System.out' outside a try catch block (4698)	3	0	0
.....			

SAMPLE 12

Table to monitor custom expressions. The following configuration will give for each module the average grade of 2 business criteria and a ratio between sizing metrics

```
TABLE;GENERIC_TABLE;COL1=CUSTOM_EXPRESSIONS,ROW1=MODULES,SNAPSHOTS=CURRENT,CUSTOM_EXPRESSIONS=(a+b)/2|c/d,PARAMS=QR a QR b SZ c SZ d,a=60013,b=60014,c=67211,d=10151,MODULES=ALL
```

Modules	(a+b)/2	c/d
aip-backup-services_b75262a6/cmsapi/main_sources content	3.40	0.62
aip-central-dto_602e2fa9/cmsapi/main_sources content	3.82	1.02
aip-central-services_b37e7c84/cmsapi/main_sources content	3.27	0.64
aip-console-app_c94043b/cmsapi/main_sources content	3.22	0.64
aip-console-dto_75185a3/cmsapi/main_sources content	3.80	0.75
aip-console-services_ae094f49/cmsapi/main_sources content	3.08	0.72

SAMPLE 13

Table to monitor omg technical debt. The following configuration will give for each module the iso technical debt total, added and removed

```
TABLE;GENERIC_TABLE;COL1=OMG_TECHNICAL_DEBT,ROW1=MODULES,SNAPSHOTS=CURRENT,OMG_TECHNICAL_DEBT=ALL,MODULES=ALL
```

Modules	Technical Debt (Days)	Technical Debt Added (Days)	Technical Debt Removed (Days)
AUTO-UA-SQL_3d4b1a7e/QaStdSecu/main_sources content	5.9	0.0	0.0
HTML5_c1c5a25/QaStdSecu/main_sources content	1.7	0.0	0.0
JspBookDemo_a0efdda2/QaStdSecu/main_sources content	16.1	0.0	0.0
spring-boot-jwt_7178e641/QaStdSecu/main_sources content	2.1	0.0	0.0

Generic Graph for Application Mode

The Graph component is built based on a table structure. The idea is to fill data into the table of the graph to populate it automatically. The table structure is the same as the Generic table component.

Axis and Values

Axis	Values
SNAPSHOTS	CURRENT, PREVIOUS, EVOL, EVOL_PERCENT, ALL
METRICS	<ID>, HEALTH_FACTOR, BUSINESS_CRITERIA, TECHNICAL_CRITERIA, QUALITY_RULES, CRITICAL_QUALITY_RULES, FUNCTIONAL_WEIGHT, TECHNICAL_SIZING, VIOLATION, CRITICAL_VIOLATION, TECHNICAL_DEBT (deprecated) , RUN_TIME, <STANDARD_TAG_NAME> (1)
MODULES	<NAME>, ALL
TECHNOLOGIES	<NAME>, ALL
VIOLATIONS (2)	TOTAL, ADDED, REMOVED, ALL
CRITICAL_VIOLATIONS (2)	TOTAL, ADDED, REMOVED, ALL
CUSTOM_EXPRESSIONS	<EXPRESSIONS>(3) Updated in 1.17
OMG_TECHNICAL_DEBT (4)	TOTAL, ADDED, REMOVED, ALL – New in 1.22.0



- (1): The selection of metrics by standard quality tag name should only be used for an application where the extension **Quality Standards Mapping** is installed. If not, no metrics will be selected and the graph will be empty.
- (2): To get results on violations or critical violations on a specific metric, add the axis "METRICS=M" where M is a metric id referenced in the Assessment Model (see stacked bar sample)
- (3): in this axis, you can configure custom expressions as we do in the other components based on
 - CUSTOM_EXPRESSIONS=a/b|c/d=a/b|(c+d)/2, (operators can be +, -, *, /, (,)), list of custom expressions separated by |
 - PARAMS=SZ a SZ b QR c QR d, (SZ for sizing measure or category - since 1.17, QR for quality rule, BF for background fact)
 - a=MetricId, (sample 67211 – all violations)
 - b=MetricId, (sample 10151 – number of code lines)
 - c = MetricId, 60013 for Robustness
 - d = MetricId, 60014 for Efficiency
 - FORMAT=N0 | N2 (N2 by default, if nothing or erroneous format is set), the first format is associated to the first custom expression,...
- (4):
 - Requires installation of OMG Technical Debt Measure (>2.0.0 funcrel) (and ISO-5055 Index extensions and/or CISQ Index extensions)
 - To get results on Omg Technical Debt on a specific metric, add the axis "METRICS=M" where M is a index id (ISO, CISQ or AIP)

Table Structure

- COL 1: (1st axis of information, mandatory)
- COL 11: (2nd axis of information, optional)
- ROW 1: (1st axis of information, mandatory)
- ROW 11: (2nd axis of information, optional)

	COL1 value 1- COL11 value1	COL1 value1 - COL11 value2	COL1 value2 - COL11 value 1	COL1 value2 - COL11 value 2
ROW1 value 1				
ROW11 value 1				
ROW11 value 2				

ROW1 value 2				
ROW11 value 1				
ROW11 value 2				

Alt Text configuration

```
TABLE;GENERIC_TABLE;COL1=A, COL11=B, ROW1=C, ROW11=D, A=a, B=b, C=c | d, D=e | f | g
```

- where A,B,C and D are one of the axis above
- and a, b, c, d, e, f, g is one or multiple tags of the axis

Notes

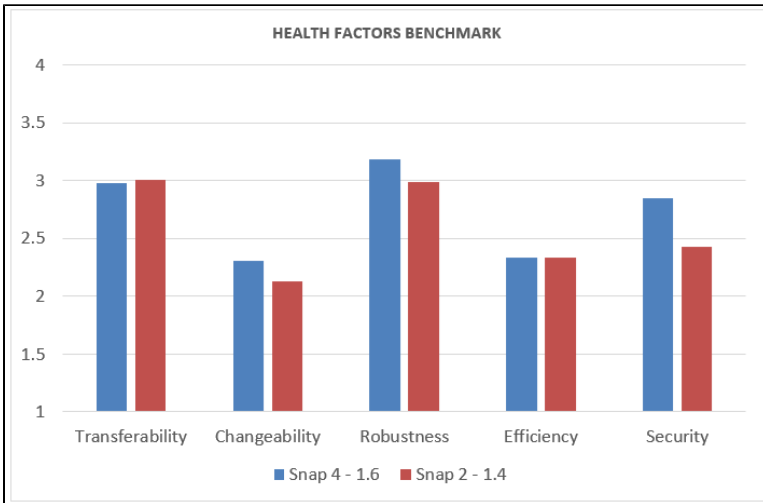


- **No space can be left** on the configuration (except if your module or technology contains it).
- **MODULES**: if no information filled, then default value is "ALL"
- **TECHNOLOGIES**: if no information filled, then default value is "ALL"
- **SNAPSHOTS**: When a snapshot is displayed in a table, we display "Snapshot Name - Snapshot version". if no information filled, then default value is "ALL"
- **VIOLATIONS**: if no information filled, then default value is "ALL"
- **CRITICAL_VIOLATIONS**: if no information filled, then default value is "ALL"
- **METRICS**: if no information filled, then default value is "HEALTH_FACTOR"
- **OMG_TECHNICAL_DEBT**: if no information filled, then default value is "ALL"

Samples

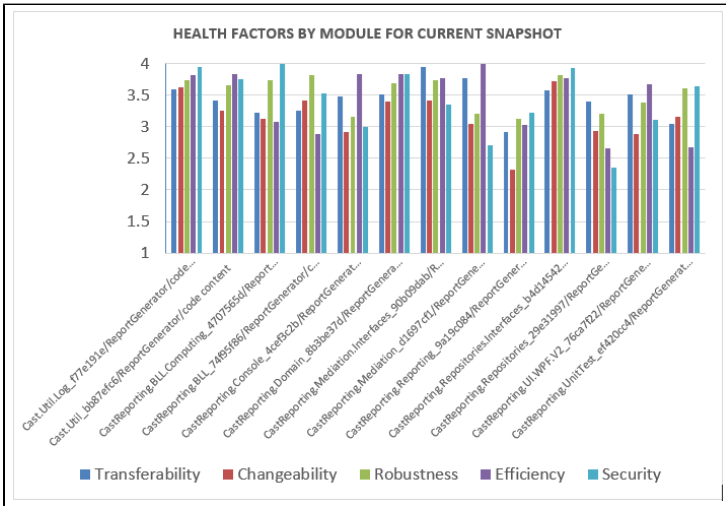
SAMPLE 1 - clustered column graph

```
GRAPH;GENERIC_GRAPH;COL1=SNAPSHOTS, ROW1=METRICS, METRICS=HEALTH_FACTOR, SNAPSHOTS=CURRENT | PREVIOUS
```



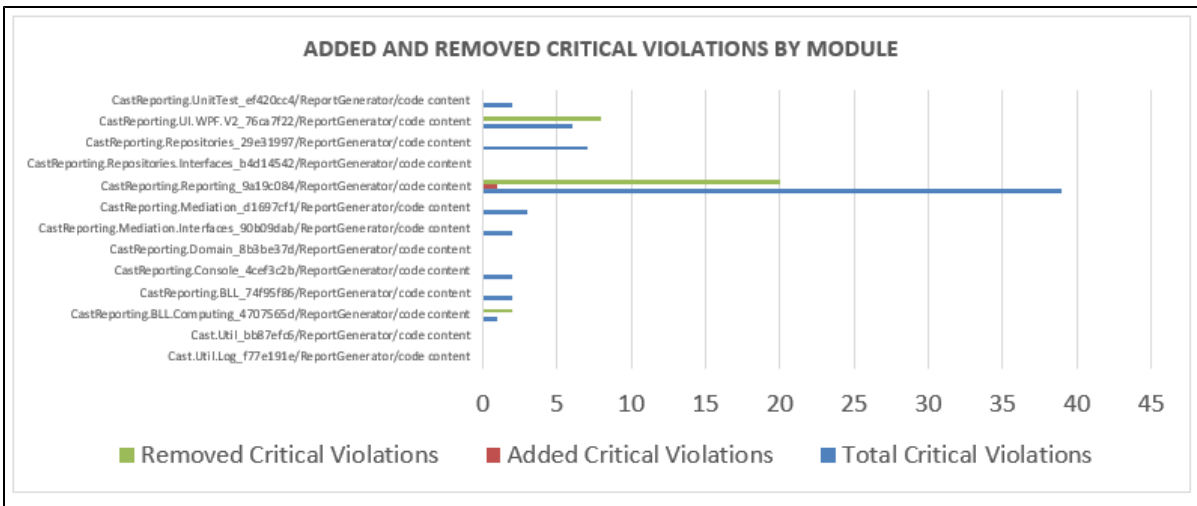
SAMPLE 2 - clustered column graph

```
GRAPH;GENERIC_GRAPH;COL1=METRICS, ROW1=MODULES, METRICS=HEALTH_FACTOR
```



SAMPLE 3 - Stacked Bar

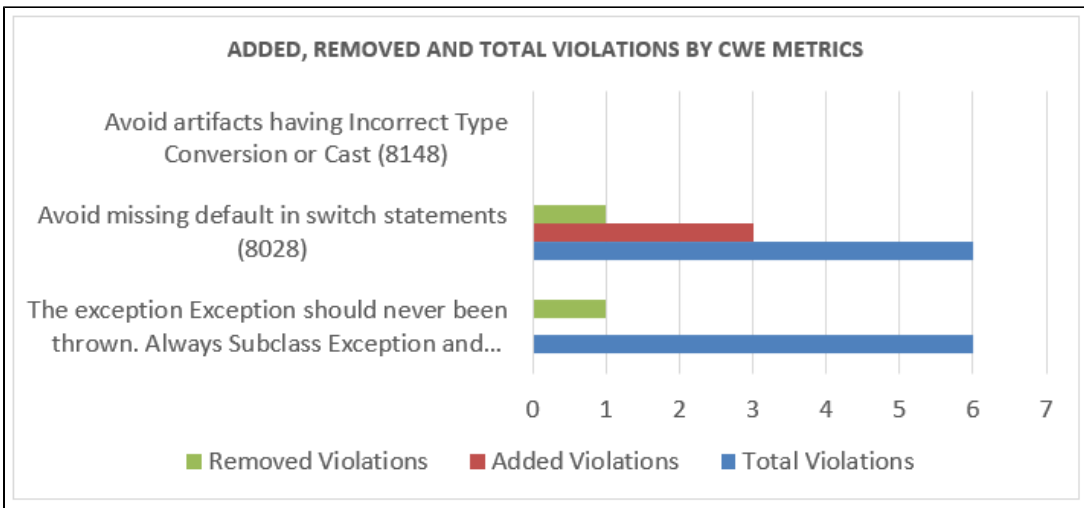
GRAPH:GENERIC_GRAPH;COL1=CRITICAL_VIOLATIONS,ROW1=MODULES,MODULES=ALL,CRITICAL_VIOLATIONS=ALL,METRICS=60017



SAMPLE 4 - Stacked Bar sample A with Standard Quality Rules

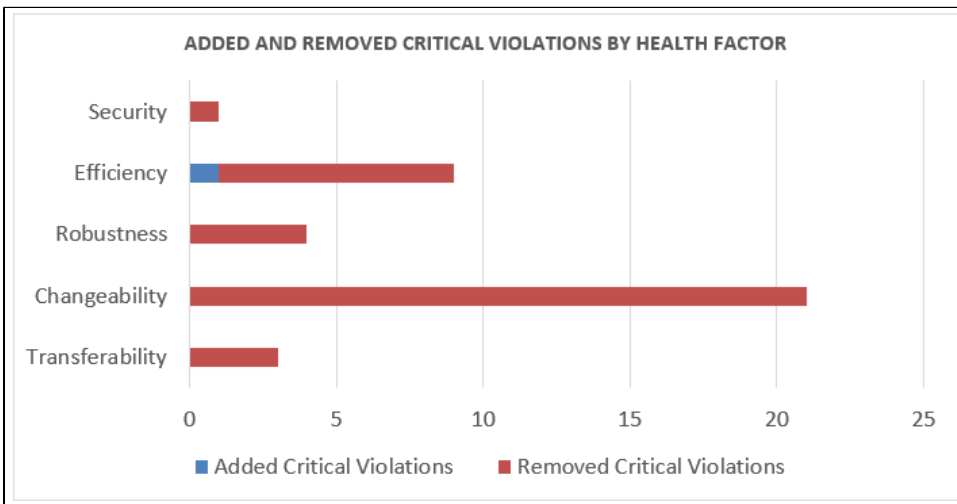
GRAPH:GENERIC_GRAPH;COL1=VIOLATIONS,ROW1=METRICS,VIOLATIONS=ALL,METRICS=CWE;

i The selection of metrics by standard quality tag name should only be used for an application where the extension **Quality Standards Mapping** is installed. If not, no metrics will be selected and the graph will be empty.



SAMPLE 5 - Stacked Bar sample B

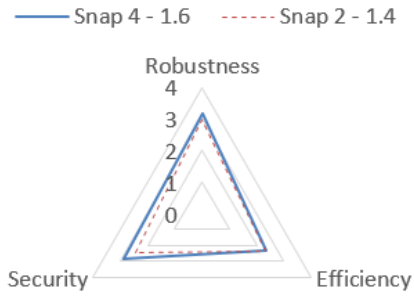
```
GRAPH:GENERIC_GRAPH;COL1=CRITICAL_VIOLATIONS,ROW1=METRICS,METRICS=HEALTH_FACTOR,CRITICAL_VIOLATIONS=ADDED|REMOVED
```



SAMPLE 6 - Radar chart

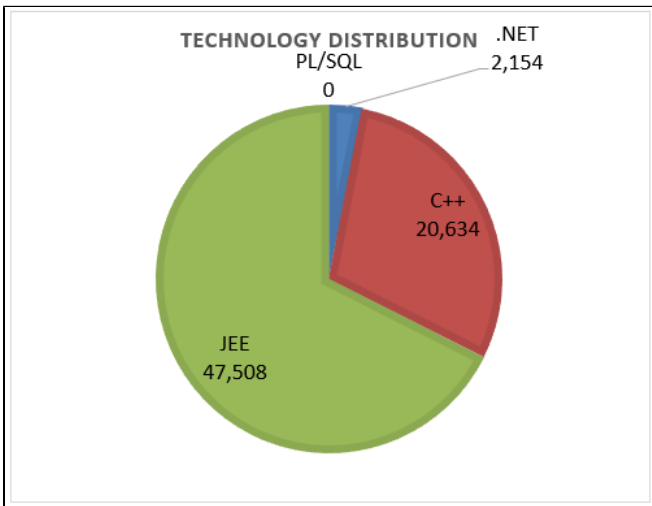
```
GRAPH:GENERIC_GRAPH;COL1=SNAPSHOTS,ROW1=METRICS,METRICS=60013|60014|60016,SNAPSHOTS=CURRENT|PREVIOUS
```

RISK FACTORS BENCHMARK FOR 2 LAST SNAPSHOTS

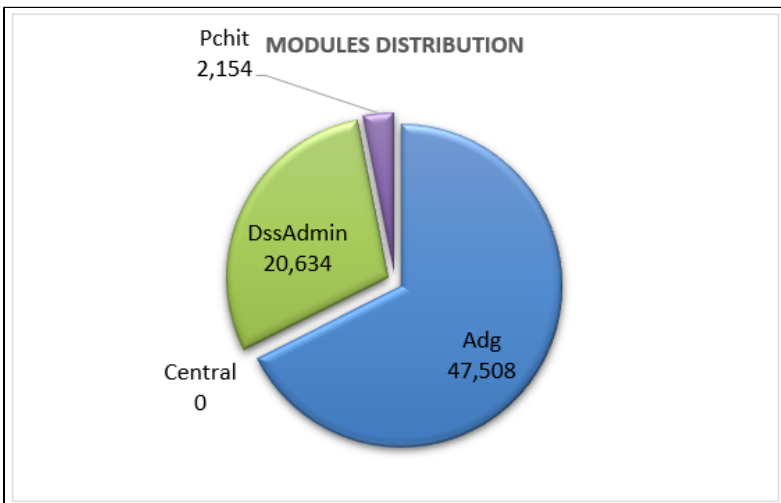


SAMPLE 7 - Pie chart

GRAPH/GENERIC_GRAPH;ROW1=TECHNOLOGIES, COL1=METRICS, TECHNOLOGIES=ALL, METRICS=10151

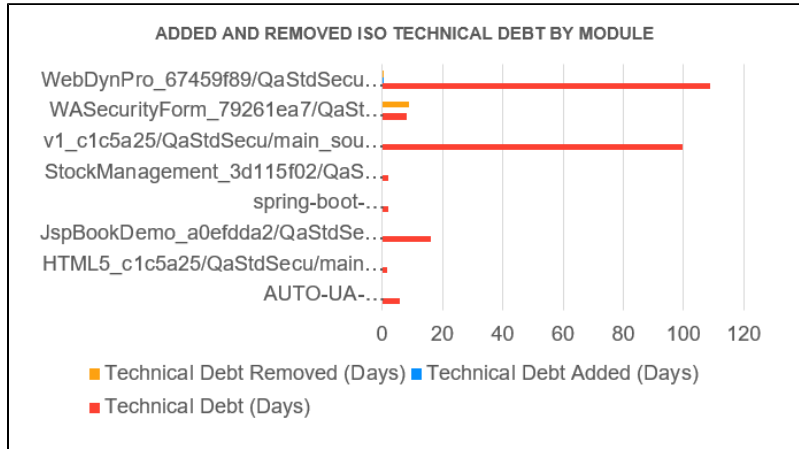


GRAPH/GENERIC_GRAPH;ROW1=MODULES, COL1=METRICS, MODULES=ALL, METRICS=10151



SAMPLE 8 - Stacked Bar

GRAPH:GENERIC_GRAPH;COL1=OMG_TECHNICAL_DEBT,ROW1=MODULES,MODULES=ALL,OMG_TECHNICAL_DEBT=ALL,METRICS=ISO



Generic Tables for Portfolio Mode

Axis and Values

Axis	Values
METRICS	<ID>, HEALTH_FACTOR, BUSINESS_CRITERIA, TECHNICAL_CRITERIA, QUALITY_RULES, CRITICAL_QUALITY_RULES, FUNCTIONAL_WEIGHT, TECHNICAL_SIZING, VIOLATION, CRITICAL_VIOLATION, TECHNICAL_DEBT (deprecated) , RUN_TIME
APPLICATIONS	<NAME>, ALL, EACH
TECHNOLOGIES	<NAME>, EACH
VIOLATIONS (1)	TOTAL, ADDED, REMOVED, ALL
CRITICAL_VIOLATIONS (1)	TOTAL, ADDED, REMOVED, ALL
CUSTOM_EXPRESSIONS	<EXPRESSIONS>(2)
OMG_TECHNICAL_DEBT (3)	TOTAL, ADDED, REMOVED, ALL – New in 1.22.0



(1): To get results on violations or critical violations on a specific metric, add the axis "METRICS=M" where M is a metric id referenced in the Assessment Model.

(2): in this axis, you can configure custom expressions as we do in the other components based on

- CUSTOM_EXPRESSIONS=a/b|c/d=a/b|(c+d)/2, (operators can be +, -, *, /, (,)), list of custom expressions separated by |
- PARAMS=SZ a SZ b QR c QR d, (SZ for sizing measure, QR for quality rule, BF for background fact)
- a=MetricId, (sample 67211 – all violations)
- b=MetricId, (sample 10151 – number of code lines)
- c = MetricId, 60013 for Robustness
- d = MetricId, 60014 for Efficiency
- FORMAT=N0 | N2 (N2 by default, if nothing or erroneous format is set), the first format is associated to the first custom expression,...

(3):

- Requires installation of OMG Technical Debt Measure (>2.0.0 funcnel) (and ISO-5055 Index extensions and/or CISQ Index extensions)
- To get results on Omg Technical Debt on a specific metric, add the axis "METRICS=M" where M is a index id (ISO, CISQ or AIP)

Table Structure

- COL 1: (1st axis of information, mandatory)
- COL 11: (2nd axis of information, optional)
- ROW 1: (1st axis of information, mandatory)
- ROW 11: (2nd axis of information, optional)

	COL1 value 1- COL11 value1	COL1 value1 - COL11 value2	COL1 value2 - COL11 value 1	COL1 value2 - COL11 value 2
ROW1 value 1				
ROW11 value 1				
ROW11 value 2				
ROW1 value 2				
ROW11 value 1				
ROW11 value 2				

Alt Text configuration

```
TABLE:GENERIC_TABLE;COL1=A,COL11=B,ROW1=C,ROW11=D,A=a,B=b,C=c|d,D=e|f|g,AGGREGATORS=SUM|AVERAGE
```

- where A,B,C and D are one of the axis above
- and a, b, c, d, e, f, g is one or multiple tags of the axis
- AGGREGATORS: AVERAGE or SUM for each item in METRICS list (optional, only needed if default selection does not fit, cf Notes)

Notes



- No space can be left on the configuration (except if your application name or technology contains it).
- **APPLICATIONS**: if no information filled, then default value is "ALL"
- **VIOLATIONS**: if no information filled, then default value is "ALL"
- **CRITICAL_VIOLATIONS**: if no information filled, then default value is "ALL"
- **METRICS**: if no information filled, then default value is "HEALTH_FACTOR". a parameter AGGREGATORS should be added, containing the list of AGGREGATORS (must be AVG or SUM) corresponding to the list of METRICS. For example, if METRICS=60017|68001|66024 then AGGREGATORS=AVERAGE|SUM|AVERAGE. For groups, you can precise METRICS=HEALTH_FACTOR|TECHNICAL_SIZING then AGGREGATORS=AVERAGE|SUM. By default if no information filled, AVERAGE will be affected for quality indicators and SUM for sizing or background facts metrics
- **TECHNOLOGIES**: if no information filled, then default value is "EACH"
- **OMG_TECHNICAL_DEBT**: if no information filled, then default value is "ALL"

Samples

SAMPLE 1

Table to get all Health Factors scores to benchmark applications results (for last snapshot of each app)

```
TABLE;PF_GENERIC_TABLE;ROW1= APPLICATIONS, COL1=METRICS, METRICS=HEALTH_FACTOR, APPLICATIONS=EACH
```

Applications	Transferability	Changeability	Robustness	Efficiency	Security
AEDAADConso	2.94	3.10	3.11	1.84	3.08
ReportGenerator	2.97	2.30	3.19	2.33	2.86

SAMPLE 2

Table to get critical violations results (total and delta) between last and previous snapshot of each application

```
TABLE;PF_GENERIC_TABLE;ROW1=APPLICATIONS, COL1=CRITICAL_VIOLATIONS, CRITICAL_VIOLATIONS =ALL, APPLICATIONS=EACH
```

Applications	Total Critical Violations	Added Critical Violations	Removed Critical Violations
AEDAADConso	505	31	1
ReportGenerator	59	3	0

SAMPLE 3

Table to benchmark applications for added critical violations by Health Factor between last and previous snapshot of each app

```
TABLE;PF_GENERIC_TABLE;COL1=METRICS, ROW1=CRITICAL_VIOLATIONS, ROW11=APPLICATIONS, METRICS=HEALTH_FACTOR, CRITICAL_VIOLATIONS =ADDED, APPLICATIONS=EACH
```

Critical Violations	Transferability	Changeability	Robustness	Efficiency	Security
Added Critical Violations					
AEDAADConso	0	0	0	31	6
ReportGenerator	0	0	0	3	0

SAMPLE 4

Table to benchmark sizing information at portfolio level regarding last snapshot results of each applications in the scope

```
TABLE;PF_GENERIC_TABLE;COL1=APPLICATIONS, ROW1=METRICS, METRICS=TECHNICAL_SIZING, APPLICATIONS=ALL, AGGREGATORS=SUM
```

Metrics	2 Applications
Number of Comment Lines	11,743
Number of Commented-out Code Lines	80
Number of Code Lines	100,605
Number of Artifacts	3,000
Number of Files	771
Number of Classes	436
Number of Programs	0
Number of Forms	0
Number of SQL Artifacts	587
Number of WEB Pages	133

SAMPLE 5

Table to monitor specific sizing metrics for each technology

```
TABLE;PF_GENERIC_TABLE;COL1=TECHNOLOGIES,ROW1=METRICS,METRICS=10151|10107|10152|10154|10161,AGGREGATORS=SUM,TECHNOLOGIES=EACH
```

Metrics	HTML5	JEE	SQL	.NET
Number of Code Lines	29,465	9,699	26,718	34,723
Number of Comment Lines	2,998	1,251	0	7,494
Number of Artifacts	456	421	587	1,536
Number of Files	150	36	2	583
Number of Methods	0	421	0	1,534

SAMPLE 6

Table to monitor technologies results by Health Factor for last snapshot of each app

```
TABLE;PF_GENERIC_TABLE;COL1=METRICS,ROW1=TECHNOLOGIES,METRICS=HEALTH_FACTOR,TECHNOLOGIES=EACH
```

Technologies	Transferability	Changeability	Robustness	Efficiency	Security
HTML5	3.08	3.12	3.50	4.00	4.00
JEE	2.85	3.25	3.16	2.34	3.16
SQL	3.09	2.71	3.01	1.63	2.75
.NET	2.97	2.30	3.19	2.33	2.86

SAMPLE 7

Table to get specific metrics (here Lines of Code) by application and by technology

```
TABLE;PF_GENERIC_TABLE;COL1=TECHNOLOGIES,ROW1=APPLICATIONS,TECHNOLOGIES=EACH,APPLICATIONS=EACH,METRICS=10151
```


	HTML5	JEE	SQL	.NET
AEDAADConso	29,465	9,699	26,718	n/a
ReportGenerator	n/a	n/a	n/a	34,723

SAMPLE 8

Table to get specific custom expressions by application

```
TABLE;PF_GENERIC_TABLE;COL1=CUSTOM_EXPRESSIONS,ROW1=APPLICATIONS,APPLICATIONS=EACH,CUSTOM_EXPRESSIONS=a/b|(c+d)/2,PARAMS=SZ a SZ b QR c QR d,a=67211,b=10151,c=60012,d=60013
```

Applications	a/b	(c+d)/2
APO	0.10	3.31
AppliCobol	0.02	2.28

SAMPLE with ISO Technical Debt

Table to get ISO Technical Debt evolution by application

```
TABLE;PF_GENERIC_TABLE;COL1=OMG_TECHNICAL_DEBT,ROW1=APPLICATIONS,METRICS=ISO,OMG_TECHNICAL_DEBT=ALL,APPLICATIONS=EACH
```

Applications	Technical Debt (Days)	Technical Debt Added (Days)	Technical Debt Removed (Days)
Aspidiske	n/a	n/a	n/a
cmsapi	844.8	844.8	0.0
eCommerce	3,718.2	144.3	150.6
EMS	2,150.9	2,150.9	0.0
QaStdSecu	244.3	0.2	10.6

ISO option is the recommended technical debt to be used. Requires installation of OMG Technical Debt Measure (>2.0.0 funcnel) 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

Generic Graph for Portfolio Mode

A Graph component is built based on a table structure. The idea is to fill data into the table of the graph to populate it automatically. The table structure is the same as the Generic table component.

Axis and Values

Axis	Values
METRICS	<ID>, HEALTH_FACTOR, BUSINESS_CRITERIA, TECHNICAL_CRITERIA, QUALITY_RULES, CRITICAL_QUALITY_RULES, FUNCTIONAL_WEIGHT, TECHNICAL_SIZING, VIOLATION, CRITICAL_VIOLATION, TECHNICAL_DEBT (deprecated) , RUN_TIME
APPLICATIONS	<NAME>, ALL, EACH
TECHNOLOGIES	<NAME>, EACH

VIOLATIONS (1)	TOTAL, ADDED, REMOVED, ALL
CRITICAL_VIOLATIONS (1)	TOTAL, ADDED, REMOVED, ALL
CUSTOM_EXPRESSIONS	<EXPRESSIONS>(2)
OMG_TECHNICAL_DEBT (3)	TOTAL, ADDED, REMOVED, ALL – New in 1.22.0



(1): To get results on violations or critical violations on a specific metric, add the axis "METRICS=M" where M is a metric id referenced in the Assessment Model.

(2): in this axis, you can configure custom expressions as we do in the other components based on

- CUSTOM_EXPRESSIONS=a/b|c/d=a/b|(c+d)/2, (operators can be +, -, *, /, (,)), list of custom expressions separated by |
- PARAMS=SZ a SZ b QR c QR d, (SZ for sizing measure, QR for quality rule, BF for background fact)
- a=MetricId, (sample 67211 – all violations)
- b=MetricId, (sample 10151 – number of code lines)
- c = MetricId, 60013 for Robustness
- d = MetricId, 60014 for Efficiency
- FORMAT=N0 | N2 (N2 by default, if nothing or erroneous format is set), the first format is associated to the first custom expression,...

(3):

- Requires installation of OMG Technical Debt Measure (>2.0.0 funcrel) (and ISO-5055 Index extensions and/or CISQ Index extensions)
- To get results on Omg Technical Debt on a specific metric, add the axis "METRICS=M" where M is a index id (ISO, CISQ or AIP)

Table Structure

- COL 1: (1st axis of information, mandatory)
- COL 11: (2nd axis of information, optional)
- ROW 1: (1st axis of information, mandatory)
- ROW 11: (2nd axis of information, optional)

	COL1 value 1- COL11 value1	COL1 value1 - COL11 value2	COL1 value2 - COL11 value 1	COL1 value2 - COL11 value 2
ROW1 value 1				
ROW11 value 1				
ROW11 value 2				
ROW1 value 2				
ROW11 value 1				
ROW11 value 2				

Alt Text configuration

```
TABLE;GENERIC_TABLE;COL1=A, COL11=B, ROW1=C, ROW11=D, A=a, B=b, C=c | d, D=e | f | g, AGGREGATORS=SUM | AVERAGE
```

- where A,B,C and D are one of the axis above
- and a, b, c, d, e, f, g is one or multiple tags of the axis
- AGGREGATORS : AVERAGE or SUM for each item in METRICS list (optional, only needed if default selection does not fit, cf Notes)

Notes

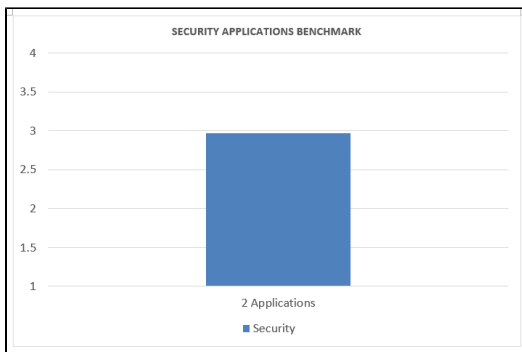


- No space can be left on the configuration (except if your application name or technology contains it).
- **APPLICATIONS:** if no information filled, then default value is "ALL"
- **VIOLATIONS:** if no information filled, then default value is "ALL"
- **CRITICAL_VIOLATIONS:** if no information filled, then default value is "ALL"
- **METRICS:** if no information filled, then default value is "HEALTH_FACTOR". a parameter AGGREGATORS should be added, containing the list of AGGREGATORS (must be AVG or SUM) corresponding to the list of METRICS. For example, if METRICS=60017|68001|66024 then AGGREGATORS=AVERAGE|SUM|AVERAGE. For groups, you can precise METRICS=HEALTH_FACTOR|TECHNICAL_SIZING then AGGREGATORS=AVERAGE|SUM. By default if no information filled, AVERAGE will be affected for quality indicators and SUM for sizing or background facts metrics
- **TECHNOLOGIES:** if no information filled, then default value is "EACH"
- **OMG_TECHNICAL_DEBT:** if no information filled, then default value is "ALL"

Samples

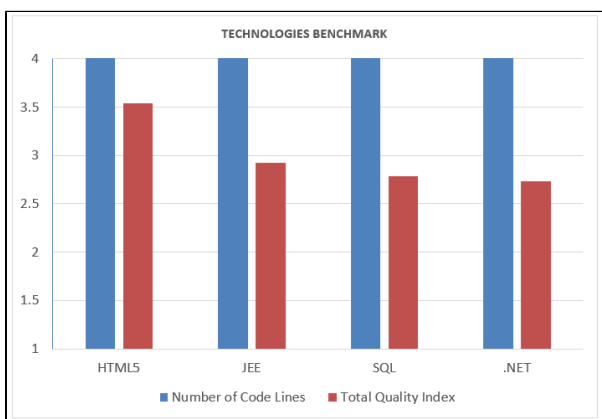
SAMPLE 1 - Clustered column graph

```
GRAPH;PF_GENERIC_GRAPH;COL1=METRICS,ROW1=APPLICATIONS,METRICS=60016
```



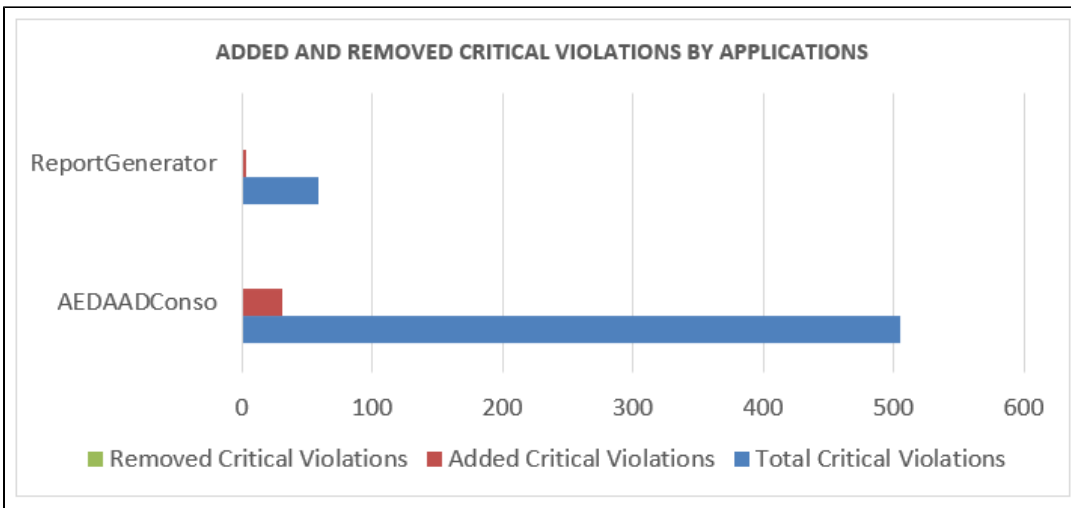
SAMPLE 2 - Clustered column graph

```
GRAPH;PF_GENERIC_GRAPH;COL1=METRICS,ROW1=TECHNOLOGIES,METRICS=10151|60017,AGGREGATORS=SUM|AVERAGE,TECHNOLOGIES=EACH
```



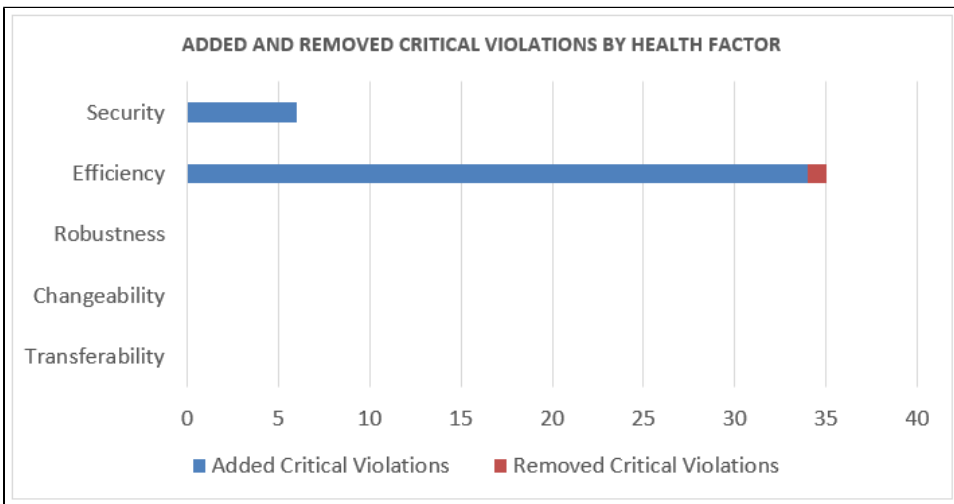
SAMPLE 3 - Stacked Bar

```
GRAPH;PF_GENERIC_GRAPH;COL1=CRITICAL_VIOLATIONS,ROW1=APPLICATIONS,APPLICATIONS=EACH,CRITICAL_VIOLATIONS=ALL,METRICS=60017
```



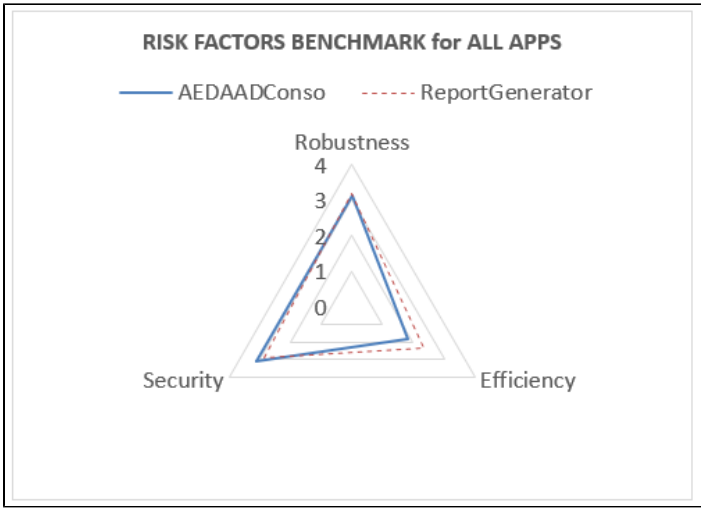
SAMPLE 4 - Stacked Bar

```
GRAPH:PF_GENERIC_GRAPH;COL1=CRITICAL_VIOLATIONS,ROW1=METRICS,METRICS=HEALTH_FACTOR,
CRITICAL_VIOLATIONS=ADDED|REMOVED
```



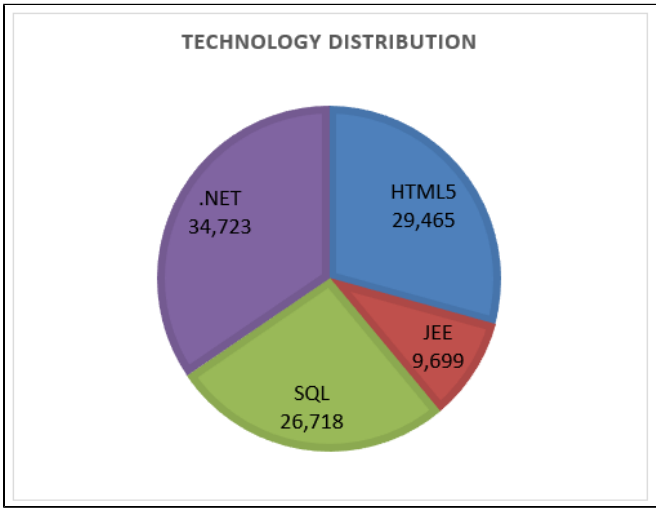
SAMPLE 5 - Radar chart

```
GRAPH:PF_GENERIC_GRAPH;COL1=APPLICATIONS,ROW1=METRICS,METRICS=60013|60014|60016,AGGREGATORS=AVERAGE,
APPLICATIONS=EACH
```



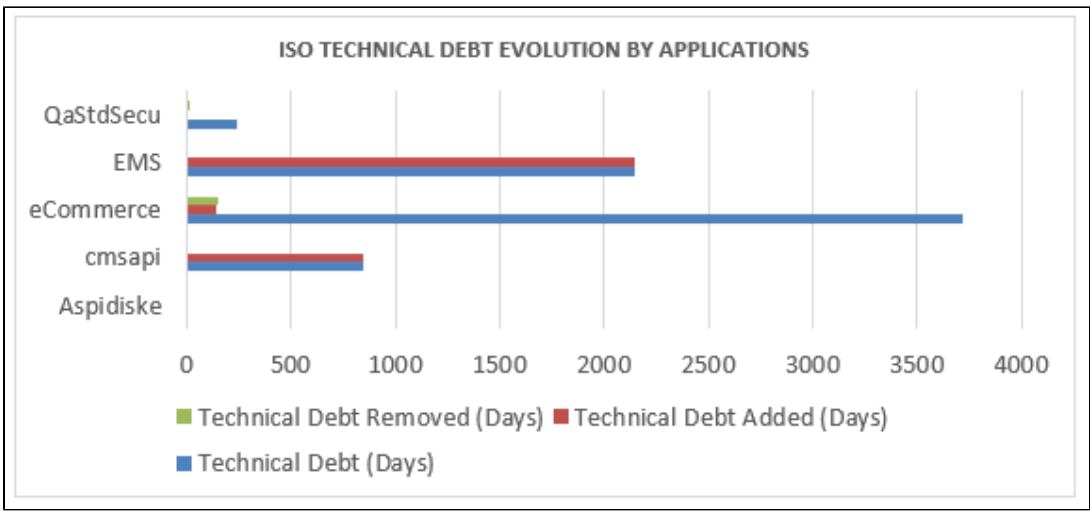
SAMPLE 6 - Pie chart

```
GRAPH;PF_GENERIC_GRAPH;ROW1=TECHNOLOGIES, COL1=METRICS, TECHNOLOGIES=EACH, METRICS=10151, AGGREGATORS=SUM
```



SAMPLE 7 - with ISO Technical Debt

```
GRAPH;PF_GENERIC_GRAPH;COL1=OMG_TECHNICAL_DEBT, ROW1=APPLICATIONS, APPLICATIONS=EACH, OMG_TECHNICAL_DEBT=ALL, METRICS=ISO
```



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