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## Summary

This plugin generates a PDF document with information about project **technology.paho**.

This plugin is intended as an example of R Markdown document to help people easily setup their own R analysis on software development data.

# Metrics

Mnemo	Value
CI_JOBS	21.00
CI_JOBS_FAILED_1W	12.00
CI_JOBS_GREEN	8.00
CI_JOBS_GREEN_RATIO	40.00
CI_JOBS_RED	12.00
CI_JOBS_YELLOW	0.00
DOC_GOV	1.00
GOV_BOARD_PUBLIC	1.00
ITS_AUTHORS	76.00
ITS_AUTHORS_1M	0.00
ITS_AUTHORS_1W	0.00
ITS_AUTHORS_1Y	4.00
ITS_CREATED_1M	0.00
ITS_CREATED_1W	0.00
ITS_CREATED_1Y	4.00
ITS_DIVERSITY_RATIO_1Y	1.00
ITS_ISSUES_ALL	124.00
ITS_OPEN	45.00
ITS_OPEN_OLD	0.00
ITS_OPEN_PERCENT	36.00
ITS_OPEN_UNASSIGNED	0.00
ITS_UPDATED_1M	1.00
ITS_UPDATED_1W	1.00
ITS_UPDATED_1Y	8.00
MLS_USR_AUTHORS	274.00
MLS_USR_AUTHORS_1M	3.00
MLS_USR_AUTHORS_1W	1.00
MLS_USR_AUTHORS_1Y	33.00
MLS_USR_DIVERSITY_RATIO_1Y	1.00
MLS_USR_POSTS	280.00
MLS_USR_POSTS_1M	3.00
MLS_USR_POSTS_1W	1.00
MLS_USR_POSTS_1Y	54.00
MLS_USR_THREADS	280.00
MLS_USR_THREADS_1M	3.00
MLS_USR_THREADS_1W	1.00
MLS_USR_THREADS_1Y	35.00
OSS_DEP_CHECK	1.00
OSS_ESCALATE	1.00
OSS_INCLUSION	1.00
PROJECT_ACCESS_INFO	3.00
PROJECT_CI_ACCESS	0.00
PROJECT_CI_INFO	0.00
PROJECT_DL_ACCESS	1.00
PROJECT_DL_INFO	1.00
PROJECT_DOC_ACCESS	0.00
PROJECT_DOC_INFO	4.00
PROJECT_GETTINGSTARTED_INFO	1.00
PROJECT_ITS_ACCESS	0.00
PROJECT_ITS_INFO	5.00
PROJECT_MLS_ACCESS	1.00
PROJECT_MLS_INFO	1.00
PROJECT_REL_VOL	7.00
PROJECT_SCM_ACCESS	1.00
PROJECT_SCM_INFO	1.00
SCM_AUTHORS	70.00
SCM_AUTHORS_1M	0.00
SCM_AUTHORS_1W	0.00
SCM_AUTHORS_1Y	7.00
SCM_BRANCHES	11.00
SCM_COMMITS	804.00
SCM_COMMITS_1M	0.00
SCM_COMMITS_1W	0.00
SCM_COMMITS_1Y	40.00
SCM_COMMITTERS	51.00
SCM_COMMITTERS_1M	0.00
SCM_COMMITTERS_1W	0.00
SCM_COMMITTERS_1Y	7.00
SCM_DIVERSITY_RATIO_1Y	5.00
SCM_MOD_LINES	604782.00
SCM_MOD_LINES_1M	0.00
SCM_MOD_LINES_1W	0.00
SCM_MOD_LINES_1Y	27976.00
SO_ANSWERS_VOL_5Y	748.00
SO_ANSWER_RATE_1Y	0.63
SO_ANSWER_RATE_5Y	0.95
SO_ASKERS_5Y	644.00
SO_QUESTIONS_VOL_5Y	786.00
SO_VIEWS_VOL_5Y	908990.00
SO_VOTES_VOL_5Y	491.00

## SCM Commits

ID: SCM\_COMMITS

Value: 804

Description: Total number of commits in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date).

## Stack Overflow Answers (5Y)

ID: SO\_ANSWERS\_VOL\_5Y

Value: 748

Description: The number of answers to questions related to the project's tag posted on Stack Overflow during the last 5 years. Having many answers posted about the project indicates a strong interest from the community, and a good support. The list of questions and their answers associated to the tag can be browsed on the Stack Overflow web site.

## MLS information

ID: PROJECT\_MLS\_INFO

Value: 1 ( 4 / 5 )

Description: Is the communication channel for the team info correctly filled in the PMI records? The project management infrastructure file holds information about the various communication means used by the project. This test checks the number of MLS-related entries defined in the PMI: mailing lists, forums, etc.

## Stack Overflow Votes (5Y)

ID: SO\_VOTES\_VOL\_5Y

Value: 491

Description: The total number of votes on questions related to the project's tag on Stack Overflow during the last 5 years. Having many votes on questions about the project indicates a strong interest from the community. The list of questions and their answers associated to the tag can be browsed on the Stack Overflow web site.

## Number of statements

ID: SQ\_STATEMENTS

Value:

Description: Number of statements. For Java, it is the number of statements as defined in the Java Language Specification but without block definitions. Statements counter gets incremented by one each time a following keyword is encountered: if, else, while, do, for, switch, break, continue, return, throw, synchronized, catch, finally.. Statements counter is not incremented by a class, method, field, annotation definition, package declaration and import declaration. For Cobol, a statement is one of move, if, accept, add, alter, call, cancel, close, compute, continue, delete, display, divide, entry, evaluate, exitProgram, goback, goto, initialize, inspect, merge, multiply, open, perform, read, release, return, rewrite, search, set, sort, start, stop, string, subtract, unstring, write, exec, ibmXmlParse, ibmXmlGenerate, readyReset, mfCommit, mfRollback.

## Getting started

ID: PROJECT\_GETTINGSTARTED\_INFO

Value: 1 ( 5 / 5 )

Description: Is the documentation info correctly filled in the PMI records? The project management infrastructure file holds information about various documentation and manuals. This test checks the number of doc-related entries defined in the PMI: build\_doc, documentation, documentation\_url, forums, gettingstarted\_url, mailing\_lists, website\_url, wiki\_url.

## User ML Posts one year

ID: MLS\_USR\_POSTS\_1Y

Value: 54

Description: The total number of posts found in the User mailing list during last year. Having many posts shows the mailing list is active. It encourages people to participate, ask and answer questions.

## User ML Authors one week

ID: MLS\_USR\_AUTHORS\_1W

Value: 1

Description: The total number of different identities found in the User mailing list during last week. Having many different authors is a sign of diversity and activity. It makes the support more reliable (i.e. increased presence of people) and more complete (i.e. more eyes to solve a problem).

## Number of failed jobs one week

ID: CI\_JOBS\_FAILED\_1W

Value: 12 ( 1 / 5 )

Description: The number of jobs that failed during last week on the CI engine.

## Access information

ID: PROJECT\_ACCESS\_INFO

Value: 3 ( 5 / 5 )

Description: Is the access info (downloads, update sites..) correctly filled in the PMI records? The project management infrastructure file holds information about how to access binaries of the project. This test checks the number of access-related entries defined in the PMI: download\_url, downloads, update\_sites.

## Governance documentation

ID: DOC\_GOV

Value: 1 ( 5 / 5 )

Description: Is there a documentation explaining how decisions are made?

## **Has Readme**

ID: SC\_HAS\_README

Value:

Description: The number of files considered as a readme, as detected by Scancode.

## **ITS diversity ratio**

ID: ITS\_DIVERSITY\_RATIO\_1Y

Value: 1 ( 1 / 5 )

Description: The ration of bugs divided by the number of submitters, over a period of one year.

## **User ML Threads one month**

ID: MLS\_USR\_THREADS\_1M

Value: 3 ( 2 / 5 )

Description: The total number of threads (one question followed by zero or more answers) found in the User mailing list during last month. Having many threads shows the mailing list is active. It encourages people to participate, ask and answer questions.

## **User ML Authors**

ID: MLS\_USR\_AUTHORS

Value: 274

Description: The total number of different identities found in the User mailing list. Having many different authors is a sign of diversity and activity. It makes the support more reliable (i.e. increased presence of people) and more complete (i.e. more eyes to solve a problem).

## **SCM Staled Open Pull requests one month**

ID: SCM\_PRS\_OPENED\_STALED\_1M

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) that are in the opened state and have not been updated since one month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

## **ITS Pending issues**

ID: ITS\_OPEN\_UNASSIGNED

Value: 0

Description: Number of issues in state open with no assignee (i.e. pending). It is considered to be good practice to keep this number low. In an active project, people would either work on the bug (i.e. assign it) or triage it (pass it to some other state or assigning it).

## Test coverage

ID: SQ\_COVERAGE

Value:

Description: Overall test coverage.

## Project authors one month

ID: PROJECT\_AUTHORS\_1M

Value:

Description: Total number of identities found as authors of commits in source code management repositories dated during the last month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

## Number of yellow jobs

ID: CI\_JOBS\_YELLOW

Value: 0

Description: The number of yellow (unstable) jobs on the CI engine. Yellow jobs in CI define unstable builds. According to CI's documentation, a build is unstable if it was built successfully and one or more publishers report it unstable. For example if the JUnit publisher is configured and a test fails then the build will be marked unstable.

## SCM Branches

ID: SCM\_BRANCHES

Value: 11

Description: Number of branches as returned by `git branch --all`.

## SCM Still Open Pull requests one week

ID: SCM\_PRS\_OPENED\_STILL\_1W

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) that have been opened more than one week ago and are still in the opened state in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

## **Total number of successful builds**

ID: CI\_BUILDS\_SUCCESS

Value:

Description: The total number of builds with state success for the project.

## **SCM committers**

ID: SCM\_COMMITTERS

Value: 51

Description: Total number of identities found as committers of commits in source code management repository. Source code management repositories are those considered as such in the project documentation. Commits in all branches are considered. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). An identity is considered as committer if it appears as such in the commit record.

## **User ML Threads**

ID: MLS\_USR\_THREADS

Value: 280

Description: The total number of threads (one question followed by zero or more answers) found in the User mailing list. Having many threads shows the mailing list is active. It encourages people to participate, ask and answer questions.

## **SCM Open Pull requests**

ID: SCM\_PRS\_OPENED

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) in the opened state in source code management repositories.

## **SCM Changed Lines**

ID: SCM\_MOD\_LINES

Value: 604782

Description: Total number of changed lines (added, removed, changed) in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date).

## **Number of info issues**

ID: SQ\_VIOLATIONS\_INFO

Value:

Description: The total number of issues (violations) found by SonarQube with a severity equal to INFO. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Issues>.

### **User ML Authors one year**

ID: MLS\_USR\_AUTHORS\_1Y

Value: 33

Description: The total number of different identities found in the User mailing list during last year. Having many different authors is a sign of diversity and activity. It makes the support more reliable (i.e. increased presence of people) and more complete (i.e. more eyes to solve a problem).

### **Total number of pipelines**

ID: CI\_PIPELINES\_VOL

Value:

Description: The total number of pipelines listed in the GitLab Pipelines section. A pipeline is a group of builds that get executed in stages. See the GitLab documentation for more details.

### **ITS access**

ID: PROJECT\_ITS\_ACCESS

Value: 0 ( 4 / 5 )

Description: Is the bugzilla info correctly filled in the PMI records? The project management infrastructure file holds information about one or more bugzilla instances. This test checks that at least one bugzilla instance is defined, with a product identifier, a create\_url to enter a new issue, and a query\_url to fetch all the issues for the project.

### **User ML Authors one month**

ID: MLS\_USR\_AUTHORS\_1M

Value: 3 ( 3 / 5 )

Description: The total number of different identities found in the User mailing list during last month. Having many different authors is a sign of diversity and activity. It makes the support more reliable (i.e. increased presence of people) and more complete (i.e. more eyes to solve a problem).

### **ITS issues updated last month**

ID: ITS\_UPDATED\_1M

Value: 1 ( 1 / 5 )

Description: Number of issues updated during last month. If today is 2017-02-01 then the range is from 2017-01-01 to 2017-02-01.



## **ITS issues created last month**

ID: ITS\_CREATED\_1M

Value: 0

Description: Number of issues created during last month. If today is 2017-02-01 then the range is from 2017-01-01 to 2017-02-01.

## **SCM Pull requests**

ID: SCM\_PRS

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) in source code management repositories. Source code management repositories are those considered as such in the project documentation.

## **Failed builds 1 week**

ID: CI\_BUILDS\_FAILED\_1W

Value:

Description: The number of builds with state failed for the project during the last 7 days.

## **Has licence**

ID: SC\_HAS\_LICENCE

Value:

Description: The number of files considered as legal (i.e. licences), as detected by Scancode.

## **Project committers one week**

ID: PROJECT\_COMMITTERS\_1W

Value:

Description: Total number of identities found as committers of commits in source code management repositories dated during the last week. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

## **Line coverage**

ID: SQ\_COVERAGE\_LINE

Value:

Description: Line test coverage.

## Project Commits one year

ID: PROJECT\_COMMITS\_1Y

Value:

Description: Total number of commits in source code management repositories dated during the last year. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

## Number of jobs

ID: CI\_JOBS

Value: 21

Description: The total number of jobs defined on the CI engine.

## Maintainability rating

ID: SQ\_SQALE\_RATING

Value:

Description: Rating given to your project related to the value of your Technical Debt Ratio. The default Maintainability Rating grid is: A=0-0.05, B=0.06-0.1, C=0.11-0.20, D=0.21-0.5, E=0.51-1. The Maintainability Rating scale can be alternately stated by saying that if the outstanding remediation cost depends on the time that has already gone into the application: A <=5% , B between 6 to 10%, C between 11 to 20%, D between 21 to 50%, and anything over 50% is an E. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Maintainability>.

## Number of files

ID: SQ\_FILES

Value:

Description: The total number of files analysed.

## Successful builds 1 month

ID: CI\_BUILDS\_SUCCESS\_1M

Value:

Description: The number of builds with state success for the project during the last month.

## Branch coverage

ID: SQ\_COVERAGE\_BRANCH

Value:

Description: Branch test coverage.

## SCM Merged Pull requests

ID: SCM\_PRS\_MERGED

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) in the 'merged' state in source code management repositories.

## Board transparency

ID: GOV\_BOARD\_PUBLIC

Value: 1 ( 5 / 5 )

Description: Are the minutes of the board publicly available?

## Special files

ID: SC\_SPECIAL\_FILES

Value:

Description: Number of legal, license, readmes, manifests, copyright and other files for key, top-level files. Key files are top- level codebase files such as COPYING, README and package manifests as reported by the `-classify` option 'is\_legal', 'is\_readme', 'is\_manifest' and 'is\_top\_level' flags.

## SCM Commits one year

ID: SCM\_COMMITS\_1Y

Value: 40

Description: Total number of commits in source code management repositories dated during the last year. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

## SCM Commits one month

ID: SCM\_COMMITS\_1M

Value: 0 ( 1 / 5 )

Description: Total number of commits in source code management repositories dated during the last month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time

range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

### **Failed builds 1 month**

ID: CI\_BUILDS\_FAILED\_1M

Value:

Description: The number of builds with state failed for the project during the last month.

### **Project committers one year**

ID: PROJECT\_COMMITTERS\_1Y

Value:

Description: Total number of identities found as committers of commits in source code management repositories dated during the last year. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

### **SCM Changed Lines one month**

ID: SCM\_MOD\_LINES\_1M

Value: 0 ( 1 / 5 )

Description: Total number of changed lines (added, removed, changed) in source code management repositories dated during the last month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

### **Automatically generated files**

ID: SC\_GENERATED\_VOL

Value:

Description: Number of files tagged as automatically generated, as detected by Scancode.

### **SCM Still Open Pull requests one month**

ID: SCM\_PRS\_OPENED\_STILL\_1M

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) that have been opened more than one month ago and are still in the opened state in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

## **Inclusion initiative**

ID: OSS\_INCLUSION

Value: 1 ( 5 / 5 )

Description: Is there a formal procedure to help people join and benefit from the community, whoever they are? As an example

## **ITS issues created last week**

ID: ITS\_CREATED\_1W

Value: 0

Description: Number of issues created during last week. If today is Wed. 2017-02-01 then the range is from Wed. 2017-01-25 to Wed. 2017-02-01.

## **Duplicated lines (%)**

ID: SQ\_DUPLICATED\_LINES\_DENSITY

Value:

Description: Density of duplication = Duplicated lines / Lines \* 100.

## **SCM access**

ID: PROJECT\_SCM\_ACCESS

Value: 1 ( 5 / 5 )

Description: Is the source\_repo info correctly filled in the PMI records? The project management infrastructure file holds information about one or more source repositories. This test checks that at least one source repository is defined, and accessible.

## **Open issues**

ID: PROJECT\_ISSUES\_OPEN

Value:

Description: The number of issues opened at the time of analysis on the GitLab project. This information is retrieved from GitLab itself, and may differ from numbers gathered from the actual issue tracking system used.

## **Project Commits one month**

ID: PROJECT\_COMMITS\_1M

Value:

Description: Total number of commits in source code management repositories dated during the last month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time

range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

## MLS access

ID: PROJECT\_MLS\_ACCESS

Value: 1 ( 5 / 5 )

Description: Is the communication channel for the team info correctly filled in the PMI records? The project management infrastructure file holds information about the various communication means used by the project. This test checks the number of MLS-related entries defined in the PMI: mailing lists, forums, etc.

## Number of functions

ID: SQ\_FUNCS

Value:

Description: Number of functions. Depending on the language, a function is either a function or a method or a paragraph. For Java, constructors are considered as methods and accessors are considered as methods if the `sonar.squid.analyse.property.accessors` property is set to false. For Cobol, it is the number of paragraphs.

## Commented code

ID: SQ\_COM\_CODE

Value:

Description: Commented lines of code See more information about commented code on SonarQube doc web site. There is a well-documented debate on Stack Overflow as well. For more information on comments for each language, see <https://docs.sonarqube.org/display/SONAR/Metrics+-+Comment+lines>.

## Number of forks

ID: PROJECT\_FORKS

Value:

Description: The number of forks for this project. More forks usually mean a greater activity.

## Last activity

ID: PROJECT\_LAST\_ACTIVITY\_AT

Value:

Description: The date of last activity for this project. This includes any type of action: changes on issues, git commits or pushes, merge requests, comments... A project with a old last activity timestamp shows the project is dead (or in agony at least).

## Public documented API (%)

ID: SQ\_PUBLIC\_API\_DOC\_DENSITY

Value:

Description: Density of public documented API = (Public API - Public undocumented API) / Public API \* 100

## Total complexity

ID: SQ\_CPX

Value:

Description: It is the complexity calculated based on the number of paths through the code. Whenever the control flow of a function splits, the complexity counter gets incremented by one. Each function has a minimum complexity of 1. This calculation varies slightly by language because keywords and functionalities do. For more information on complexity for each language, see <https://docs.sonarqube.org/display/SONAR/Metrics+-+Complexity>.

## Number of red jobs

ID: CI\_JOBS\_RED

Value: 12

Description: The number of red (failed) jobs on the CI engine. Red jobs in CI define failed builds.

## ITS information

ID: PROJECT\_ITS\_INFO

Value: 5 ( 5 / 5 )

Description: Is the bugzilla info correctly filled in the PMI records? The project management infrastructure file holds information about one or more bugzilla instances. This test checks that at least one bugzilla instance is defined, with a product identifier, a create\_url to enter a new issue, and a query\_url to fetch all the issues for the project.

## CI access

ID: PROJECT\_CI\_ACCESS

Value: 0 ( 4 / 5 )

Description: Is the continuous integration info correctly filled in the PMI records? The project management infrastructure file holds information about the location of CI services. This test checks the number of ci-related entries defined in the PMI.

## User ML Posts

ID: MLS\_USR\_POSTS

Value: 280

Description: The total number of posts found in the User mailing list. Having many posts shows the mailing list is active. It encourages people to participate, ask and answer questions.

## Stack Overflow Questions (5Y)

ID: SO\_QUESTIONS\_VOL\_5Y

Value: 786

Description: The number of questions related to the project's tag posted on Stack Overflow during the last 5 years. Having many questions posted about the project indicates a strong interest from the community. The list of questions associated to the tag can be browsed on the Stack Overflow web site.

## Project committers one month

ID: PROJECT\_COMMITTERS\_1M

Value:

Description: Total number of identities found as committers of commits in source code management repositories dated during the last month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

## Number of comment lines

ID: SQ\_COMMENT\_LINES

Value:

Description: Number of lines containing either comment or commented-out code. Non-significant comment lines (empty comment lines, comment lines containing only special characters, etc.) do not increase the number of comment lines. For Java, file headers are not counted as comment lines (as they usually define the license). Lines containing the following instructions are counted both as comments and lines of code: AUTHOR, INSTALLATION, DATE-COMPILED, DATE-WRITTEN, SECURITY. For more information on comments for each language, see <https://docs.sonarqube.org/display/SONAR/Metrics+-+Comment+lines>.

## SCM Still Open Pull requests one year

ID: SCM\_PRS\_OPENED\_STILL\_1Y

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) that have been opened more than one year ago and are still in the opened state in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).



## **Contributing**

ID: DOC\_CONTRIBUTING

Value:

Description: Is the documentation info correctly filled in the PMI records? The project management infrastructure file holds information about various documentation and manuals. This test checks the number of doc-related entries defined in the PMI: build\_doc, documentation, documentation\_url, forums, gettingstarted\_url, mailing\_lists, website\_url, wiki\_url.

## **User ML Posts one week**

ID: MLS\_USR\_POSTS\_1W

Value: 1

Description: The total number of posts found in the User mailing list during last week. Having many posts shows the mailing list is active. It encourages people to participate, ask and answer questions.

## **SCM Changed Lines one week**

ID: SCM\_MOD\_LINES\_1W

Value: 0

Description: Total number of changed lines (added, removed, changed) in source code management repositories dated during the last week. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

## **Successful builds 1 week**

ID: CI\_BUILDS\_SUCCESS\_1W

Value:

Description: The number of builds with state success for the project during the last 7 days.

## **ITS issues created last year**

ID: ITS\_CREATED\_1Y

Value: 4

Description: Number of issues created during last year. If today is 2017-02-01 then the range is from 2016-02-01 to 2017-02-01.

## **ITS Open issues (%)**

ID: ITS\_OPEN\_PERCENT

Value: 36

Description: Percentage of open issues compared to the overall number of issues registered in the system.

## SCM information

ID: PROJECT\_SCM\_INFO

Value: 1 ( 4 / 5 )

Description: Is the source\_repo info correctly filled in the PMI records? The project management infrastructure file holds information about one or more source repositories. This test checks that at least one source repository is defined, and accessible.

## Comment lines density

ID: SQ\_COMR

Value:

Description: Density of comment lines =  $\text{Comment lines} / (\text{Lines of code} + \text{Comment lines}) * 100$ . With such a formula, 50% means that the number of lines of code equals the number of comment lines and 100% means that the file only contains comment lines For more information on comments for each language, see <https://docs.sonarqube.org/display/SONAR/Metrics+-+Comment+lines>.

## Readme

ID: DOC\_README

Value:

Description: Is the documentation info correctly filled in the PMI records? The project management infrastructure file holds information about various documentation and manuals. This test checks the number of doc-related entries defined in the PMI: build\_doc, documentation, documentation\_url, forums, gettingstarted\_url, mailing\_lists, website\_url, wiki\_url.

## Total number of Actors

ID: ITS\_PEOPLE

Value:

Description: The total number of people involved in issues tracking, includes authors (submitters), closers and updaters XXX.

## Project Commits one week

ID: PROJECT\_COMMITS\_1W

Value:

Description: Total number of commits in source code management repositories dated during the last week. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

## User ML diversity ratio

ID: MLS\_USR\_DIVERSITY\_RATIO\_1Y

Value: 1 ( 1 / 5 )

Description: The ration of posts divided by the number of authors, over a period of one year.

## File complexity

ID: SQ\_CPX\_FILE\_IDX

Value:

Description: Average complexity by file. File complexity is computed using the Total complexity (SQ\_CPX, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Complexity>) divided by the number of files (SQ\_FILES).

## Project authors one week

ID: PROJECT\_AUTHORS\_1W

Value:

Description: Total number of identities found as authors of commits in source code management repositories dated during the last week. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

## Escalation procedure

ID: OSS\_ESCALATE

Value: 1 ( 5 / 5 )

Description: Is there an easy and visible way for anybody to report toxic behaviour or unfair practices? As an example, people willing to report unfair practices or bad behaviour within an Eclipse project can send an email at [codeofconduct@eclipse.org](mailto:codeofconduct@eclipse.org).

## User ML Threads one week

ID: MLS\_USR\_THREADS\_1W

Value: 1

Description: The total number of threads (one question followed by zero or more answers) found in the User mailing list during last week. Having many threads shows the mailing list is active. It encourages people to participate, ask and answer questions.

## ITS authors last month

ID: ITS\_AUTHORS\_1M

Value: 0 ( 1 / 5 )

Description: Number of authors who created issues during last month. If today is 2017-02-01 then the range is from 2017-01-01 to 2017-02-01.

## **Project committers**

ID: PROJECT\_COMMITTERS

Value:

Description: Total number of identities found as committers of commits in source code management repository. Source code management repositories are those considered as such in the project documentation. Commits in all branches are considered. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). An identity is considered as committer if it appears as such in the commit record.

## **ITS Total issues**

ID: ITS\_ISSUES\_ALL

Value: 124

Description: Number of issues registered in the database, whatever their state is.

## **Doc access**

ID: PROJECT\_DOC\_ACCESS

Value: 0 ( 4 / 5 )

Description: Is the documentation info correctly filled in the PMI records? The project management infrastructure file holds information about various documentation and manuals. This test checks the number of doc-related entries defined in the PMI: build\_doc, documentation, documentation\_url, forums, gettingstarted\_url, mailing\_lists, website\_url, wiki\_url.

## **Project authors one year**

ID: PROJECT\_AUTHORS\_1Y

Value:

Description: Total number of identities found as authors of commits in source code management repositories dated during the last year. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

## **Number of minor issues**

ID: SQ\_VIOLATIONS\_MINOR

Value:

Description: The total number of issues (violations) found by SonarQube with a severity equal to MINOR. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Issues>.

## SCM authors one month

ID: SCM\_AUTHORS\_1M

Value: 0 ( 1 / 5 )

Description: Total number of identities found as authors of commits in source code management repositories dated during the last month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

## SCM Changed Lines one year

ID: SCM\_MOD\_LINES\_1Y

Value: 27976

Description: Total number of changed lines (added, removed, changed) in source code management repositories dated during the last year. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

## Number of blocker issues

ID: SQ\_VIOLATIONS\_BLOCKER

Value:

Description: The total number of issues (violations) found by SonarQube with a severity equal to BLOCKER. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Issues>.

## Docs information

ID: PROJECT\_DOC\_INFO

Value: 4 ( 5 / 5 )

Description: Is the documentation info correctly filled in the PMI records? The project management infrastructure file holds information about various documentation and manuals. This test checks the number of doc-related entries defined in the PMI: build\_doc, documentation, documentation\_url, forums, gettingstarted\_url, mailing\_lists, website\_url, wiki\_url.

## CI information

ID: PROJECT\_CI\_INFO

Value: 0 ( 4 / 5 )

Description: Is the continuous integration info correctly filled in the PMI records? The project management infrastructure file holds information about the location of CI services. This test checks the number of ci-related entries defined in the PMI.

## **ITS authors last year**

ID: ITS\_AUTHORS\_1Y

Value: 4

Description: Number of authors who created issues during last year. If today is 2017-02-01 then the range is from 2016-02-01 to 2017-02-01.

## **Licences check**

ID: SC\_LIC\_CHECK

Value:

Description: Unwanted licences in the code, as provided by tools like ScanCode (or Black Duck or..). All licences found in the codebase that do not conform to a custom regexp are considered wrong. One should have as few as possible of them.

## **Package Tangle index**

ID: SQ\_PACKAGES\_TANGLE\_IDX

Value:

Description: The Package tangle index, as defined in SonarQube.

## **Number of copyright holders**

ID: SC\_HOLDERS\_VOL

Value:

Description: Number of copyright holders detected in the code.

## **SCM authors one year**

ID: SCM\_AUTHORS\_1Y

Value: 7

Description: Total number of identities found as authors of commits in source code management repositories dated during the last year. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

## **ITS issues updated last year**

ID: ITS\_UPDATED\_1Y

Value: 8

Description: Number of issues updated during last year. If today is 2017-02-01 then the range is from 2016-02-01 to 2017-02-01.

## SCM Closed Pull requests

ID: SCM\_PRS\_CLOSED

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) in the closed state in source code management repositories.

## ITS Authors

ID: ITS\_AUTHORS

Value: 76

Description: Number of different authors who created issues during the lifetime of the project. A high number of authors shows diversity and improves the bus factor of the project.

## User ML Posts one month

ID: MLS\_USR\_POSTS\_1M

Value: 3 ( 1 / 5 )

Description: The total number of posts found in the User mailing list during last month. Having many posts shows the mailing list is active. It encourages people to participate, ask and answer questions.

## SCM committers one year

ID: SCM\_COMMITTERS\_1Y

Value: 7

Description: Total number of identities found as committers of commits in source code management repositories dated during the last year. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

## Technical debt

ID: SQ\_SQALE\_INDEX

Value:

Description: Effort to fix all maintainability issues. The measure is stored in minutes in the DB. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metrics+Definition>. Maintainability.

## Project authors

ID: PROJECT\_AUTHORS

Value:

Description: Total number of identities found as authors of commits in source code management repository. Source code management repositories are those considered as such in the project documentation. Commits in all branches are considered. Date used for each commit is 'author date' (when there is a difference between author date and committer date). An identity is considered as author if it appears as such in the commit record (for systems logging several identities related to the commit, authoring identity will be considered).

## **ITS authors last week**

ID: ITS\_AUTHORS\_1W

Value: 0

Description: Number of authors who created issues during last week. If today is Wed. 2017-02-01 then the range is from Wed. 2017-01-25 to Wed. 2017-02-01.

## **Project Commits**

ID: PROJECT\_COMMITS

Value:

Description: Total number of commits in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date).

## **SCM Open Pull requests one month**

ID: SCM\_PRS\_OPENED\_1M

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) that have been opened within the last month in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

## **SCM authors**

ID: SCM\_AUTHORS

Value: 70

Description: Total number of identities found as authors of commits in source code management repository. Source code management repositories are those considered as such in the project documentation. Commits in all branches are considered. Date used for each commit is 'author date' (when there is a difference between author date and committer date). An identity is considered as author if it appears as such in the commit record (for systems logging several identities related to the commit, authoring identity will be considered).



## **ITS issues updated last week**

ID: ITS\_UPDATED\_1W

Value: 1

Description: Number of issues updated during last week. If today is Wed. 2017-02-01 then the range is from Wed. 2017-01-25 to Wed. 2017-02-01.

## **User ML Threads one year**

ID: MLS\_USR\_THREADS\_1Y

Value: 35

Description: The total number of threads (one question followed by zero or more answers) found in the User mailing list during last year. Having many threads shows the mailing list is active. It encourages people to participate, ask and answer questions.

## **Stack Overflow Views (5Y)**

ID: SO\_VIEWS\_VOL\_5Y

Value: 908990

Description: The total number of views for questions related to the project's tag on Stack Overflow during the last 5 years. Having many views on questions about the project indicates a strong interest from the community. The list of questions and their answers associated to the tag can be browsed on the Stack Overflow web site.

## **DL access**

ID: PROJECT\_DL\_ACCESS

Value: 1 ( 5 / 5 )

Description: Is the access info (downloads, update sites..) correctly filled in the PMI records? The project management infrastructure file holds information about how to access binaries of the project. This test checks the number of access-related entries defined in the PMI: download\_url, downloads, update\_sites.

## **Code of Conduct**

ID: SC\_HAS\_CODEOFCONDUCT

Value:

Description: The number of files considered as a code of conduct, as detected by Scancode. These can be any initiative and written document to regulate the behaviour of individuals As an example, the Eclipse Foundation enforces the following code of conduct: [https://www.eclipse.org/org/documents/Community\\_Code\\_of\\_Conduct.php](https://www.eclipse.org/org/documents/Community_Code_of_Conduct.php) .

## Has contributing

ID: SC\_HAS\_CONTRIBUTING

Value:

Description: The number of files considered as a contributing or development guide, as detected by Scancode.

## Number of lines of code

ID: SQ\_NCLOC

Value:

Description: Number of physical lines that contain at least one character which is neither a whitespace or a tabulation or part of a comment. For Cobol, generated lines of code and pre-processing instructions (SKIP1, SKIP2, SKIP3, COPY, EJECT, REPLACE) are not counted as lines of code.

## Number of stars

ID: PROJECT\_STARS

Value:

Description: The number of times people have starred this project. Users use stars to show their interest for a project, and more stars usually mean a greater visibility and interest.

## DL information

ID: PROJECT\_DL\_INFO

Value: 1 ( 5 / 5 )

Description: Is the access info (downloads, update sites..) correctly filled in the PMI records? The project management infrastructure file holds information about how to access binaries of the project. This test checks the number of access-related entries defined in the PMI: download\_url, downloads, update\_sites.

## Sqale Debt ratio

ID: SQ\_SQALE\_DEBT\_RATIO

Value:

Description: The Technical Debt Ratio, as defined in Sqale. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Maintainability>.

## ITS Old open issues

ID: ITS\_OPEN\_OLD

Value: 0

Description: Number of dead issues, i.e. issues that are in state open and have not been updated for a long time (one year). It is considered to be good practice to keep this number low because it impacts the

confidence in the Issue Tracking System if there are too many open dead issues. Some projects close issues after some time of inactivity and re-open it if needed.

## **SCM Open Pull requests one week**

ID: SCM\_PRS\_OPENED\_1W

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) that have been opened within the last week in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

## **SCM authors one week**

ID: SCM\_AUTHORS\_1W

Value: 0

Description: Total number of identities found as authors of commits in source code management repositories dated during the last week. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

## **Public API**

ID: SQ\_PUBLIC\_API

Value:

Description: Number of public Classes + number of public Functions + number of public Properties

## **Dependency check**

ID: OSS\_DEP\_CHECK

Value: 1 ( 5 / 5 )

Description: Analysis of dependencies to identify old, vulnerable dependencies, as provided by tools like dependency-check or JFrog/Nexus. As an example, projects hosted at the Eclipse Foundation have a rigorous IP cleanliness procedure that makes sure that all dependencies meet defined requirements.

## **Number of releases**

ID: PROJECT\_REL\_VOL

Value: 7 ( 4 / 5 )

Description: The number of releases recorded in the PMI. Milestones are retrieved from the PMI file and are counted whatever their target release is. Milestones are useful to assess the maturity of the release and improves predictability of the project's output, in terms of quality and time.

## **SCM Commits one week**

ID: SCM\_COMMITS\_1W

Value: 0

Description: Total number of commits in source code management repositories dated during the last week. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

## **Total number of builds**

ID: CI\_BUILDS\_VOL

Value:

Description: The total number of builds listed in the GitLab Builds section. Builds are individual runs of jobs. See the GitLab documentation for more details.

## **ITS Open issues**

ID: ITS\_OPEN

Value: 45

Description: Number of issues with a state 'open' at the time of analysis.

## **Authors**

ID: SC\_AUTHORS\_VOL

Value:

Description: Number of authors detected in the code.

## **SCM diversity ratio**

ID: SCM\_DIVERSITY\_RATIO\_1Y

Value: 5 ( 3 / 5 )

Description: The ration of commits divided by the number of authors, over a period of one year.

## **Total number of files analysed**

ID: SC\_FILES\_VOL

Value:

Description: Total number of files analysed (and documented) by Scancode. Metric is the number of files provided in the list of analysed files returned by Scancode.

## Number of copyrights

ID: SC\_COPYRIGHTS\_VOL

Value:

Description: Number of copyrights detected by Scancode in the code base.

## Ratio of green jobs

ID: CI\_JOBS\_GREEN\_RATIO

Value: 40 ( 2 / 5 )

Description: The number of green (successful) jobs on the CI engine, divided by the total number of jobs. Green (or blue) jobs in CI define successful builds.

## Number of releases

ID: PMI\_REL\_VOL

Value:

Description: The number of releases recorded in the PMI. Milestones are retrieved from the PMI file and are counted whatever their target release is. Milestones are useful to assess the maturity of the release and improves predictability of the project's output, in terms of quality and time.

## SCM Open Pull requests one year

ID: SCM\_PRS\_OPENED\_1Y

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) that have been opened within the last year in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

## Total number of failed builds

ID: CI\_BUILDS\_FAILED

Value:

Description: The total number of builds with state failed for the project.

## Stack Overflow Answer rate (1Y)

ID: SO\_ANSWER\_RATE\_1Y

Value: 0.63 ( 1 / 5 )

Description: The average number of answers per questions related to the project's tag on Stack Overflow during the last year. Having many answers posted about the project indicates a strong interest from the

community, and a good support. The list of questions and their answers associated to the tag can be browsed on the Stack Overflow web site.

### **Number of critical issues**

ID: SQ\_VIOLATIONS\_CRITICAL

Value:

Description: The total number of issues (violations) found by SonarQube with a severity equal to CRITICAL. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Issues>.

### **Stack Overflow Answer rate (5Y)**

ID: SO\_ANSWER\_RATE\_5Y

Value: 0.95

Description: The average number of answers per questions related to the project's tag on Stack Overflow during the last 5 years. Having many answers posted about the project indicates a strong interest from the community, and a good support. The list of questions and their answers associated to the tag can be browsed on the Stack Overflow web site.

### **Number of major issues**

ID: SQ\_VIOLATIONS\_MAJOR

Value:

Description: The total number of issues (violations) found by SonarQube with a severity equal to MAJOR. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Issues>.

### **Number of green jobs**

ID: CI\_JOBS\_GREEN

Value: 8

Description: The number of green (successful) jobs on the CI engine. Green (or blue) jobs in CI define successful builds.

### **Programming languages**

ID: SC\_PROGS\_VOL

Value:

Description: Number of programming languages detected in the code.

## **SCM committers one month**

ID: SCM\_COMMITTERS\_1M

Value: 0

Description: Total number of identities found as committers of commits in source code management repositories dated during the last month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

## **Stack Overflow Askers (5Y)**

ID: SO\_ASKERS\_5Y

Value: 644

Description: The number of distinct people asking questions related to the project's tag posted on Stack Overflow during the last 5 years. Having many people ask questions about the project indicates a strong interest from the community, and a good support. The list of questions and their answers associated to the tag can be browsed on the Stack Overflow web site.

## **SCM committers one week**

ID: SCM\_COMMITTERS\_1W

Value: 0

Description: Total number of identities found as committers of commits in source code management repositories dated during the last week. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

## **ITS Late issues**

ID: ITS\_LATE

Value:

Description: Number of issues with a past due date. It is considered good practice to keep this number low. Either fix it or maintain its due date.

## Attributes

Mnemo	Value
QM_ACTIVITY	1.00
QM_AGG_COLLAB	5.00
QM_AGG_DECISIONS	5.00
QM_AGG_DOC	4.50
QM_AGG_ENGAGEMENT	1.50
QM_AGG_ETHICS	5.00
QM_AGG_IP	5.00
QM_AGG_OPENNESS	4.50
QM_AGG_OSS_CORE	4.80
QM_DIVERSITY	1.70
QM_DOC	4.80
QM_ECOSYSTEM	2.20
QM_PROCESS	3.70
QM_QUALITY	3.60
QM_REL_ENG	3.00
QM_SCM	2.00
QM_SUPPORT	2.00

### Activity

ID: QM\_ACTIVITY

Value: 1 / 5

Description: The activity of the project's ecosystem, as measured on the mailing lists and configuration management system. An active project will provide a lot of information on the mailing lists, so when an user encounters an issue she will quickly find the information she needs, and has more chances to get answers if she asks. Fixes and improvements are added regularly.

### Collaboration

ID: QM\_AGG\_COLLAB

Value: 5 / 5

Description: Are the required pieces of basic documentation available?

### Decisions

ID: QM\_AGG\_DECISIONS

Value: 5 / 5

Description: How public and open is the project's decision-making process?

### Information

ID: QM\_AGG\_DOC

Value: 4.5 / 5

Description: Is the project well documented?



## **Engagement**

ID: QM\_AGG\_ENGAGEMENT

Value: 1.5 / 5

Description: How the community is invited to participate, and how much is it heard when talking?

## **Ethics**

ID: QM\_AGG\_ETHICS

Value: 5 / 5

Description: Is the project compliant regarding OSS' ethics?

## **Intellectual Property Management**

ID: QM\_AGG\_IP

Value: 5 / 5

Description: How is intellectual property handled in the project? Is there an IP log? Are the project and the Eclipse Foundation safe regarding IP?

## **Openness**

ID: QM\_AGG\_OPENNESS

Value: 4.5 / 5

Description: Is the project open and transparent?

## **OSS Core**

ID: QM\_AGG\_OSS\_CORE

Value: 4.8 / 5

Description: The conformance of the project to the core Open-Source Software principles and good practices.

## **Diversity**

ID: QM\_DIVERSITY

Value: 1.7 / 5

Description: The diversity of the project's ecosystem, as measured on the mailing lists and configuration management system. If many different actors from different companies are involved in the project, then it improves its sustainability (by eliminating a single point of failure) and adaptability to different situations. Having developers and users with different contexts and perspectives on the project helps widening its scope and provide a more generic support.

## Documentation

ID: QM\_DOC

Value: 4.8 / 5

Description: The maturity of code. Good code is vital for maintenance and evolution. It will encourage people to contribute, lower the number of bugs, and make a better product for the end-user as well as for the maintainers.

## Ecosystem

ID: QM\_ECOSYSTEM

Value: 2.2 / 5

Description: The sustainability of the ecosystem evolving around the project. Sustainability is a key point for long term support. If there is a lot of activity, if people can get fast and complete answers, if many people from different companies contribute to the project, then it will have more chance to still be there in a few years, and to continue providing fixes and improvements. Ecosystem requirements have been discussed on the mailing list and during meetings, and have been further described on the Polarsys wiki.

## Process

ID: QM\_PROCESS

Value: 3.7 / 5

Description: The maturity of the process used to run the project. A sound process helps people to do things right and ease collaborative work. If the process is documented, has predictable output, helps enforcing good development practices, etc. then new comers will easily find the information to collaborate, test or change code, or participate in the community. A good process also helps producing a good product [[Ing2003](/documentation/references.html#Ing2003)] – although it is agreed that the process is not enough by itself. Process requirements have been discussed on the mailing list and during meetings, and have been further described on the Polarsys wiki. Some may also recognise CMMi Key Process Areas among the attributes.

## Eclipse Maturity

ID: QM\_QUALITY

Value: 3.6 / 5

Description: The overall Maturity of the project. In the context of embedded software, Maturity is usually associated with some kind of reliability (most bugs have been already found) and functionality of code, sustainability of the project (will it still deliver fixes and improvements in a few years), and process predictability. Maturity in the PolarSys context has been further described on the wiki, and is actually precisely defined by the decomposition of this quality model.

## Build and Release Management

ID: QM\_REL\_ENG

Value: 3 / 5

Description: Does the project apply best practices regarding Build and Release management?

## Configuration Management

ID: QM\_SCM

Value: 2 / 5

Description: The maturity of the project regarding access and usage of the configuration management system. Configuration management is an essential part of the collaboration in the project. Access to the source should be documented and facilitated for new comers to easily come in.

## Support

ID: QM\_SUPPORT

Value: 2 / 5

Description: The amount of knowledge provided when someone asks for support. Having many answers on a single question helps better understand how the product works in different conditions, and also provides help for people looking for a similar information later on, since mailing lists are archived and public.

## Git analysis

```
## Error in as.POSIXct.default(evolve$date): do not know how to convert 'evolve$date' to class "POSIXct"
```

The repository contains a total of 0 commits made by 70 authors. The first commit was made on the d8c2554c7cdd7da989830cc084fe47316e8da206 and the last analysed commits was made on 40f75663f7f9715a6452940005d615b5c1eadda6.

During the last month, there has been 0 commits made by 0 authors.

## Weekly commits

```
## Error in FUN(X[[i]], ...): object 'evol_xts' not found
```

```
## Error in is.xts(x): object 'evol_xts' not found
```

```
## Error in ggplot(evol_xts_commits, aes(x = index(evol_xts_commits), y = commits)): object 'evol_xts_c
```

## Weekly authors

```
## Error in is.xts(x): object 'evol_xts' not found
```

```
## Error in ggplot(evol_xts_authors, aes(x = index(evol_xts_authors), y = authors)): object 'evol_xts_a
```