

Alambic – R analysis document

Boris Baldassari

Contents

Summary	3
Metrics	4
Number of files	5
Maintainability rating	5
Number of forks	5
Number of red jobs	5
Project Commits one year	5
ITS authors last week	5
File complexity	6
Duplicated lines (%)	6
SCM Changed Lines one year	6
SCM Still Open Pull requests one year	6
Number of stars	6
Project authors one year	7
Project committers one year	7
ITS issues updated last month	7
SCM Still Open Pull requests one month	7
Stack Overflow Questions (5Y)	7
User ML Authors	8
User ML Authors	8
ITS issues updated last year	8
Number of critical issues	8
Total complexity	8
Last activity	8
Number of minor issues	9
Number of failed jobs one week	9
Number of major issues	9
ITS Total issues	9
Access information	9
Ratio of green jobs	9
Number of releases	10
SCM Merged Pull requests	10
Test coverage	10
Number of releases	10
Project Commits	10
SCM authors one week	10
SCM Commits one year	11
SCM Changed Lines one week	11
ITS issues created last year	11
User ML Posts	11
Project committers	11
User ML Posts	12
Stack Overflow Answer rate (5Y)	12
Doc information	12
User ML Posts	12

Public documented API (%)	12
Stack Overflow Views (5Y)	12
ITS information	13
ITS Late issues	13
Commented code	13
Package Tangle index	13
Project authors	13
ITS authors last month	14
SCM authors one month	14
User ML Threads	14
Stack Overflow Answers (5Y)	14
Open issues	14
Project Commits one week	15
ITS issues created last week	15
Project committers one week	15
Number of comment lines	15
SCM Commits one week	15
Number of lines of code	16
ITS Authors	16
Project committers one month	16
Sqale Debt ratio	16
Number of yellow jobs	16
User ML Authors	17
Project authors one month	17
Branch coverage	17
SCM committers	17
Public API	17
Project Commits one month	18
Stack Overflow Votes (5Y)	18
SCM Pull requests	18
SCM Commits	18
Stack Overflow Askers (5Y)	18
Number of jobs	19
Number of blocker issues	19
ITS Open issues	19
Number of info issues	19
SCM Commits one month	19
Project authors one week	19
User ML Posts	20
User ML Threads	20
SCM committers one week	20
Line coverage	20
ITS authors last year	20
User ML Threads	20
CI information	21
ITS issues updated last week	21
ITS Pending issues	21
SCM Open Pull requests one year	21
SCM authors	21
SCM authors one year	22
SCM information	22
SCM committers one year	22
User ML Authors	22
SCM Open Pull requests one week	22

Number of statements	23
Number of functions	23
SCM Still Open Pull requests one week	23
Number of green jobs	23
SCM Closed Pull requests	24
SCM Changed Lines	24
SCM Staled Open Pull requests one month	24
Technical debt	24
SCM committers one month	24
User ML Threads	25
SCM Open Pull requests	25
SCM Changed Lines one month	25
ITS issues created last month	25
SCM Open Pull requests one month	25
Comment lines density	26
ITS Open issues (%)	26
Attributes	26
Activity	26
Diversity	26
Documentation	27
Ecosystem	27
Maintainability	27
Process	27
Product	27
Eclipse Maturity	28
Reliability	28
Build and Release Management	28
Configuration Management	28
Support	28
Git analysis	29
Weekly commits	29
Weekly authors	29

Summary

This plugin generates a PDF document with information about project **tools.cdt**.

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	64.00
CI_JOBS_FAILED_1W	3.00
CI_JOBS_GREEN	34.00
CI_JOBS_GREEN_RATIO	85.00
CI_JOBS_RED	3.00
CI_JOBS_YELLOW	3.00
ITS_AUTHORS	4213.00
ITS_AUTHORS_1M	24.00
ITS_AUTHORS_1W	11.00
ITS_AUTHORS_1Y	205.00
ITS_CREATED_1M	41.00
ITS_CREATED_1W	18.00
ITS_CREATED_1Y	437.00
ITS_ISSUES_ALL	21137.00
ITS_OPEN	4704.00
ITS_OPEN_OLD	0.00
ITS_OPEN_PERCENT	22.00
ITS_OPEN_UNASSIGNED	0.00
ITS_UPDATED_1M	41.00
ITS_UPDATED_1W	18.00
ITS_UPDATED_1Y	437.00
MLS_USR_AUTHORS	6881.00
MLS_USR_AUTHORS_1M	47.00
MLS_USR_AUTHORS_1W	19.00
MLS_USR_AUTHORS_1Y	385.00
MLS_USR_POSTS	13534.00
MLS_USR_POSTS_1M	94.00
MLS_USR_POSTS_1W	35.00
MLS_USR_POSTS_1Y	958.00
MLS_USR_THREADS	13534.00
MLS_USR_THREADS_1M	45.00
MLS_USR_THREADS_1W	14.00
MLS_USR_THREADS_1Y	436.00
PROJECT_ACCESS_INFO	1.00
PROJECT_DOC_INFO	5.00
PROJECT_ITS_INFO	5.00
PROJECT_REL_VOL	41.00
PROJECT_SCM_INFO	1.00
SCM_AUTHORS	254.00
SCM_AUTHORS_1M	10.00
SCM_AUTHORS_1W	3.00
SCM_AUTHORS_1Y	39.00
SCM_COMMITS	25960.00
SCM_COMMITS_1M	22.00
SCM_COMMITS_1W	4.00
SCM_COMMITS_1Y	352.00
SCM_COMMITTERS	114.00
SCM_COMMITTERS_1M	9.00
SCM_COMMITTERS_1W	2.00
SCM_COMMITTERS_1Y	29.00
SCM_MOD_LINES	9109767.00
SCM_MOD_LINES_1M	4734.00
SCM_MOD_LINES_1W	94.00
SCM_MOD_LINES_1Y	1363523.00
SO_ANSWERS_VOL_5Y	1088.00
SO_ANSWER_RATE_5Y	0.81
SO_ASKERS_5Y	1041.00
SO_QUESTIONS_VOL_5Y	1349.00
SO_VIEWS_VOL_5Y	690916.00
SO_VOTES_VOL_5Y	1243.00
SQ_COMMENT_LINES	178184.00
SQ_COMR	16.00
SQ_COVERAGE	37.00
SQ_COVERAGE_BRANCH	36.40
SQ_COVERAGE_LINE	37.30
SQ_CPX	229270.00
SQ_CPX_CLASS_IDX	21.90
SQ_CPX_FILE_IDX	29.30
SQ_CPX_FUNC_IDX	3.20
SQ_DUPLICATED_BLOCKS	4240.00
SQ_DUPLICATED_FILES	1240.00
SQ_DUPLICATED_LINES	113842.00
SQ_DUPLICATED_LINES_DENSITY	8.00
SQ_FILES	7833.00
SQ_FUNCS	72600.00
SQ_ISSUES_OPEN	94551.00
SQ_NCLOC	934471.00
SQ_NCLOC_LANG	
SQ_PACKAGES_CYCLES	2130.00
SQ_PACKAGES_TANGLE_IDX	17.50
SQ_PUBLIC_API	40672.00
SQ_PUBLIC_API_DOC_DENSITY	46.10
SQ_PUBLIC_UNDOC_API	21919.00
SQ_RULES	35.00
SQ_SQALE_DEBT_RATIO	6.30
SQ_SQALE_INDEX	1758642.00

Number of files

ID: SQ_FILES

Value: 7833

Description: The total number of files analysed.

Maintainability rating

ID: SQ_SQALE_RATING

Value: 1

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 \leq 5% , B between 6 to 10%, C between 11 to 20%, D between 21 to 50%, and anything over 50% is an E.

Number of forks

ID: PROJECT_FORKS

Value:

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

Number of red jobs

ID: CI_JOBS_RED

Value: 3

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

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).

ITS authors last week

ID: ITS_AUTHORS_1W

Value: 11

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.

File complexity

ID: SQ_CPX_FILE_IDX

Value: 29.3 (3 / 5)

Description: Average complexity by file.

Duplicated lines (%)

ID: SQ_DUPLICATED_LINES_DENSITY

Value: 8 (5 / 5)

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

SCM Changed Lines one year

ID: SCM_MOD_LINES_1Y

Value: 1363523

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).

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).

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.

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).

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).

ITS issues updated last month

ID: ITS_UPDATED_1M

Value: 41 (4 / 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.

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).

Stack Overflow Questions (5Y)

ID: SO_QUESTIONS_VOL_5Y

Value: 1349

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.

User ML Authors

ID: MLS_USR_AUTHORS_1Y

Value: 385

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).

User ML Authors

ID: MLS_USR_AUTHORS

Value: 6881

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).

ITS issues updated last year

ID: ITS_UPDATED_1Y

Value: 437

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.

Number of critical issues

ID: SQ_VIOLATIONS_CRITICAL

Value: 1643

Description: The total number of issues (violations) found by SonarQube with a severity equal to CRITICAL.

Total complexity

ID: SQ_CPX

Value: 229270

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 line counting for each language, see <https://docs.sonarqube.org/display/SONAR/Metrics+-+Complexity>.

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).

Number of minor issues

ID: SQ_VIOLATIONS_MINOR

Value: 22865

Description: The total number of issues (violations) found by SonarQube with a severity equal to MINOR.

Number of failed jobs one week

ID: CI_JOBS_FAILED_1W

Value: 3 (4 / 5)

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

Number of major issues

ID: SQ_VIOLATIONS_MAJOR

Value: 62975

Description: The total number of issues (violations) found by SonarQube with a severity equal to MAJOR.

ITS Total issues

ID: ITS_ISSUES_ALL

Value: 21137

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

Access information

ID: PROJECT_ACCESS_INFO

Value: 1 (3 / 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.

Ratio of green jobs

ID: CI_JOBS_GREEN_RATIO

Value: 85 (4 / 5)

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

Number of releases

ID: PROJECT_REL_VOL

Value: 41 (5 / 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 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.

Test coverage

ID: SQ_COVERAGE

Value: 37 (3 / 5)

Description: Overall test coverage.

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.

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 authors one week

ID: SCM_AUTHORS_1W

Value: 3

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.

SCM Commits one year

ID: SCM_COMMITS_1Y

Value: 352

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 Changed Lines one week

ID: SCM_MOD_LINES_1W

Value: 94

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.

ITS issues created last year

ID: ITS_CREATED_1Y

Value: 437

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.

User ML Posts

ID: MLS_USR_POSTS

Value: 13534

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.

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.

User ML Posts

ID: MLS_USR_POSTS_1W

Value: 35

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.

Stack Overflow Answer rate (5Y)

ID: SO_ANSWER_RATE_5Y

Value: 0.81

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.

Doc information

ID: PROJECT_DOC_INFO

Value: 5 (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.

User ML Posts

ID: MLS_USR_POSTS_1M

Value: 94 (5 / 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.

Public documented API (%)

ID: SQ_PUBLIC_API_DOC_DENSITY

Value: 46.1

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

Stack Overflow Views (5Y)

ID: SO_VIEWS_VOL_5Y

Value: 690916

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.

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.

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.

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.

Package Tangle index

ID: SQ_PACKAGES_TANGLE_IDX

Value: 17.5 (5 / 5)

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

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 month

ID: ITS_AUTHORS_1M

Value: 24 (4 / 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.

SCM authors one month

ID: SCM_AUTHORS_1M

Value: 10 (4 / 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).

User ML Threads

ID: MLS_USR_THREADS_1W

Value: 14

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.

Stack Overflow Answers (5Y)

ID: SO_ANSWERS_VOL_5Y

Value: 1088

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.

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 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.

ITS issues created last week

ID: ITS_CREATED_1W

Value: 18

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.

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.

Number of comment lines

ID: SQ_COMMENT_LINES

Value: 178184

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.

SCM Commits one week

ID: SCM_COMMITS_1W

Value: 4

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.

Number of lines of code

ID: SQ_NCLOC

Value: 934471

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.

ITS Authors

ID: ITS_AUTHORS

Value: 4213

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.

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).

Sqale Debt ratio

ID: SQ_SQALE_DEBT_RATIO

Value: 6.3 (5 / 5)

Description: The Technical Debt Ratio, as defined in Sqale.

Number of yellow jobs

ID: CI_JOBS_YELLOW

Value: 3

Description: The number of yellow (unstable) jobs on the Hudson engine. Yellow jobs in Hudson define unstable builds. According to Hudson'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.

User ML Authors

ID: MLS_USR_AUTHORS_1W

Value: 19

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).

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).

Branch coverage

ID: SQ_COVERAGE_BRANCH

Value: 36.4

Description: Branch test coverage.

SCM committers

ID: SCM_COMMITTERS

Value: 114

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.

Public API

ID: SQ_PUBLIC_API

Value: 40672

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

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).

Stack Overflow Votes (5Y)

ID: SO_VOTES_VOL_5Y

Value: 1243

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.

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.

SCM Commits

ID: SCM_COMMITS

Value: 25960

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 Askers (5Y)

ID: SO_ASKERS_5Y

Value: 1041

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.

Number of jobs

ID: CI_JOBS

Value: 64

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

Number of blocker issues

ID: SQ_VIOLATIONS_BLOCKER

Value: 6 (4 / 5)

Description: The total number of issues (violations) found by SonarQube with a severity equal to BLOCKER.

ITS Open issues

ID: ITS_OPEN

Value: 4704 (5 / 5)

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

Number of info issues

ID: SQ_VIOLATIONS_INFO

Value: 7063

Description: The total number of issues (violations) found by SonarQube with a severity equal to INFO.

SCM Commits one month

ID: SCM_COMMITS_1M

Value: 22 (4 / 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).

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.

User ML Posts

ID: MLS_USR_POSTS_1Y

Value: 958

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 Threads

ID: MLS_USR_THREADS_1M

Value: 45 (5 / 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.

SCM committers one week

ID: SCM_COMMITTERS_1W

Value: 2

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: 37.3

Description: Line test coverage.

ITS authors last year

ID: ITS_AUTHORS_1Y

Value: 205

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.

User ML Threads

ID: MLS_USR_THREADS_1Y

Value: 436

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.

CI information

ID: PROJECT_CI_INFO

Value:

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 issues updated last week

ID: ITS_UPDATED_1W

Value: 18

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.

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).

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).

SCM authors

ID: SCM_AUTHORS

Value: 254

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).

SCM authors one year

ID: SCM_AUTHORS_1Y

Value: 39

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).

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.

SCM committers one year

ID: SCM_COMMITTERS_1Y

Value: 29

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).

User ML Authors

ID: MLS_USR_AUTHORS_1M

Value: 47 (5 / 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).

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.

Number of statements

ID: SQ_STATEMENTS

Value: 428171

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.

Number of functions

ID: SQ_FUNCS

Value: 72600

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.

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.

Number of green jobs

ID: CI_JOBS_GREEN

Value: 34

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

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.

SCM Changed Lines

ID: SCM_MOD_LINES

Value: 9109767

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).

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).

Technical debt

ID: SQ_SQALE_INDEX

Value: 1758642

Description: Effort to fix all maintainability issues. The measure is stored in minutes in the DB.

SCM committers one month

ID: SCM_COMMITTERS_1M

Value: 9

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).

User ML Threads

ID: MLS_USR_THREADS

Value: 13534

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 one month

ID: SCM_MOD_LINES_1M

Value: 4734 (5 / 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).

ITS issues created last month

ID: ITS_CREATED_1M

Value: 41

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 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).

Comment lines density

ID: SQ_COMR

Value: 16

Description: Density of comment lines = Comment lines / (Lines of code + 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

ITS Open issues (%)

ID: ITS_OPEN_PERCENT

Value: 22

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

Attributes

Mnemo	Value
QM_ACTIVITY	4.40
QM_DIVERSITY	4.30
QM_DOC	4.00
QM_ECOSYSTEM	4.50
QM_MAINTAINABILITY	4.50
QM_PROCESS	4.20
QM_PRODUCT	4.20
QM_QUALITY	4.30
QM_RELIABILITY	3.80
QM_REL_ENG	4.50
QM_SCM	4.00
QM_SUPPORT	4.70

Activity

ID: QM_ACTIVITY

Value: 4.4 / 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.

Diversity

ID: QM_DIVERSITY

Value: 4.3 / 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 / 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: 4.5 / 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.

Maintainability

ID: QM_MAINTAINABILITY

Value: 4.5 / 5

Description: The Maintainability of the codebase, as defined in ISO-9126.

Process

ID: QM_PROCESS

Value: 4.2 / 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.

Product

ID: QM_PRODUCT

Value: 4.2 / 5

Description: The maturity of the product itself, from the code perspective. Considering the vast amount and diversity of the projects under the Eclipse umbrella, there must be no single definition of quality to fit them all. However, Eclipse has some recommended practices and concerns about product quality. Projects are then expected to extend this foundation. Major concerns identified for Eclipse products quality are linked to

the development context of the foundation (open source, very large code base and thousands of contributor worldwide), and its architecture (modular stacks of components). It must be highlighted that product quality is not clearly defined on the public wiki, neither for its definition nor for how it may be assessed. Furthermore, almost all product-related rules (with a few exceptions, like for packages naming) are optional guidelines. . Ecosystem requirements have been discussed on the mailing list and during meetings, and have been further described on the Polarsys wiki.

Eclipse Maturity

ID: QM_QUALITY

Value: 4.3 / 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.

Reliability

ID: QM_RELIABILITY

Value: 3.8 / 5

Description: The Reliability of code, as defined in ISO-9126.

Build and Release Management

ID: QM_REL_ENG

Value: 4.5 / 5

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

Configuration Management

ID: QM_SCM

Value: 4 / 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: 4.7 / 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.

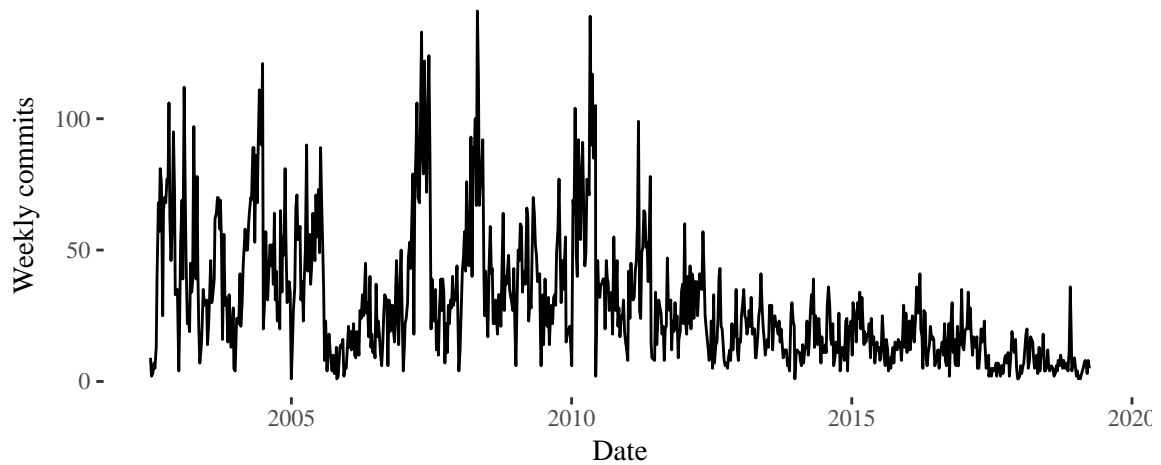
Git analysis

The repository contains a total of 25960 commits made by 254 authors. The first commit was made on the 2002-06-26 and the last analysed commits was made on 2019-03-30.

During the last month, there has been 22 commits made by 10 authors.

Weekly commits

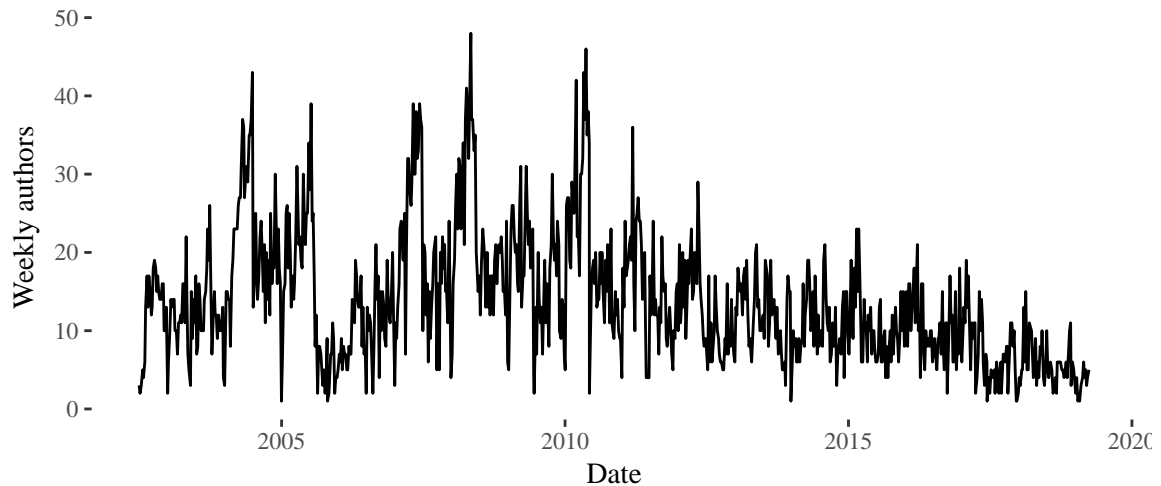
Weekly commits for project



Based on data from Alambic

Weekly authors

Weekly authors for project



Based on data from Alambic