

Project Plan

Unique identifier

- c_uparog

Team members

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Subject of analysis

- Apache Active MQ
- Apache Kafka
- Rabbit MQ

Tools

- Findbugs
- JMeter
- Gatling

Metrics

Testing

- J-Meter - Will be used for Kafka, Apache MQ, RabbitMQ
 - System Metrics
 - Average Messages
 - Latest Sample
 - Median
 - Performance Metrics
 - Throughput
 - Standard Deviation
 - Stress Testing
 - Load Testing
- Gatling - Will be used for Kafka, Apache MQ, RabbitMQ
 - Queries Per second
 - Speed
 - Configuration details
 - Time
 - Throttling

Bug-finding

- FindBugs - Will be used for Kafka, Apache MQ, RabbitMQ
 - Structure
 - Patterns and Anomalies
 - Bad Practices
 - Dead Code
 - Correctness

Miscellaneous Metrics

Please note that the miscellaneous metrics are noted for the reference purpose, not all might be collected, and this certainly shouldn't be considered as an exhaustive list.

- **Discovery** - Essentially includes “are people able to find the project?”
 - The pulse of the project
 - Repo Metrics
 - Forks
 - Stars
 - Commits
 - Branches
 - Releases
 - Issues
 - Open / Closed / Latest
 - This can be done probably using homegrown scripts to crawl the web on a daily basis to collect data. *This idea of homegrown script is a tentative plan if time allows for the possibility.*
- **Usage**
 - How people are using the project and metrics to define that
 - [Libraries.io](https://libraries.io) - Track usage statistics across many popular package managers.
 - [Clone Graph](#)
 - If usage is low compared to the number of people discovering your project, there are two issues to consider. Either:
 - Your project isn't successfully converting your audience, or
 - You're attracting the wrong audience

- **Retention**

- A project maybe be popular but not well supported.
- How well is the project being contributed to (inflow of [new contributions](#))
- Community metrics that can be tracked (if it can be tracked)
 - Total number of contributors and number of contributions (commits)
 - On GitHub, you can view this under “Insights” -> “Contributors.”
 - Right now, this graph only counts contributors who have committed to the default branch of the repository.
 - Frequency of contribution - First time, casual, repeat
 - Without new contributors, your project’s community can become stagnant.
 - Number of open issues and pull requests
 - If the numbers are too high, code reviews might be needed
 - However, total number of **opened** issues would tell that people care about this project.
 - Types of contributions
 - Typo, Bug fixing

- **Maintainer activities**

- Average time an issue remains open
- Whether issues get closed by PRs
- Whether stale issues get closed
- Average time to merge a pull request
 - *This is an optional metric, we would do this only if it is possible to scrape the information, and if time allows us.*

- **Tone of conversation** for the people involved in the project

- Is the development atmosphere positive, negative or neutral?
 - *This is an optional metric, we would do this only if it is possible to scrape the information, and if time allows us.*