Hyperledger Caliper

**Project**

Blockchain benchmark framework which allows users to measure the performance of a specific blockchain implementation with a set of predefined use cases.

**Status**

INCUBATION

**CII Badge**

Logo

**Description**

Caliper will produce reports containing a number of performance indicators, such as TPS (Transactions Per Second), transaction latency, resource utilisation etc. The intent is for Caliper results to be used as a reference in supporting the choice of a blockchain implementation suitable for the user-specific use-cases. Given the variety of blockchain configurations, network setup, as well as the specific use-cases in mind, it is not intended to be an authoritative performance assessment, nor to be used for simple comparative purposes (e.g. blockchain A does 5 TPS and blockchain B does 10 TPS, therefore B is better). The Caliper project references the definitions, metrics, and terminology as defined by the Performance & Scalability Working Group (PSWG).

**Key Characteristics**

- A unified blockchain benchmark framework. We provide a common layer to integrate with major existing blockchain framework/platforms, so that the same benchmarks can be run for different blockchain systems. Some benchmark test environment will be provided to help different people run tests under the same environment, blockchain management tools like Hyperledger Cello could be integrated later to deploy and operate the environment. Also, users can use their existing environment and configure Caliper to run the test under the environment.
- A commonly accepted definition of performance indicators. You cannot compare an apple and a pear directly unless some common criteria are set. We will work closely with PSWG to provide a common definition of performance indicators that users care about, such as TPS, latency, resource utilization, etc.
- A set of commonly accepted benchmark cases. The goal of Caliper includes providing a set of easy-understandable benchmark cases so that each blockchain solution can be compared in various scenarios. This calls for much collaboration from PSWG, Requirement WG and other WG in Hyperledger community as well as blockchain practitioners to cover as many use cases that are of user’s interest as possible.

**Project Management**

Issue Tracking - [https://github.com/hyperledger/caliper/issues](https://github.com/hyperledger/caliper/issues)

**Repositories**

Source code: [https://github.com/hyperledger/caliper](https://github.com/hyperledger/caliper)

Documentation: [https://hyperledger.github.io/caliper/](https://hyperledger.github.io/caliper/)

**Additional Materials**

- Project health charts
- 2019 Hong Kong Bootcamp Tutorial (outdated, pre-publish version)

**License Scan Results**
Security Audit
When Hyperledger Caliper reaches their first major release, Hyperledger will execute an external security audit of the code.

License Audit
2019-03 Caliper License Audit Summary
2019-03 Caliper License Audit Full Report

License Audit Fixes
Hyperledger Caliper License Github Issues

Crypto Audit
Hyperledger Export Notice

Communication

Mailing List
- caliper
- Mail alias: caliper@lists.hyperledger.org
- Mail archive: https://lists.hyperledger.org/g/caliper/topics
- Mail subscription: https://lists.hyperledger.org/g/caliper

Chat (for questions and ephemeral discussions)
- #caliper - General usage questions
- #caliper-contributors - Contributor discussions

Meeting
There is a regular community call every week at UTC time 9am on Wednesday. The exact meeting time can be found in Hyperledger meeting calendar.
- Join from PC, Mac, Linux, iOS or Android: https://zoom.us/my/hyperledger.community
- Or iPhone one-tap:
  - US: +16465588656,,4034983298# or +16699006833,,4034983298#
- Or Telephone:
  - Dial (for higher quality, dial a number based on your current location): US: +1 646 558 8656 or +1 669 900 6833 or +1 855 880 1246 (Toll Free) or +1 877 369 0926 (Toll Free)
  - Meeting ID: 403 498 3298
  - International numbers available: https://zoom.us/u/bAaJoyznp

Minutes
- October 17, 2018 minutes
- October 24, 2018 minutes
- October 30, 2018 minutes
- November 6, 2018 minutes
- November 14, 2018 minutes
- November 21, 2018 minutes
- November 27, 2018 minutes
- December 4, 2018 minutes
- December 19, 2018 minutes
- January 16, 2019 minutes
- March 27, 2019 minutes
- April 3, 2019 minutes
- May 22, 2019 minutes

History
- Proposed by Haojun ZHOU and Victor HU, Huawei
Recent space activity

- **Caliper Development Plan** updated Nov 06, 2019 • view change
- **Hyperledger Caliper** updated Oct 28, 2019 • view change
- **Meeting Notes** updated Jun 12, 2019 • view change
- **2019-06-12 Minutes** created Jun 12, 2019
- **2019-05-29 Minutes** created May 30, 2019

Space contributors

- Attila Klenik (301 days ago)
- David Huseby (467 days ago)
- qinghui hou (493 days ago)
- qinghui hou (517 days ago)
- yu pan (528 days ago)
- ...