Hyperledger Sawtooth

Hyperledger Sawtooth was moved to archived status at the request of the maintainers on Feb 1, 2024. You are welcome to use and contribute to this code, although the maintainers may or may not be responsive to any questions you have. Note that the developers have said they plan to continue making ongoing maintenance releases of this code in the Splinter community at https://www.splinter.dev/.

<table>
<thead>
<tr>
<th>Project</th>
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<tr>
<td>Status</td>
<td>GRADUATED</td>
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<tr>
<td>CI/Badge</td>
<td>blocked URL</td>
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**Description**

Hyperledger Sawtooth offers a flexible and modular architecture separates the core system from the application domain, so smart contracts can specify the business rules for applications without needing to know the underlying design of the core system. Hyperledger Sawtooth supports a variety of consensus algorithms, including Practical Byzantine Fault Tolerance (PBFT) and Proof of Elapsed Time (PoET).

Originally contributed by Intel, Sawtooth is a blockchain suite designed for versatility and scalability. Distributed Ledger Technology has potential in many fields with use cases from IoT to Financials. This architecture recognizes the diversity of requirements across that spectrum. Sawtooth supports both permissioned and permissionless deployments. It includes a novel consensus algorithm, Proof of Elapsed Time (PoET). PoET targets large distributed validator populations with minimal resource consumption. Transaction business logic is decoupled from the consensus layer into Transaction Families that allow for restricted or unfettered semantics.

**Key Characteristics**

- Pluggable consensus algorithms (Change consensus on the fly by transaction)
- Includes Proof of Elapsed Time (PoET) consensus
- Write smart contracts in almost any language
- Ethereum contract support via Hyperledger Burrow integration
- Supply Chain example out of the box
- Parallel transaction execution for added throughput

**Documentation**

- Sawtooth Website
- Main doc

**Repositories**

- Github

**Discord**

To join Hyperledger's Discord, you'll need to do a few things:

1. First, please install and use a client. Using Discord in the browser is the #1 cause of help desk requests.
2. Second, you will need to join the Discord server.
For more details on Hyperledger's Discord instance see: Our chat service.

Channels

There are three Discord channels:

1. #sawtooth - general discussion / Q&A
2. #sawtooth-contributors - contributor discussion
3. #sawtooth-announcements - official announcements

Meetings

Monthly contributor meetings are held on Zoom. You can check the calendar here.

Mailing List

There is a sawtooth mailing list but the most active discussions are on Discord.

Process Notes

- Release Notes: Release notes will be provided for release 1.0 and thereafter.
- The project will follow the Hyperledger security bug process and identify any security vulnerabilities fixed in the release.
  - Security bugs: Security bugs can be reported to security@hyperledger.org.
  - The Sawtooth project will follow the HyperLedger security process and will respond within 14 days.
- Static analysis: The Sawtooth project will follow the Hyperledger security process and address bugs found by static analysis in a timely manner.
- Dynamic analysis: The Sawtooth project will perform dynamic analysis prior to major releases will follow the Hyperledger security process and address bugs found by static analysis in a timely manner.

History

- Proposed by Mic Bowman, Intel Corporation (mic.bowman@intel.com) and Richard Gendal Brown, R3cev
- Approved by the TSC on April 14, 2016
- Moved out of Incubation on May 18, 2017
  - Request
  - TSC Approval
- TSC Updates
  - Hyperledger Sawtooth Update, October 2018
  - Hyperledger Sawtooth Update, July 2018
  - Hyperledger Sawtooth Update, Apr 2018
  - Hyperledger Sawtooth Update, Jan 2018
  - Hyperledger Sawtooth Update, Oct 2017

Recent space activity

- Ry Jones
  Hyperledger Sawtooth updated Feb 01, 2024 view change

- Mark Carroll
  Mentions of Raft among Sawtooth Documentation commented Jul 31, 2023

- Kevin O’Donnell
  Mentions of Raft among Sawtooth Documentation created Jul 31, 2023

Space contributors

- Ry Jones (117 days ago)
- Mark Carroll (303 days ago)
- Kevin O’Donnell (308 days ago)
- Ryan Roberts (308 days ago)
- Andrea Gunderson (308 days ago)
- ...