Hyperledger Iroha

<table>
<thead>
<tr>
<th>Project</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="https://github.com/hyperledger/iroha/blob/master/images/iroha.png" alt="Hyperledger Iroha" /></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Status</th>
<th>GRADUATED</th>
</tr>
</thead>
<tbody>
<tr>
<td>CII Badge</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Distributed ledger in C++</th>
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</table>

Iroha is a distributed ledger project, that aims to provide a development environment where C++ and mobile application developers could contribute to Hyperledger. The project seeks to complement Fabric, Sawtooth, and other potential projects, being a framework with pre-defined set of commands, permissions and queries that can be used with various client libraries to easily create applications for desktop and mobile platforms.

Iroha is inspired by Japanese *Kaizen* principle — eliminate excessiveness (*muri*). Iroha has essential functionality for asset, information or identity management, at the same time being an efficient and trustworthy byzantine fault-tolerant tool for your enterprise needs.

**Key Characteristics**

Permissioned network; written in C++; Client libraries in Java, Python, JS, Swift; BFT consensus algorithm YetAnotherConsensus (YAC); ready-to-use set of commands and queries, Multi-signature transactions.

**Documentation**

- README
- Wiki
- Documentation

**Project Management**

Proposals can be created in Jira or suggested and discussed in chat. Those who can implement the proposals then write the code. If people want to know what to work on, they can ask in a special contributors chat or create an issue to get attention. Github projects are used to manage release versions.

**Repositories**

- iroha (core project)
- iroha-ios (iOS SDK)
- iroha-android (Android SDK)
- iroha-javascript (JavaScript SDK)
- iroha-python (Python SDK)
- https://github.com/hyperledger/iroha-ed25519
- https://github.com/hyperledger/iroha-scala
- https://github.com/hyperledger/iroha-dotnet
- https://github.com/hyperledger/iroha-java
Archived

- iroha-ametsuchi (flatbuffer database)

Communication

Mailing List

- iroha

Chat (for questions and ephemeral discussions)

- #iroha
  - Gitter
  - Telegram

Meeting

- https://lists.hyperledger.org/g/iroha/calendar - join us for bi-weekly meetings!

Related Pages

- iroha.tech

History

- Proposed by Makoto Takemiya (Soramitsu), Toshiya Cho (Hitachi), Takahiro Inaba (NTT Data), and Mark Smargon (Colu)
- Approved by the TSC on October 13, 2016
- Moved out of Incubation on May 18, 2017
  - Request
  - Approval

Good first issues

<table>
<thead>
<tr>
<th>Key</th>
<th>Summary</th>
<th>T</th>
<th>Assignee</th>
<th>P</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR-999</td>
<td>Change constructors api from <code>new(t: T)</code> to <code>new(t: impl Into&lt;T&gt;)</code></td>
<td>✔</td>
<td>Unassigned</td>
<td></td>
<td>TO DO</td>
</tr>
<tr>
<td>IR-942</td>
<td>Edit doc comments to have actual link to types.</td>
<td>✔</td>
<td>Unassigned</td>
<td></td>
<td>TO DO</td>
</tr>
<tr>
<td>IR-822</td>
<td>Add size checks to CI</td>
<td>✔</td>
<td>Unassigned</td>
<td></td>
<td>TO DO</td>
</tr>
<tr>
<td>IR-739</td>
<td>Add Kura benchmarks</td>
<td>✔</td>
<td>Unassigned</td>
<td></td>
<td>TO DO</td>
</tr>
<tr>
<td>IR-709</td>
<td>Replace boost:: optional and variant with std:: in irohad</td>
<td>✔</td>
<td>Joseph Nicholas Alcantara</td>
<td>IN PROGRESS</td>
<td></td>
</tr>
<tr>
<td>IR-438</td>
<td>(Re)Move TransactionSequence classes</td>
<td>✔</td>
<td>Unassigned</td>
<td></td>
<td>TO DO</td>
</tr>
<tr>
<td>IR-402</td>
<td>Remove unwanted public key format validation from unit tests</td>
<td>✔</td>
<td>Unassigned</td>
<td></td>
<td>TO DO</td>
</tr>
<tr>
<td>IR-398</td>
<td>Add information about used ports in Deployment documentation</td>
<td>✔</td>
<td>Unassigned</td>
<td></td>
<td>TO DO</td>
</tr>
</tbody>
</table>
IR-324  Rework YAC-related unit tests to use supermajority checker mock  
☑️  Unassigned  

IR-280  Fix UB sanitizer issues (Segfaults) and identify false positives  
⚠️  Unassigned  

IR-279  Fix data race sanitizer issues (thread sanitizer) and identify false positives  
⚠️  Unassigned  

IR-278  Fix AddressLeak sanitizer issues and identify false positives  
⚠️  Unassigned  

IR-257  Make a MockBlockStore possible in Storage  
☑️  Unassigned  

IR-240  Create python examples: can_add/subtract_domain_asset_qty  
☑️  Unassigned  

IR-197  Unnecessary Protobuf backend usage in irohad  
🔼  Unassigned  

IR-122  Leave default value if some of env value IROHA_POSTGRES_* do not exist  
⚠️  Unassigned  

IR-81  Wrong response on getAccountAssetTransactions query (a non-existing account or asset)  
⚠️  Unassigned  

IR-80  Force peer check that it is launched with the same key as it has in genesis block  
🔼  Unassigned  

IR-78  Genesis block should pass stateless validation  
🔼  Unassigned  

19 issues

Examples of additions for this page - based on Sara Garifullina request to enliven the page:

- Task lists can be assigned user etc.
- This is already in use for pages for validating an action is complete

Example Poll

@KellyCooper for poll request additions

Yes, this location works for a poll

No, arrange for a poll to be added to the template

I think it would be great if we move it to the pool example page and there

Also, charts, galleries, roadmap planner, etc. If you have data or content I can mock up.

Recent space activity

Egor Ikvov
Iroha Configuration commented May 13, 2021

Rinat Kharisov
Scheme generation of model-objects updated May 11, 2021

Space contributors

- Rinat Kharisov (11 days ago)
- Aler Denisov (17 days ago)
- Ry Jones (28 days ago)
- Ivan Rybin (37 days ago)
- Aleksandr Denisov (46 days ago)
- ...