Integration of EVM (from Hyperledger Burrow) to Hyperledger Iroha
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Integration of Burrow EVM to Iroha

› Introduction

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› **Hyperledger project:** Hyperledger Iroha and Hyperledger Burrow
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Project Description:

- **Hyperledger Iroha** — straightforward and simple DLT.
  - Asset management via special commands.
  - Technologies: C++, Protobuf, GTest, Boost

- **Hyperledger Burrow** — a modular blockchain client.
  - Technologies: Go, Protobuf.

Ethereum de-facto is the most popular smart contract platform. The task is to integrate EVM from Hyperledger Burrow to Hyperledger Iroha.
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› Project Objectives:

› Obj 1: Add new Iroha command to work with EVM bytecode.

› Obj 2: Develop a wrapper to bind Iroha and Burrow EVM runtimes.

› Obj 3: Implement Burrow EVM API to use Iroha blockchain state.

› Obj 4: Perform testing.
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Project Deliverables:

- Deliverable 1: Updated Iroha code with new command.
- Deliverable 2: A wrapper to connect Iroha and Burrow.
- Deliverable 3: Tests.
- Deliverable 4: A user guide how to use smart contracts in Iroha.
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Project Execution & Accomplishments:
Done:
○ New command is integrated.
○ Burrow EVM can read/write data from Iroha.
○ Most of the tests are written.

Should be done (keep working on them with Iroha team):
○ Run ERC-20 token smart contract as a test.
○ User guide.
○ Pull-request to Iroha repository.

Challenges:
○ Understanding codebases.
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› Recommendations for future work:

Features and improvements:

○ Implement web3 Ethereum interface

○ Add permissions for Iroha/EVM accounts

○ Catch EVM logs and events
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