We're pretty close to finalizing our encryption protocol:

github.com

enigmampc/EnigmaBlockchain/blob/master/docs/encryption-specs.md

Implementing the Secret in Contracts

:warning: This is a very advanced WIP.

- Implementing the Secret in Contracts
- Bootstrap Process
- consensus seed
- Key Derivation
 - consensus seed exchange privkey
 - consensus io exchange privkey
 - consensus state ikm
 - o consensus state iv
- Bootstrap Process Epilogue
- Node Startup
- New Node Registration
- On the new node
- On the consensus layer, inside the Enclave of every full node
 - seed exchange key
 - Sharing consensus seed with the new node
- Back on the new node, inside its Enclave

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This' document includes:

- 1. Bootstrapping the network
- 2. Registration of new nodes
- 3. Contracts state encryption
- 4. Contracts inputs and outputs encryption

Still not finished:

- 1. How network upgrades can occur without losing state and tx input/output history.
- 2. How to generate contract_id

in a trusted way, to prevent two contracts having the same encryption key this section).

We'd love to get your feedback on this!

So please ask us hard questions, including about all of the "TODO reasoning" and about attack vectors.

List of previous discussions: https://github.com/enigmampc/EnigmaBlockchain#implementation-discussions