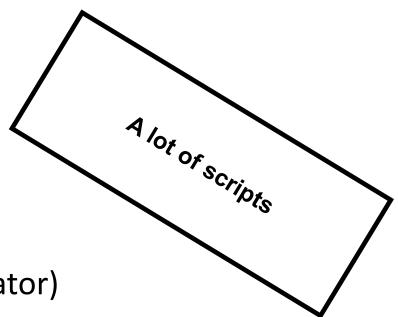


Hyperledger Fabric Moving from MVP to Production

Shift focus from functionality to operateability.

Fixing your technical depths

- Cryptogen
- On-, Offboarding
- Security (TLS, HSM)
- Performance
- Availability
- Maintainability
- Deployment (there is no blockchain administrator)
- Consensus (solo to kafka)
- Privacy
- •



Goals

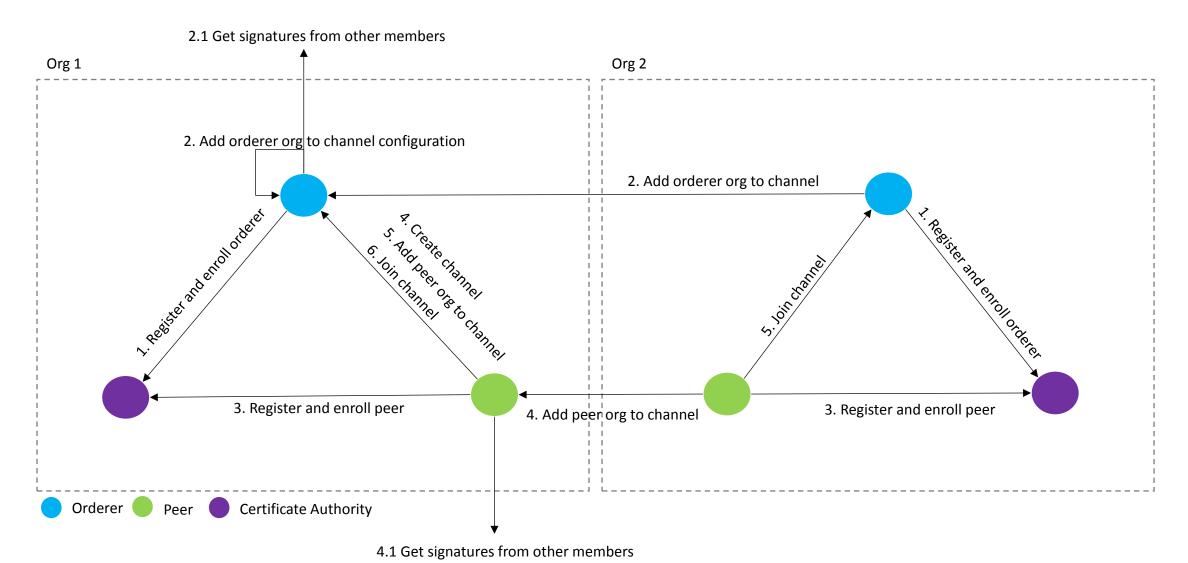
- Bootstrapping a business network should be possible by running a single command.
- The network should be manageable without a UI.
- The network should be horizontally scaleable (auto-scaling).
- Participating in a business network should be possible by running a single command.

Assumptions

 All negotiations for an organization to join a network are performed off blockchain.

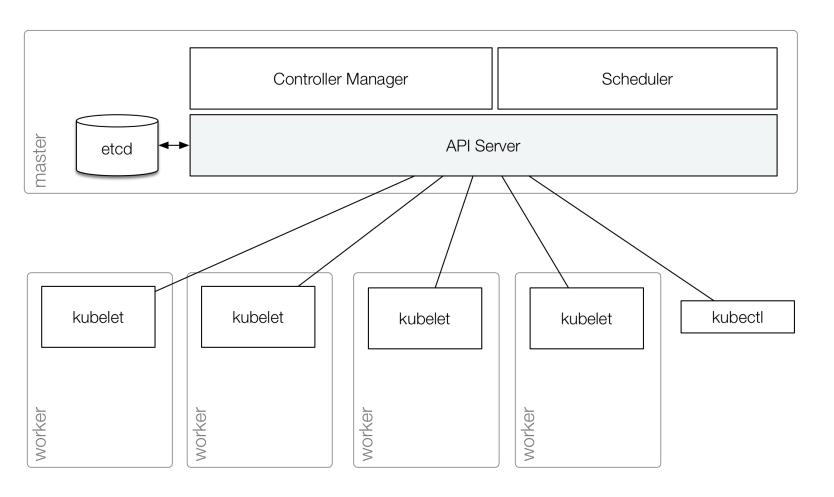
- Once an organization has been accepted, it will get access to a deliverable so that the organization can ...
 - Perform plausibility checks on the smart contract.
 - Connect itself to the network and bootstrap its node.

Bootstrapping a network



Kubernetes recap

cloud agnostic service orchestration



Key resource types

- Pod (manages containers)
- Replication controller / Replica set
- Deployment / Stateful set
- Service
- Config map
- Persistent Volume (Claims)

Namespace

Stateful Set: orderer Stateful Set: peer Deployment: chaincode-sync Deployment hyperledger/fabric-ca:1.3.0 hyperledger/fabric-peer:1.3.0 hyperledger/fabric-orderer:1.3.0 k8s.gcr.io/git-sync-amd64:v2.0.6 Pods hyperledger/fabric-couchdb:0.4.10 richardholzeis/member Joins the peer to the channel and deploys changed chaincode. richardholzeis/crypto richardholzeis/crypto Generates the crypto materials according to the MSP directory. Init Creates the genesis block for the richardholzeis/configtx Creates the channel (if not existing) and orderer. adds the MSP to the config. artifacts ca-cert + crypto materials + channel artifacts + default.block runtime data runtime data Contains all certificates (ca, orderer and Contains a clone of the chaincode peers) and is accessible within the repository and is monitored for changes ca-cert namespace. by the network container. ca-cert Contains the credentials for interacting with the fabric ca. Contains the configtx.yaml

Volumes

Config

- Demo -