Fabric Network

Fabric-samples

➔ **curl -sSLO https://raw.githubusercontent.com/hyperledger/fabric/main/scripts/install-fabric.sh && chmod +x install-fabric.sh**

➔ **./install-fabric.sh -f 2.5.3 -c 1.5.6**

- Download the fabric-samples
- Install the Hyperledger Fabric platform-specific binaries and config files for the version specified into the /bin and /config directories of fabric-samples
- Download the Hyperledger Fabric docker images for the version specified

sudo cp fabric-samples/bin/* /usr/local/bin

test-network Architecture

- No of Orgs : 2
  - Org1 - 1 peer (peer0.org1.example.com)
  - Org2 - 1 peer (peer0.org2.example.com)
- Ordering Service : raft (Single Node - orderer.example.com)
- Database Type - CouchDB (couchdb0, couchdb1)
- Certificate Authority : Separate CA for org1, org2 and orderer
  - ca_org1
  - ca_org2
  - ca_orderer

Steps to set-up a fabric network

- Build the network
  - Generate the crypto material (fabric-ca or cryptogen)
  - Generate the genesis block
  - Bring up the components (2 orgs with 1 peer each and 1 orderer)
  - Create channel and join the orderers
  - Join the peers to the created channel
  - Anchor peer update
- Deploy the chaincode
  - Package the chaincode
  - Install the packaged chaincode to selected peers
  - Approve chaincode with chaincode definition
  - Commit the chaincode to the channel
- Invoke/Query the chaincode

Dive onto the files

There are four important files before we bootstrap the network.

- **docker-compose-ca.yaml** - Used to generate the certificates for the organizations.
- **registerEnroll.sh** - Script file used to register and enroll users, and organize the certificates.
- **docker-compose-2org.yaml** - Used to define the containers of Network components.
- **configtx.yaml** - Contains the configuration.

THANK YOU