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Assignment No. 2: Create Hyperledger Fabric Network and create a channel manually

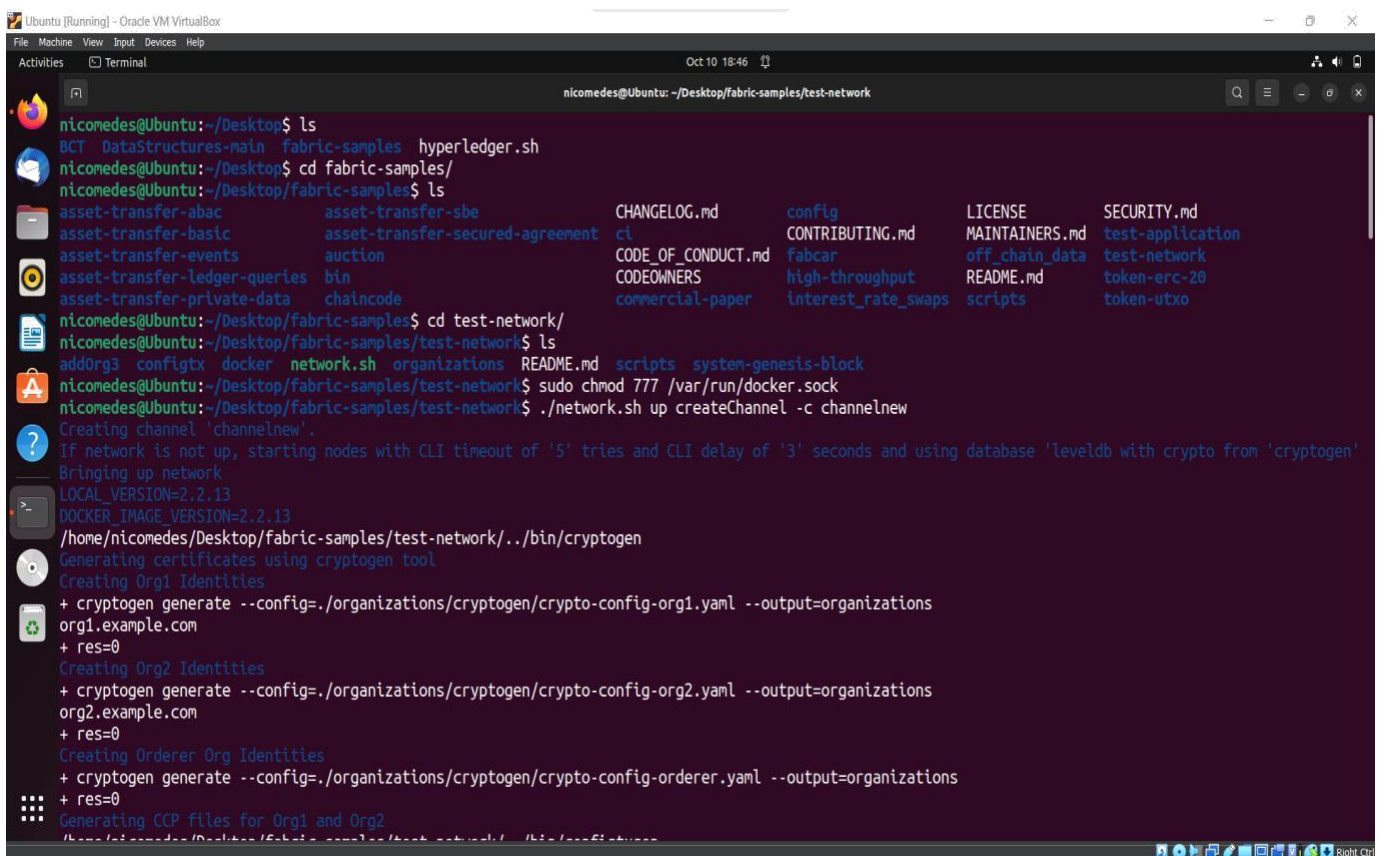
Open the folder “fabric-samples” in terminal

Set path to “test-network” folder in fabric-samples

```
Cd fabric-samples/test-network
```

Then execute following command to create channel

```
./network.sh up createChannel -c <channelname>
```



```
nicomedes@Ubuntu: ~/Desktop$ ls
BCT DataStructures-main fabric-samples hyperledger.sh
nicomedes@Ubuntu: ~/Desktop$ cd fabric-samples/
nicomedes@Ubuntu: ~/Desktop/fabric-samples$ ls
asset-transfer-abac      asset-transfer-sbe      CHANGELOG.md             config                    LICENSE                   SECURITY.md
asset-transfer-basic     asset-transfer-secured-agreement  ci                        CONTRIBUTING.md           MAINTAINERS.md           test-application
asset-transfer-events    auction                  CODE_OF_CONDUCT.md       fabcar                    off_chain_data           test-network
asset-transfer-ledger-queries  bin                      CODEOWNERS                high-throughput           README.md                 token-erc-20
asset-transfer-private-data  chaincode                commercial-paper          interest_rate_swaps       scripts                   token-utxo
nicomedes@Ubuntu: ~/Desktop/fabric-samples$ cd test-network/
nicomedes@Ubuntu: ~/Desktop/fabric-samples/test-network$ ls
addOrg3 configtx docker network.sh organizations README.md scripts system-genesis-block
nicomedes@Ubuntu: ~/Desktop/fabric-samples/test-network$ sudo chmod 777 /var/run/docker.sock
nicomedes@Ubuntu: ~/Desktop/fabric-samples/test-network$ ./network.sh up createChannel -c channelnew
Creating channel 'channelnew'.
If network is not up, starting nodes with CLI timeout of '5' tries and CLI delay of '3' seconds and using database 'leveldb with crypto from 'cryptogen'
Bringing up network
LOCAL_VERSION=2.2.13
DOCKER_IMAGE_VERSION=2.2.13
/home/nicomedes/Desktop/fabric-samples/test-network/./bin/cryptogen
Generating certificates using cryptogen tool
Creating Org1 Identities
+ cryptogen generate --config=./organizations/cryptogen/crypto-config-org1.yaml --output=organizations
org1.example.com
+ res=0
Creating Org2 Identities
+ cryptogen generate --config=./organizations/cryptogen/crypto-config-org2.yaml --output=organizations
org2.example.com
+ res=0
Creating Orderer Org Identities
+ cryptogen generate --config=./organizations/cryptogen/crypto-config-orderer.yaml --output=organizations
+ res=0
Generating CCP files for Org1 and Org2
/home/nicomedes/Desktop/fabric-samples/test-network/./bin/cryptogen
```

```
Ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal
Oct 10 18:46
nicomedes@Ubuntu: ~/Desktop/fabric-samples/test-network

2023-10-10 13:16:07.444 UTC [channelCmd] fetch -> INFO 003 Retrieving last config block: 1
2023-10-10 13:16:07.446 UTC [cli.common] readBlock -> INFO 004 Received block: 1
Decoding config block to JSON and isolating config to Org2MSPconfig.json
+ jq '.data.data[0].payload.data.config'
+ configtxlator proto_decode --input config_block.pb --type common.Block
Generating anchor peer update transaction for Org2 on channel channelnew
+ jq '.channel_group.groups.Application.groups.Org2MSP.values += {"AnchorPeers":{"mod_policy": "Admins","value":{"anchor_peers": [{"host": "peer0.org2.e
xample.com","port": 9051}]}},"version": "0"}' Org2MSPconfig.json
+ configtxlator proto_encode --input Org2MSPconfig.json --type common.Config
+ configtxlator proto_encode --input Org2MSPmodified_config.json --type common.Config
+ configtxlator compute_update --channel_id channelnew --original original_config.pb --updated modified_config.pb
+ configtxlator proto_decode --input config_update.pb --type common.ConfigUpdate
+ jq .
++ cat config_update.json
+ echo '{"payload":{"header":{"channel_header":{"channel_id":"channelnew","type":2},"data":{"config_update":{"channel_id":"channelnew","isola
ted_data":{"groups":{"Application":{"groups":{"Org2MSP":{"groups":{"mod_policy":"","policy":null,"version":"0"},"Endorsement":{"mod_policy":"","policy":null,
"version":"0"},"Readers":{"mod_policy":"","policy":null,"version":"0"},"Writers":{"mod_policy":"","policy":null,"version":"0"},"values":{"MSP":{"mod_policy":"","value":null,"version":"0"},"mod_policy":"","policies":{"values":{"version":"1"},"mod_policy":"","policies":{"values":
{"version":"0"},"write_set":{"groups":{"Application":{"groups":{"Org2MSP":{"groups":{"mod_policy":"","policy":null,"version":"0"},"Readers":{"mod_policy":"","policy":null,"version":"0"},"Writers":{"mod_pol
icy":"","policy":null,"version":"0"},"values":{"AnchorPeers":{"mod_policy":"Admins","value":{"anchor_peer
s":[{"host":"peer0.org2.example.com","port":9051}]},"version":"0"},"MSP":{"mod_policy":"","value":{"n
l,"version":"0"},"version":"1"},"mod_policy":"","policies":{"values":{"version":"1"},"mod
_policy":"","policies":{"values":{"version":"0"}}}}}}}}'
+ configtxlator proto_encode --input config_update_in_envelope.json --type common.Envelope
2023-10-10 13:16:07.737 UTC [channelCmd] InitCmdFactory -> INFO 001 Endorser and orderer connections initialized
2023-10-10 13:16:07.754 UTC [channelCmd] update -> INFO 002 Successfully submitted channel update
Anchor peer set for org 'Org2MSP' on channel 'channelnew'
Channel 'channelnew' joined
nicomedes@Ubuntu:~/Desktop/fabric-samples/test-network$
```