

Network Setup Instructions

1) Need to install latest hyperledger fabric(1.4.3) and composer setup

bin folder is empty due to size limitation, so please Copy & extract zip from the shared location: https://drive.google.com/open?id=1ZTyxQJtrTkIluYHEnnLmI_hASxc7mGM9

2) Arrange the files as per below directory structure and run the commands from the directory reliance-network

bin[directory]

- all the binaries

reliance-network[directory]

- base [direcory]

 - docker-compose-base.yaml

 - peer-base.yaml

- channel-artifacts [directory]

 - channel.tx

 - genesis.block

 - RelianceCapitalanchors.tx

 - RelianceCommunicationsanchors.tx

 - RelianceEntertainmentanchors.tx

 - RelianceInfrastructureanchors.tx

 - ReliancePoweranchors.tx

- crypto-config [directory]

 - ordererOrganizations[directory]

 - peerOrganizations[directory]

- configtx.yaml

- crypto-config.yaml

- docker-compose.yaml

Already ran **Step 3** and created channel-artifacts,crypto-config and updated all the private keys in docker-compose.yaml. **If Step 3 is executing please update the private keys in docker-compose.yaml accordingly.**

3) Execute below commands which will create all the transaction files

```
export CHANNEL_NAME=reliancechannel
```

```
../bin/cryptogen generate --config crypto-config.yaml
```

```
../bin/configtxgen -profile OrdererGenesis -outputBlock ./channel-artifacts/genesis.block
```

```
../bin/configtxgen -profile ChannelFiveOrgs -outputCreateChannelTx ./channel-artifacts/channel.tx  
-channelID $CHANNEL_NAME
```

```
../bin/configtxgen -profile ChannelFiveOrgs -outputAnchorPeersUpdate  
./channel-artifacts/RelianceInfrastructureanchors.tx -channelID $CHANNEL_NAME -asOrg  
RelianceInfrastructureMSP
```

```
../bin/configtxgen -profile ChannelFiveOrgs -outputAnchorPeersUpdate  
./channel-artifacts/ReliancePoweranchors.tx -channelID $CHANNEL_NAME -asOrg  
ReliancePowerMSP
```

```
../bin/configtxgen -profile ChannelFiveOrgs -outputAnchorPeersUpdate  
./channel-artifacts/RelianceCommunicationsanchors.tx -channelID $CHANNEL_NAME -asOrg  
RelianceCommunicationsMSP
```

```
../bin/configtxgen -profile ChannelFiveOrgs -outputAnchorPeersUpdate  
./channel-artifacts/RelianceEntertainmentanchors.tx -channelID $CHANNEL_NAME -asOrg  
RelianceEntertainmentMSP
```

```
../bin/configtxgen -profile ChannelFiveOrgs -outputAnchorPeersUpdate  
./channel-artifacts/RelianceCapitalanchors.tx -channelID $CHANNEL_NAME -asOrg  
RelianceCapitalMSP
```

4)execute below command

```
docker-compose -f docker-compose.yaml up
```

if execution timedout with slow connection, try below command

```
COMPOSE_HTTP_TIMEOUT=200 docker-compose -f docker-compose.yaml up
```

5)open a new terminal and check the docker container status using below command

```
docker ps -a
```

if all the network up then we will can see 17 network up and running

6)now login to the CLI container using the following command:

```
docker exec -it cli bash
```

7)Execute below steps in CLI terminal, which will create the channel

```
export CHANNEL_NAME=reliancechannel
```

```
peer channel create -o orderer.reliance-network.com:7050 -c $CHANNEL_NAME -f ./channel-  
artifacts/channel.tx --tls --cafile  
/opt/gopath/src/github.com/hyperledger/fabric/peer/crypto/ordererOrganizations/reliance-  
network.com/orderers/orderer.reliance-network.com/msp/tlscacerts/tlsca.reliance-network.com-  
cert.pem
```

8)To connect with all peers and join a network, we have to join the anchor peers of all the organization. To join RelianceInfrastructure organization execute below command

```
CORE_PEER_MSPCONFIGPATH=/opt/gopath/src/github.com/hyperledger/fabric/peer/crypto/peerOrganizations/infrastructure.reliance-network.com/users/Admin@infrastructure.reliance-network.com/msp
```

```
CORE_PEER_ADDRESS=peer0.infrastructure.reliance-network.com:7051
```

```
CORE_PEER_LOCALMSPID="RelianceInfrastructureMSP"
```

```
CORE_PEER_TLS_ROOTCERT_FILE=/opt/gopath/src/github.com/hyperledger/fabric/peer/crypto/peerOrganizations/infrastructure.reliance-network.com/peers/peer0.infrastructure.reliance-network.com/tls/ca.crt
```

```
peer channel join -b reliancechannel.block
```

9)To join ReliancePower organization execute below command

```
CORE_PEER_MSPCONFIGPATH=/opt/gopath/src/github.com/hyperledger/fabric/peer/crypto/peerOrganizations/power.reliance-network.com/users/Admin@power.reliance-network.com/msp
```

```
CORE_PEER_ADDRESS=peer0.power.reliance-network.com:9051
```

```
CORE_PEER_LOCALMSPID="ReliancePowerMSP"
```

```
CORE_PEER_TLS_ROOTCERT_FILE=/opt/gopath/src/github.com/hyperledger/fabric/peer/crypto/peerOrganizations/power.reliance-network.com/peers/peer0.power.reliance-network.com/tls/ca.crt
```

```
peer channel join -b reliancechannel.block
```

10)To join RelianceCommunications organization execute below commands

```
CORE_PEER_MSPCONFIGPATH=/opt/gopath/src/github.com/hyperledger/fabric/peer/crypto/peerOrganizations/communications.reliance-network.com/users/Admin@communications.reliance-network.com/msp
```

```
CORE_PEER_ADDRESS=peer0.communications.reliance-network.com:11051
```

```
CORE_PEER_LOCALMSPID="RelianceCommunicationsMSP"
```

```
CORE_PEER_TLS_ROOTCERT_FILE=/opt/gopath/src/github.com/hyperledger/fabric/peer/crypto/peerOrganizations/communications.reliance-network.com/peers/peer0.communications.reliance-network.com/tls/ca.crt
```

```
peer channel join -b reliancechannel.block
```

11)To join RelianceEntertainment organization execute below commands

```
CORE_PEER_MSPCONFIGPATH=/opt/gopath/src/github.com/hyperledger/fabric/peer/crypto/peerOrganizations/entertainment.reliance-network.com/users/Admin@entertainment.reliance-network.com/msp
```

```
CORE_PEER_ADDRESS=peer0.entertainment.reliance-network.com:13051
```

```
CORE_PEER_LOCALMSPID="RelianceEntertainmentMSP"
```

```
CORE_PEER_TLS_ROOTCERT_FILE=/opt/gopath/src/github.com/hyperledger/fabric/peer/
crypto/peerOrganizations/entertainment.reliance-network.com/peers/peer0.entertainment.reliance-
network.com/tls/ca.crt
```

```
peer channel join -b reliancechannel.block
```

12) To join RelianceCapital organization execute below commands

```
CORE_PEER_MSPCONFIGPATH=/opt/gopath/src/github.com/hyperledger/fabric/peer/crypto/
peerOrganizations/capital.reliance-network.com/users/Admin@capital.reliance-network.com/msp
CORE_PEER_ADDRESS=peer0.capital.reliance-network.com:15051
CORE_PEER_LOCALMSPID="RelianceCapitalMSP"
CORE_PEER_TLS_ROOTCERT_FILE=/opt/gopath/src/github.com/hyperledger/fabric/peer/
crypto/peerOrganizations/capital.reliance-network.com/peers/peer0.capital.reliance-network.com/
tls/ca.crt
```

```
peer channel join -b reliancechannel.block
```

This will create a fabric network with all the five organization and orderer!!!

Note: -

* To stop network run below command
docker-compose -f docker-compose.yaml down

*To run once again delete all the docker content using below commands
docker volume prune
docker network prune
docker system prune