TP objectives:

1/ Setup Hyperledger Explorer environment

2/ Start Explorer

3/ Check Blockchain network « logistic »

TP:

1.   Setup environment

a) Configure environment

• Run command **[1]** ;

> **[1] #git clone https://github.com/hyperledger/blockchain-explorer**

• Run command **[2]** ; create directory « crypto »

> **[2] #mkdir examples/dockerConfig/crypto**

• Run command **[3]** ;

Copy from initial project the crypto-material to explorer.

> **[3] #mv ../hyperledger_bc_intro/crypto-config examples/dockerConfig/crypto**

Edit file : {explorer-root}/examples/dockerConfig/**config.json**

a) Configure network

Adapt file « config.json » :

Adapt the **network section** :

```
"network-1": {                                                    2/5
 "version": "1.0",
 "clients": {
  "client-1": {
   "tlsEnable": true,
   "organization": "Org1MSP",
   "channel": "mychannel",
   "credentialStore": {
    "path": "./tmp/credentialStore_Org1/credential",
    "cryptoStore": {
     "path": "./tmp/credentialStore_Org1/crypto"
    }
   }
```

- Replace network by « logistic_sfeirntw »
- Set the flag « **tlsEnable** » value to **false**.
- Replace « **organization** » value by « **ShopMSP** »
- Replace « **channel** » value by « **sfeircc** »

Adapt the **channels section** :

```
"channels": {
 "mychannel": {
  "peers": {
   "peer0.org1.example.com": {}
  },
  "connection": {
   "timeout": {
    "peer": {
     "endorser": "6000",
     "eventHub": "6000",
     "eventReg": "6000"
    }
   }
  }
```

- Replace «**peers** » object by « **peer0.shop.sfeir.lu** »

Adapt the **organizations section** :

```
"Org1MSP": {
 "mspid": "Org1MSP",
 "fullpath": false,
 "adminPrivateKey": {
  "path":
   "/tmp/crypto/peerOrganizations/org1.example.com/users/Admin@org1.example.com/msp/keystore"
 },
 "signedCert": {
  "path":
   "/tmp/crypto/peerOrganizations/org1.example.com/users/Admin@org1.example.com/msp/signcerts"
 }
},
```

```
  "Org2MSP": {
   "mspid": "Org2MSP",
   "adminPrivateKey": {
    "path":
      "/tmp/crypto/peerOrganizations/org2.example.com/users/Admin@org2.example.com/msp/keystore"
   }
  },
  "OrdererMSP": {
   "mspid": "OrdererMSP",
   "adminPrivateKey": {
    "path":
      "/tmp/crypto/ordererOrganizations/example.com/users/Admin@example.com/msp/keystore"
   }
  }
```

- Replace « **mspid** » value by « **ShopMSP** » or « **WarehourseMSP** » or
« **OrdererMSP** »
- Adapt « **adminPrivateKey** » respectively by :

(shop)
/tmp/crypto/crypto-config/peerOrganizations/shop.sfeir.lu/users/Admin@shop.sfeir.lu/msp/keystore
(warehouse)
/tmp/crypto/crypto-config/peerOrganizations/warehouse.sfeir.lu/users/Admin@warehouse.sfeir.lu/msp/keystore

(orderer)
/tmp/crypto/crypto-config/ordererOrganizations/sfeir.lu/users/Admin@sfeir.lu/msp/keystore

- Adapt « **signedCert** » respectively by :
(shop)
/tmp/crypto/crypto-config/peerOrganizations/shop.sfeir.lu/users/Admin@shop.sfeir.lu/msp/signcerts

Adapt the **peers section** :

Remove sub section for peer : « **peer1.org1.example.com** » and
« **peer1.org2.example.com** » (keep other sub sections)

```
  "peers": {
   "peer0.org1.example.com": {
    "tlsCACerts": {
     "path":
       "/tmp/crypto/peerOrganizations/org1.example.com/peers/peer0.org1.example.com/tls/ca.crt"
    },
    "url": "grpcs://localhost:7051",
    "eventUrl": "grpcs://localhost:7053",
    "grpcOptions": {
     "ssl-target-name-override": "peer0.org1.example.com"
    }
   },
   "peer0.org2.example.com": {
    "tlsCACerts": {
     "path":
       "/tmp/crypto/peerOrganizations/org2.example.com/peers/peer0.org2.example.com/tls/ca.crt"
    },
    "url": "grpcs://localhost:9051",
    "eventUrl": "grpcs://localhost:9053",
    "grpcOptions": {
```

```
      "ssl-target-name-override": "peer0.org2.example.com"
    }
  },
 "orderers": {
   "orderer.example.com": {
    "url": "grpcs://localhost:7050"
   }
  }
 }
}
```

- Replace « **peer0.org1.example.com** » by « **peer0.shop.sfeir.lu** »
- Replace « **tlsCACerts.path** » value by « **/tmp/crypto/crypto-config/peerOrganizations/shop.sfeir.lu/peers/peer0.shop.sfeir.lu/tls/ca.crt** »
- Replace « **url** » value by : « **grpcs://peer0.shop.sfeir.lu:7051** »
- Replace « **eventUrl** » value by : « **grpcs://peer0.shop.sfeir.lu:7053** »
- Replace « **grpcOptions.ssl-target-name-override** » value by :
« **peer0.shop.sfeir.lu** »

- Replace « **peer0.org2.example.com** » by « **peer0.warehouse.sfeir.lu** »
- Replace « **tlsCACerts.path** » value by « **/tmp/crypto/crypto-config/peerOrganizations/warehouse.sfeir.lu/peers/peer0.warehouse.sfeir.lu/tls/ca.crt** »
- Replace « **url** » value by : « **grpcs://peer0.warehouse.sfeir.lu:8051** »
- Replace « **eventUrl** » value by : « **grpcs://peer0.warehouse.sfeir.lu:8053** »
- Replace « **grpcOptions.ssl-target-name-override** » value by :
« **peer0.warehouse.sfeir.lu** »

- Replace « **orderers.orderer.example.com** » by «**orderer.sfeir.lu** »
- Replace « **url** » value by : « **grpcs://orderer.sfeir.lu:7050** »

Adapt the **last section**

```
"configtxgenToolPath": "/fabric-path/workspace/fabric-samples/bin",
"license": "Apache-2.0"
```

- Replace « /***fabric-path*/workplace/fabric-sample** » by
«**/full-path/hyperledger_bc_intro/bin** »

2.	**Start explorer**

• Run command **[1]** ;

[1] # ./deploy_explorer.sh dockerConfig logistic_sfeirntw

3.   **Check Blockchain network « logistic »**

- open http://localhost:8090 url.   5/5

- Go through :

→ Dashboard

- ✗   Check number of transactions
- ✗   Check number of nodes
- ✗   Check number of chaincode

→ Blocks

- ✗   Change time line filters
- ✗   Change organization list filter
- ✗   Check block number column result
- ✗   Check channel name column result
- ✗   Open and check a block hash
- ✗   Open and check a transaction details
    - ▪   Check transaction id
    - ▪   Check code status
    - ▪   Check endorser
    - ▪   Check type
    - ▪   Check Read/Write proposals

→ Transactions
- ✗   Change time line filters
- ✗   Change organization list filter
- ✗   Check creator column result
- ✗   Check channel name column result
- ✗   Check type column result