

# Property Registration HLF Network

By: Tanuj Sharma

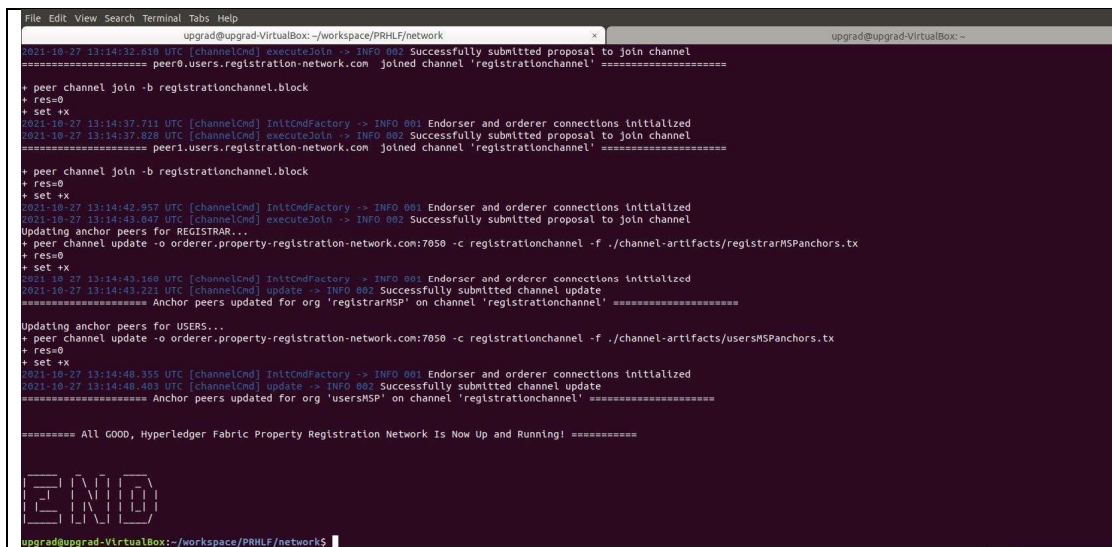
1. Generating certificates, genesis block, channel config, anchor peer, Generating and starting docker container.

Joining peers to channel, Updating anchor peers

Hyperledger Fabric Property Registration Network Is Now Up and Running

**Command to run script:**

- Navigate to the property-registration DIR and then cd into network
- ./fabricNetwork.sh up



```
upgrad@upgrad-VirtualBox: ~/workspace/PRHLF/network
2021-10-27 13:14:32.610 UTC [channelCmd] executeJoin -> INFO 002 Successfully submitted proposal to join channel
===== peer0.users.registration-network.com joined channel 'registrationchannel' =====
+ peer channel join -b registrationchannel.block
+ res=0
+ set +x
2021-10-27 13:14:37.711 UTC [channelCmd] InitCmdFactory -> INFO 001 Endorser and orderer connections initialized
2021-10-27 13:14:37.828 UTC [channelCmd] executeJoin -> INFO 002 Successfully submitted proposal to join channel
===== peer1.users.registration-network.com joined channel 'registrationchannel' =====
+ peer channel join -b registrationchannel.block
+ res=0
+ set +x
2021-10-27 13:14:42.957 UTC [channelCmd] InitCmdFactory -> INFO 001 Endorser and orderer connections initialized
2021-10-27 13:14:43.847 UTC [channelCmd] executeJoin -> INFO 002 Successfully submitted proposal to join channel
Updating anchor peers for REGISTRAR...
+ peer channel update -o orderer.property-registration-network.com:7050 -c registrationchannel -f ./channel-artifacts/registrarMSPanchors.tx
+ res=0
+ set +x
2021-10-27 13:14:43.160 UTC [channelCmd] InitCmdFactory -> INFO 001 Endorser and orderer connections initialized
2021-10-27 13:14:43.221 UTC [channelCmd] update -> INFO 002 Successfully submitted channel update
===== Anchor peers updated for org 'registrarMSP' on channel 'registrationchannel' =====
Updating anchor peers for USERS...
+ peer channel update -o orderer.property-registration-network.com:7050 -c registrationchannel -f ./channel-artifacts/usersMSPanchors.tx
+ res=0
+ set +x
2021-10-27 13:14:48.355 UTC [channelCmd] InitCmdFactory -> INFO 001 Endorser and orderer connections initialized
2021-10-27 13:14:48.403 UTC [channelCmd] update -> INFO 002 Successfully submitted channel update
===== Anchor peers updated for org 'usersMSP' on channel 'registrationchannel' =====

===== ALL GOOD, Hyperledger Fabric Property Registration Network Is Now Up and Running! =====

END
upgrad@upgrad-VirtualBox:~/workspace/PRHLF/network$
```

2. Open another terminal and connect to CHAINCODE container:

Then first make sure all node dependency are in place and then start the (start-dev) script

**Command to run script:**

- docker exec -it chaincode /bin/bash
- npm install
- npm run start-dev

```

root@36fd17bbe9ad: /opt/gopath/src/chaincode
upgrad@upgrad-VirtualBox: ~/workspace/PRHLF/network
upgrad@upgrad-VirtualBox:~/workspace/PRHLF/network$ cd
upgrad@upgrad-VirtualBox:~$ docker exec -it chaincode /bin/bash
root@36fd17bbe9ad:/opt/gopath/src/chaincode# npm run start-dev
> regnet@0.0.1 start-dev /opt/gopath/src/chaincode
> fabric-chaincode:node start --peer.address peer0.registrar.property-registration-network.com:7053 --chaincode-ld-name regnet:1.1

Configuring yargs through package.json is deprecated and will be removed in the next major release, please use the JS API instead.
Configuring yargs through package.json is deprecated and will be removed in the next major release, please use the JS API instead.
Configuring yargs through package.json is deprecated and will be removed in the next major release, please use the JS API instead.
2021-10-27T13:17:58.750Z info [shim:contracts-spl/bootstrap.js] No metadata file supplied in contract, introspection will generate all the data
2021-10-27T13:17:58.751Z info [shim:contracts-spl/chaincodefromcontract.js] Using serializers [{"transaction":"jsonserializer","serializers":{}}]
2021-10-27T13:17:58.751Z info [shim:contracts-spl/chaincodefromcontract.js] next major release, please use the JS API instead.
2021-10-27T13:17:58.794Z info [shim:lib/chaincode.js] Registering with peer peer0.registrar.property-registration-network.com:7053 as chaincode "regnet:1.1"

Command succeeded
2021-10-27T13:17:58.827Z info [shim:lib/handler.js] Successfully registered with peer node. State transferred to "established"
2021-10-27T13:17:58.830Z info [shim:lib/handler.js] Successfully established communication with peer node. State transferred to "ready"

```

### 3. Install and Instantiate Chaincode:

#### Command:

- `./fabricNetwork.sh install`

```

upgrad@upgrad-VirtualBox: ~/workspace/PRHLF/network
upgrad@upgrad-VirtualBox:~/workspace/PRHLF/network
2021-10-27 13:18:48.465 UTC [chaincodeCmd] checkChaincodeCmdParams -> INFO 00: Using default vsc
2021-10-27 13:18:48.916 UTC [chaincodeCmd] install -> INFO 003 Installed remotely response:<status:200 payload:"OK" >
===== Chaincode is installed on peer0.registrar =====
Installing chaincode on peer1.registrar.property-registration-network.com ...
+ peer chaincode install -n regnet -v 1.1 -l node -p /opt/gopath/src/github.com/hyperledger/fabric/peer/chaincode/
+ res=0
+ set +x
2021-10-27 13:18:48.996 UTC [chaincodeCmd] checkChaincodeCmdParams -> INFO 001 Using default esc
2021-10-27 13:18:48.996 UTC [chaincodeCmd] checkChaincodeCmdParams -> INFO 002 Using default vsc
2021-10-27 13:18:49.125 UTC [chaincodeCmd] install -> INFO 003 Installed remotely response:<status:200 payload:"OK" >
===== Chaincode is installed on peer1.registrar =====
Installing chaincode on peer0.users.property-registration-network.com ...
+ peer chaincode install -n regnet -v 1.1 -l node -p /opt/gopath/src/github.com/hyperledger/fabric/peer/chaincode/
+ res=0
+ set +x
2021-10-27 13:18:49.244 UTC [chaincodeCmd] checkChaincodeCmdParams -> INFO 001 Using default esc
2021-10-27 13:18:49.245 UTC [chaincodeCmd] checkChaincodeCmdParams -> INFO 002 Using default vsc
2021-10-27 13:18:49.366 UTC [chaincodeCmd] install -> INFO 003 Installed remotely response:<status:200 payload:"OK" >
===== Chaincode is installed on peer0.users =====
Instantiating chaincode on channel using peer0.registrar.property-registration-network.com ...
+ peer chaincode instantiate -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -l node -v 1.1 -c '{"Args":["org.property-registration-network:user:instantiate","regnet","peer0.registrar","peer0.users"]}'
+ res=0
+ set +x
2021-10-27 13:18:49.518 UTC [chaincodeCmd] checkChaincodeCmdParams -> INFO 001 Using default esc
2021-10-27 13:18:49.519 UTC [chaincodeCmd] checkChaincodeCmdParams -> INFO 002 Using default vsc
===== Chaincode is instantiated on peer0.registrar on channel 'registrationchannel' =====
===== All GOOD, Chaincode REGNET Is Now Installed & Instantiated On Registration Network =====

END
upgrad@upgrad-VirtualBox:~/workspace/PRHLF/network$

```

### 4. Now we could connect to the CLI container and start invoking our functions: Invoking instantiate function

#### Command:

- `docker exec -it cli /bin/bash`
- `peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network:user:instantiate"]}'`
- `peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network:registrar:instantiate"]}'`

CLI Container

```

upgrad@upgrad-VirtualBox: ~/workspace/PRHLF/network
root@36fd17bbe9ad: /opt/gopath/src/chaincode
root@3b5216f39351: /opt/gopath/src/github.com/hyperledger/

upgrad@upgrad-VirtualBox:~/workspace/PRHLF/network$ docker exec -it cli /bin/bash/
OCI runtime exec failed: exec failed: container_linux.go:380: starting container process caused: exec: "/bin/bash/": stat /bin/bash/: not a directory: unknown: Are you trying to mount
a file (or vice-versa)? Check if the specified host path exists and is the expected type
upgrad@upgrad-VirtualBox:~/workspace/PRHLF/network$ docker exec -it cli /bin/bash
root@3b5216f39351:/opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -c registrationchannel -n regnet -c '{"A
y-registration-network.user:instantiate"}'
2021-10-27 13:22:17.959 UTC [chaincodeCmd] chaincodeInvokeOrQuery -> INFO 001 Chaincode Invoke successful. result: status:200
root@3b5216f39351:/opt/gopath/src/github.com/hyperledger/fabric/peer#

```

User Smart Contract

CLI Container

```

root@3b5216f39351:/opt/gopath/src/github.com/hyperledger/fabric/peer
File Edit View Search Terminal Tabs Help

upgrad@upgrad-VirtualBox:~/workspace/PRHLF/network
root@36fd17bbe9ad: /opt/gopath/src/chaincode
root@3b5216f39351: /opt/gopath/src/github.com/hyperledger/

upgrad@upgrad-VirtualBox:~/workspace/PRHLF/network$ docker exec -it cli /bin/bash/
OCI runtime exec failed: exec failed: container_linux.go:380: starting container process caused: exec: "/bin/bash/": stat /bin/bash/: not a directory: unknown: Are you trying to mount
a file (or vice-versa)? Check if the specified host path exists and is the expected type
upgrad@upgrad-VirtualBox:~/workspace/PRHLF/network$ docker exec -it cli /bin/bash
root@3b5216f39351:/opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -c registrationchannel -n regnet -c '{"A
y-registration-network.user:instantiate"}'
2021-10-27 13:22:17.959 UTC [chaincodeCmd] chaincodeInvokeOrQuery -> INFO 001 Chaincode Invoke successful. result: status:200
root@3b5216f39351:/opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -c registrationchannel -n regnet -c '{"A
y-registration-network.registrar:instantiate"}'
2021-10-27 13:22:17.959 UTC [chaincodeCmd] chaincodeInvokeOrQuery -> INFO 001 Chaincode Invoke successful. result: status:200
root@3b5216f39351:/opt/gopath/src/github.com/hyperledger/fabric/peer#

```

Registrar Smart Contract

Chaincode Container

```

root@36fd17bbe9ad: /opt/gopath/src/chaincode
File Edit View Search Terminal Tabs Help

upgrad@upgrad-VirtualBox:~/workspace/PRHLF/network
root@36fd17bbe9ad: /opt/gopath/src/chaincode
root@3b5216f39351: /opt/gopath/src/github.com/hyperledger/

upgrad@upgrad-VirtualBox:~/workspace/PRHLF/network$ cd
upgrad@upgrad-VirtualBox:~$ docker exec -it chaincode /bin/bash
root@36fd17bbe9ad:/opt/gopath/src/chaincode# npm run start-dev

> regnet@0.0.1 start-dev /opt/gopath/src/chaincode
> fabric-chaincode-node start --peer.address peer0.registrar.property-registration-network.com:7053 --chaincode-id-name regnet:1.1

Configuring yargs through package.json is deprecated and will be removed in the next major release, please use the JS API instead.
Configuring yargs through package.json is deprecated and will be removed in the next major release, please use the JS API instead.
Configuring yargs through package.json is deprecated and will be removed in the next major release, please use the JS API instead.
2021-10-27T13:17:58.759Z info [shim:contracts-spi/bootstrap.js] No metadata file supplied in contract, introspection will generate all the data
2021-10-27T13:17:58.751Z info [shim:contracts-spi/chaincodeFromContract.js] Using serializers {"transaction":"jsonSerializer","serializers":{}}
Configuring yargs through package.json is deprecated and will be removed in the next major release, please use the JS API instead.
2021-10-27T13:17:58.794Z info [shim:lib/chaincode.js] Registering with peer peer0.registrar.property-registration-network.com:7053 as chaincode "regnet:1.1"

Command succeeded

2021-10-27T13:17:58.827Z info [shim:lib/handler.js] Successfully registered with peer node. State transferred to "established"
2021-10-27T13:17:58.830Z info [shim:lib/handler.js] Successfully established communication with peer node. State transferred to "ready"
Regnet Smart Contract Instantiated
2021-10-27T13:18:49.557Z info [shim:lib/handler.js] [registrationchannel-63529703] calling chaincode Init() succeeded. Sending COMPLETED message back to
Regnet Smart Contract Instantiated
2021-10-27T13:22:16.452Z info [shim:lib/handler.js] [registrationchannel-e37a1719] calling chaincode Invoke() succeeded. Sending COMPLETED message back
Registrar Smart Contract Instantiated
2021-10-27T13:23:17.957Z info [shim:lib/handler.js] [registrationchannel-d25e2c45] calling chaincode Invoke() succeeded. Sending COMPLETED message back

```

Both the contracts are up and running

1. User Contract
2. Registrar Contract

Logic Flow:

- a. Creation of User Request
- b. Approval of User Request
- c. View User
- d. Recharge User
- e. Register Property
- f. Approve Property
- g. View Property
- h. Update Property for sell
- i. Buy Property

## 5. Invoke User Contract: Creation of User Request

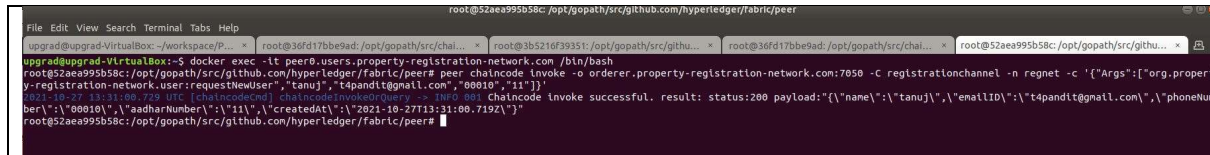
Steps to invoke a function from user contract using peer0.users:

- a. connect to chaincode container : **docker exec -it chaincode /bin/bash**
- b. Run the script **npm run start-dev1** (as this script is pointing to peer0.users)
- c. On another terminal connect to peer0.users.property-registration-network.com:  
**docker exec -it peer0.users.property-registration-network.com /bin/bash**

- d. Invoke any function from the user contract:

Example:

```
peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration network.user:requestNewUser","tanuj","t4pandit@gmail","00010","11"]}'
```



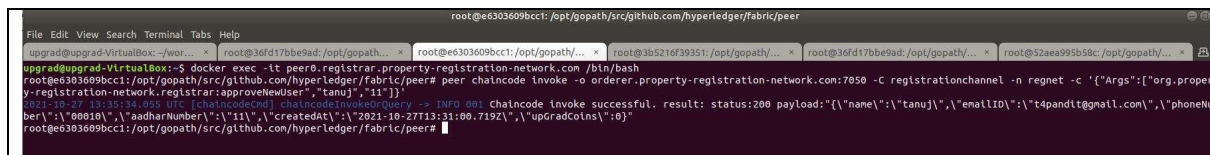
## 6. Invoke Registrar Contract: Approval of User Request

Steps to invoke a function from registrar contract using peer0.registrar:

- connect to chaincode container : **docker exec -it chaincode /bin/bash**
- Stop the **npm run start-dev** script (ctrl +c) then,
- Run the script npm run start-dev (as this script is pointing to peer0.registrar)
- On another terminal connect to peer0.registrar.property-registration-network.com: **docker exec -it peer0.registrar.property-registration-network.com /bin/bash**
- Invoke any function from the user contract:

Example:

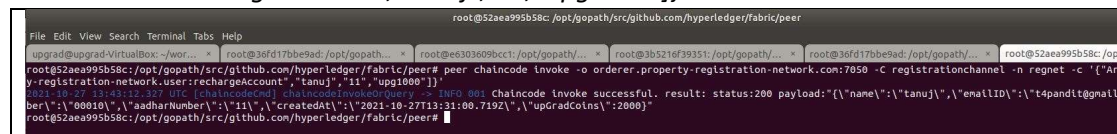
```
peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration network.registrar:approveNewUser","tanuj","11"]}'
```



## 7. Invoke User Contract: Recharge User Account

**Command:**

```
peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration network.user:rechargeAccount","tanuj","1","upg1000"]}'
```



## 8. Invoke User Contract: Recharge Wrong User Account

**Command:**

```
peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration network.user:rechargeAccount","PQR","1","upg1000"]}'
```



**Result: User is not approved to make the transaction. (From Validation)**

## 9. Invoke User Contract: **View User**

### Command:

```
peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:viewUser","tanuj","11"]}'
```

```
File Edit View Search Terminal Tabs Help
root@52aea995b58c:/opt/gopath/src/github.com/hyperledger/fabric/peer
upgrad@upgrad-VirtualBox:~/work... * root@36fd17bbe9ad:/opt/gopath... * root@e6303609bcc1:/opt/gopath... * root@3b521ef39351:/opt/gopath... * root@36fd17bbe9ad:/opt/gopath... * root@52aea995b58c:/opt/gopath...
root@52aea995b58c:/opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:rechargeAccount","tanuj","11","upg1000"]}'
[2021-10-27 13:48:52.118] INFO [chaincode] chaincodeInvokeQuery -> INFO 001 Chaincode invoke successful. result: status:200 payload:{"name":"tanuj","emailID":"t4pandit@gmail.com","aadharNumber":"111","createdAt":"2021-10-27T13:31:00.719Z","upgradCoins":2000}
root@52aea995b58c:/opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:viewUser","tanuj","11"]}'
[2021-10-27 13:48:52.118] INFO [chaincode] chaincodeInvokeQuery -> INFO 001 Chaincode invoke successful. result: status:200 payload:{"name":"tanuj","emailID":"t4pandit@gmail.com","aadharNumber":"111","createdAt":"2021-10-27T13:31:00.719Z","upgradCoins":2000}
root@52aea995b58c:/opt/gopath/src/github.com/hyperledger/fabric/peer#
```

## 10. Invoke Registrar Contract: **View User**

### Command:

```
peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.registrar:viewUser","tanuj","11"]}'
```

```
File Edit View Search Terminal Tabs Help
root@e6303609bcc1:/opt/gopath/src/github.com/hyperledger/fabric/peer
upgrad@upgrad-VirtualBox:~/work... * root@36fd17bbe9ad:/opt/gopath... * root@e6303609bcc1:/opt/gopath... * root@3b521ef39351:/opt/gopath... * root@36fd17bbe9ad:/opt/gopath... * root@52aea995b58c:/opt/gopath...
root@e6303609bcc1:/opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.registrar:approveNewUser","tanuj","11"]}'
[2021-10-27 13:48:52.118] INFO [chaincode] chaincodeInvokeQuery -> INFO 001 Chaincode invoke successful. result: status:200 payload:{"name":"tanuj","emailID":"t4pandit@gmail.com","aadharNumber":"111","createdAt":"2021-10-27T13:31:00.719Z","upgradCoins":0}
root@e6303609bcc1:/opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.registrar:viewUser","tanuj","11"]}'
[2021-10-27 13:48:52.118] INFO [chaincode] chaincodeInvokeQuery -> INFO 001 Chaincode invoke successful. result: status:200 payload:{"name":"tanuj","emailID":"t4pandit@gmail.com","aadharNumber":"111","createdAt":"2021-10-27T13:31:00.719Z","upgradCoins":2000}
root@e6303609bcc1:/opt/gopath/src/github.com/hyperledger/fabric/peer#
```

## 11. Invoke User Contract: **Property Registration**

### Command:

```
peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:propertyRegistrationRequest","001","tanuj","1000","registered","tanuj","11"]}'
```

```
File Edit View Search Terminal Tabs Help
root@52aea995b58c:/opt/gopath/src/github.com/hyperledger/fabric/peer
upgrad@upgrad-VirtualBox:~/work... * root@36fd17bbe9ad:/opt/gopath... * root@e6303609bcc1:/opt/gopath... * root@3b521ef39351:/opt/gopath... * root@36fd17bbe9ad:/opt/gopath... * root@52aea995b58c:/opt/gopath...
root@52aea995b58c:/opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:rechargeAccount","tanuj","11","upg1000"]}'
[2021-10-27 13:48:52.118] INFO [chaincode] chaincodeInvokeQuery -> INFO 001 Chaincode invoke successful. result: status:200 payload:{"name":"tanuj","emailID":"t4pandit@gmail.com","aadharNumber":"111","createdAt":"2021-10-27T13:31:00.719Z","upgradCoins":2000}
root@52aea995b58c:/opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:viewUser","tanuj","11"]}'
[2021-10-27 13:48:52.118] INFO [chaincode] chaincodeInvokeQuery -> INFO 001 Chaincode invoke successful. result: status:200 payload:{"name":"tanuj","emailID":"t4pandit@gmail.com","aadharNumber":"111","createdAt":"2021-10-27T13:31:00.719Z","upgradCoins":2000}
root@52aea995b58c:/opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:propertyRegistrationRequest","001","tanuj","1000","registered","tanuj","11"]}'
[2021-10-27 13:48:52.118] INFO [chaincode] chaincodeInvokeQuery -> INFO 001 Chaincode invoke successful. result: status:200 payload:{"propertyId":"001","owner":"\\u0000org.p...ion-network.regnet.approvedUser\\u0000tanuj-11\\u0000","price":"1000","status":"registered"}
root@52aea995b58c:/opt/gopath/src/github.com/hyperledger/fabric/peer#
```

## 12. Involve Registrar Contract: **Property Registration Approval**

### Command:

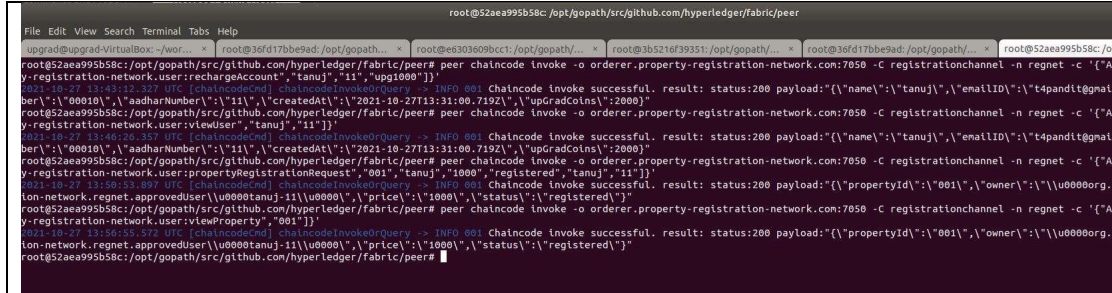
```
peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.registrar:approvePropertyRegistration","001"]}'
```

```
File Edit View Search Terminal Tabs Help
root@e6303609bcc1:/opt/gopath/src/github.com/hyperledger/fabric/peer
upgrad@upgrad-VirtualBox:~/work... * root@36fd17bbe9ad:/opt/gopath... * root@e6303609bcc1:/opt/gopath... * root@3b521ef39351:/opt/gopath... * root@36fd17bbe9ad:/opt/gopath... * root@52aea995b58c:/opt/gopath...
root@e6303609bcc1:/opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.registrar:approveNewUser","tanuj","11"]}'
[2021-10-27 13:48:52.118] INFO [chaincode] chaincodeInvokeQuery -> INFO 001 Chaincode invoke successful. result: status:200 payload:{"name":"tanuj","emailID":"t4pandit@gmail.com","aadharNumber":"111","createdAt":"2021-10-27T13:31:00.719Z","upgradCoins":0}
root@e6303609bcc1:/opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.registrar:viewUser","tanuj","11"]}'
[2021-10-27 13:48:52.118] INFO [chaincode] chaincodeInvokeQuery -> INFO 001 Chaincode invoke successful. result: status:200 payload:{"name":"tanuj","emailID":"t4pandit@gmail.com","aadharNumber":"111","createdAt":"2021-10-27T13:31:00.719Z","upgradCoins":2000}
root@e6303609bcc1:/opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.registrar:approvePropertyRegistration","001"]}'
[2021-10-27 13:48:52.118] INFO [chaincode] chaincodeInvokeQuery -> INFO 001 Chaincode invoke successful. result: status:200 payload:{"propertyId":"001","owner":"\\u0000org.p...ion-network.regnet.approvedUser\\u0000tanuj-11\\u0000","price":"1000","status":"registered"}
root@e6303609bcc1:/opt/gopath/src/github.com/hyperledger/fabric/peer#
```

### 13. Invoke User Contract: View Property

#### Command:

```
peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:viewProperty","001"]}'
```



### 14. Invoke Registrar Contract: View Property

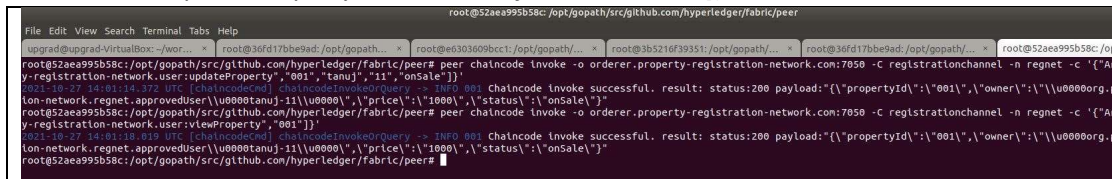
#### Command:

```
peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.registrar:viewProperty","001"]}'
```

### 15. Invoke User Contract: Update Property for Sell

#### Command:

```
peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:updateProperty","001","tanuj","11","onSale"]}'
```

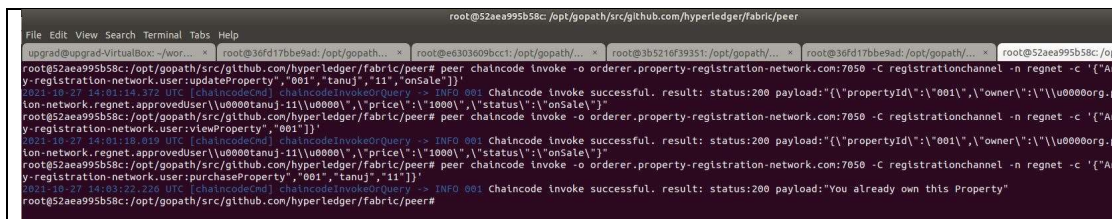


### 16. Invoke User Contract: Try to but my own property

#### Command:

```
peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:purchaseProperty","001","tanuj","11"]}'
```

#### Error:



### 17. Invoke User Contract: Buy Property from another User

#### Command:

Creation of New User Request

- a. `peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:requestNewUser","sharma","sharma@gmail.com","00011","12"]}'`

#### Approval of New User Request

- b. `peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.registrar:approveNewUser","sharma","12"]}'`

#### Recharge New User

- c. `peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:rechargeAccount","sharma","12","upg1000"]}'`

#### Buy property from New User

- d. `peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:purchaseProperty","001","sharma","12"]}'`

```
root@52aea995b58c: /opt/gopath/src/github.com/hyperledger/fabric/peer
File Edit View Search Terminal Tabs Help
root@52aea995b58c: /opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:updateProperty","001","tanuj","11","onSale"]}'
2021-10-27 14:01:11.012 UTC [chaincodeCmd] chaincodeInvokeOrQuery => INFO 001 Chaincode invoke successful. result: status:200 payload:"{"propertyId":"001","owner":"\\u0000org.p
ion-network.regnet.approvedUser\\u0000tanuj-11\\u0000","price":"1000","status":"onSale"}"
root@52aea995b58c: /opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:viewProperty","001"]}'
2021-10-27 14:01:18.603 UTC [chaincodeCmd] chaincodeInvokeOrQuery => INFO 001 Chaincode invoke successful. result: status:200 payload:"{"propertyId":"001","owner":"\\u0000org.p
ion-network.regnet.approvedUser\\u0000tanuj-11\\u0000","price":"1000","status":"onSale"}"
root@52aea995b58c: /opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:purchaseProperty","001","tanuj","11"]}'
2021-10-27 14:01:22.522 UTC [chaincodeCmd] chaincodeInvokeOrQuery => INFO 001 Chaincode invoke successful. result: status:200 payload:"You already own this Property"
root@52aea995b58c: /opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:requestNewUser","sharma","sharma@gmail.com","00011","12"]}'
2021-10-27 14:12:47.495 UTC [chaincodeCmd] chaincodeInvokeOrQuery => INFO 001 Chaincode invoke successful. result: status:200 payload:"{"name":"sharma","emailID":"sharma@gmail.
er","aadharNumber":"12","createdAt":"2021-10-27T14:12:47.487Z"}"
root@52aea995b58c: /opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:rechargeAccount","sharma","12","upg1000"]}'
2021-10-27 14:12:47.495 UTC [chaincodeCmd] chaincodeInvokeOrQuery => INFO 001 Chaincode invoke successful. result: status:200 payload:"{"name":"sharma","emailID":"sharma@gmail.
er","aadharNumber":"12","createdAt":"2021-10-27T14:12:47.487Z","upGradCoins":1000}"
root@52aea995b58c: /opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:requestNewUser","sharma","sharma@gmail.com","00011","12"]}'
2021-10-27 14:15:50.003 UTC [chaincodeCmd] chaincodeInvokeOrQuery => INFO 001 Chaincode invoke successful. result: status:200 payload:"This user have already requested for Registratio
root@52aea995b58c: /opt/gopath/src/github.com/hyperledger/fabric/peer# peer chaincode invoke -o orderer.property-registration-network.com:7050 -C registrationchannel -n regnet -c '{"Args":["org.property-registration-network.user:purchaseProperty","001","sharma","12"]}'
2021-10-27 14:24:00.508 UTC [chaincodeCmd] chaincodeInvokeOrQuery => INFO 001 Chaincode invoke successful. result: status:200 payload:"OldOwner Updated Detail {"name":"tanuj","e
it@gmail.com","phoneNumber":"00010","aadharNumber":"11","createdAt":"2021-10-27T13:31:00.719Z","upGradCoins":3000} NewOwner Updated Details {"name":"sharma@gmail.com","phoneNumber":"00011","aadharNumber":"12","createdAt":"2021-10-27T14:12:47.487Z","upGradCoins":0} Updated Pro
propertyId":"001","owner":"\\u0000org.property-registration-network.regnet.approvedUser\\u0000sharma-12\\u0000","price":"1000","status":"registered"}"
root@52aea995b58c: /opt/gopath/src/github.com/hyperledger/fabric/peer#
```