# Package Chaincode

cd fabric-samples/asset-transfer-basic/chaincode-go

Check version

cat go.mod

go mod vendor

cd ../../test-network

export PATH=${PWD}/../bin:$PATH

export FABRIC\_CFG\_PATH=$PWD/../config/

Go Chaincode

peer lifecycle chaincode package basic.tar.gz --path ../asset-transfer-basic/chaincode-go/ --lang golang --label basic\_1.0

Javascript Chaincode

peer lifecycle chaincode package basic.tar.gz --path ../asset-transfer-basic/chaincode-javascript/ --lang node --label basic\_1.0

# Install Chainocode

## Setup Organization 1

export CORE\_PEER\_TLS\_ENABLED=true

export CORE\_PEER\_LOCALMSPID="Org1MSP"

export CORE\_PEER\_TLS\_ROOTCERT\_FILE=${PWD}/organizations/peerOrganizations/org1.example.com/peers/peer0.org1.example.com/tls/ca.crt

export CORE\_PEER\_MSPCONFIGPATH=${PWD}/organizations/peerOrganizations/org1.example.com/users/Admin@org1.example.com/msp

export CORE\_PEER\_ADDRESS=localhost:7051

peer lifecycle chaincode install basic.tar.gz

## Setup Organization 2

export CORE\_PEER\_LOCALMSPID="Org2MSP"

export CORE\_PEER\_TLS\_ROOTCERT\_FILE=${PWD}/organizations/peerOrganizations/org2.example.com/peers/peer0.org2.example.com/tls/ca.crt

export CORE\_PEER\_MSPCONFIGPATH=${PWD}/organizations/peerOrganizations/org2.example.com/users/Admin@org2.example.com/msp

export CORE\_PEER\_ADDRESS=localhost:9051

peer lifecycle chaincode install basic.tar.gz

# Approve Chaincode

Get the package id

peer lifecycle chaincode queryinstalled

export CC\_PACKAGE\_ID=<Package\_ID>

peer lifecycle chaincode approveformyorg -o localhost:7050 --ordererTLSHostnameOverride orderer.example.com --channelID mychannel --name basic --version 1.0 --package-id $CC\_PACKAGE\_ID --sequence 1 --tls --cafile "${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem"

export CORE\_PEER\_LOCALMSPID="Org1MSP"

export CORE\_PEER\_MSPCONFIGPATH=${PWD}/organizations/peerOrganizations/org1.example.com/users/Admin@org1.example.com/msp

export CORE\_PEER\_TLS\_ROOTCERT\_FILE=${PWD}/organizations/peerOrganizations/org1.example.com/peers/peer0.org1.example.com/tls/ca.crt

export CORE\_PEER\_ADDRESS=localhost:7051

peer lifecycle chaincode approveformyorg -o localhost:7050 --ordererTLSHostnameOverride orderer.example.com --channelID mychannel --name basic --version 1.0 --package-id $CC\_PACKAGE\_ID --sequence 1 --tls --cafile "${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem"

# Committing Chaincode

Check commit readiness

peer lifecycle chaincode checkcommitreadiness --channelID mychannel --name basic --version 1.0 --sequence 1 --tls --cafile "${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem" --output json

peer lifecycle chaincode commit -o localhost:7050 --ordererTLSHostnameOverride orderer.example.com --channelID mychannel --name basic --version 1.0 --sequence 1 --tls --cafile "${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem" --peerAddresses localhost:7051 --tlsRootCertFiles "${PWD}/organizations/peerOrganizations/org1.example.com/peers/peer0.org1.example.com/tls/ca.crt" --peerAddresses localhost:9051 --tlsRootCertFiles "${PWD}/organizations/peerOrganizations/org2.example.com/peers/peer0.org2.example.com/tls/ca.crt"

peer lifecycle chaincode querycommitted --channelID mychannel --name basic --cafile "${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem"

# Invoke Chaincode

peer chaincode invoke -o localhost:7050 --ordererTLSHostnameOverride orderer.example.com --tls --cafile "${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem" -C mychannel -n basic --peerAddresses localhost:7051 --tlsRootCertFiles "${PWD}/organizations/peerOrganizations/org1.example.com/peers/peer0.org1.example.com/tls/ca.crt" --peerAddresses localhost:9051 --tlsRootCertFiles "${PWD}/organizations/peerOrganizations/org2.example.com/peers/peer0.org2.example.com/tls/ca.crt" -c '{"function":"InitLedger","Args":[]}'

peer chaincode query -C mychannel -n basic -c '{"Args":["GetAllAssets"]}'

# Upgrade Chaincode

export PATH=${PWD}/../bin:$PATH

export FABRIC\_CFG\_PATH=$PWD/../config/

export [CORE\_PEER\_MSPCONFIGPATH=${PWD}/organizations/peerOrganizations/org1.example.com/users/Admin@org1.example.com/msp](mailto:CORE_PEER_MSPCONFIGPATH=$%7bPWD%7d/organizations/peerOrganizations/org1.example.com/users/Admin@org1.example.com/msp)

peer lifecycle chaincode package basic\_2.tar.gz --path ../asset-transfer-basic/chaincode-javascript/ --lang node --label basic\_2.0

export CORE\_PEER\_TLS\_ENABLED=true

export CORE\_PEER\_LOCALMSPID="Org1MSP"

export CORE\_PEER\_TLS\_ROOTCERT\_FILE=${PWD}/organizations/peerOrganizations/org1.example.com/peers/peer0.org1.example.com/tls/ca.crt

export CORE\_PEER\_MSPCONFIGPATH=${PWD}/organizations/peerOrganizations/org1.example.com/users/Admin@org1.example.com/msp

export CORE\_PEER\_ADDRESS=localhost:7051

peer lifecycle chaincode install basic\_2.tar.gz

peer lifecycle chaincode queryinstalled

export NEW\_CC\_PACKAGE\_ID=<PackageID>

peer lifecycle chaincode approveformyorg -o localhost:7050 --ordererTLSHostnameOverride orderer.example.com --channelID mychannel --name basic --version 2.0 --package-id $NEW\_CC\_PACKAGE\_ID --sequence 2 --tls --cafile "${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem"

export CORE\_PEER\_LOCALMSPID="Org2MSP"

export CORE\_PEER\_TLS\_ROOTCERT\_FILE=${PWD}/organizations/peerOrganizations/org2.example.com/peers/peer0.org2.example.com/tls/ca.crt

export CORE\_PEER\_MSPCONFIGPATH=${PWD}/organizations/peerOrganizations/org2.example.com/users/Admin@org2.example.com/msp

export CORE\_PEER\_ADDRESS=localhost:9051

peer lifecycle chaincode install basic\_2.tar.gz

peer lifecycle chaincode approveformyorg -o localhost:7050 --ordererTLSHostnameOverride orderer.example.com --channelID mychannel --name basic --version 2.0 --package-id $NEW\_CC\_PACKAGE\_ID --sequence 2 --tls --cafile "${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem"

peer lifecycle chaincode checkcommitreadiness --channelID mychannel --name basic --version 2.0 --sequence 2 --tls --cafile "${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem" --output json

peer lifecycle chaincode commit -o localhost:7050 --ordererTLSHostnameOverride orderer.example.com --channelID mychannel --name basic --version 2.0 --sequence 2 --tls --cafile "${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem" --peerAddresses localhost:7051 --tlsRootCertFiles "${PWD}/organizations/peerOrganizations/org1.example.com/peers/peer0.org1.example.com/tls/ca.crt" --peerAddresses localhost:9051 --tlsRootCertFiles "${PWD}/organizations/peerOrganizations/org2.example.com/peers/peer0.org2.example.com/tls/ca.crt"

peer chaincode invoke -o localhost:7050 --ordererTLSHostnameOverride orderer.example.com --tls --cafile "${PWD}/organizations/ordererOrganizations/example.com/orderers/orderer.example.com/msp/tlscacerts/tlsca.example.com-cert.pem" -C mychannel -n basic --peerAddresses localhost:7051 --tlsRootCertFiles "${PWD}/organizations/peerOrganizations/org1.example.com/peers/peer0.org1.example.com/tls/ca.crt" --peerAddresses localhost:9051 --tlsRootCertFiles "${PWD}/organizations/peerOrganizations/org2.example.com/peers/peer0.org2.example.com/tls/ca.crt" -c '{"function":"CreateAsset","Args":["asset8","blue","16","Kelley","750"]}'

peer chaincode query -C mychannel -n basic -c '{"Args":["GetAllAssets"]}'