Fabric

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2.1 Doker Docker Compose

Fabric Docker Docker Compose

- MacOSX, *nix Windows 10: Docker 17.06.2-ce

- Windows: Docker ToolboxDocker 17.06.2-ce

`docker --version` Docker `docker-compose --version` Docker Compose

2.2 Go

Fabric Go Go 1.10.x

```
# GOPATH
export GOPATH=$HOME/go
export PATH=$PATH:$GOPATH/bin
```

3 Fabric Sample

Fabric Sample Fabric

3.1 Clone Fabric Sample

Fabric Sample

```
git clone https://github.com/hyperledger/fabric-samples.git
```

3.2 Docker

scripts/boostrap.sh Fabric Docker fabric, fabirc-ca,

```
cd fabric-samples
./scripts/bootstrap.sh [version] [ca version] [thirdparty_version]
```

Docker

```
$ docker images |grep hyperledger*
hyperledger/fabric-ca          1.2.0           66cc132bd09c        2 weeks ago
hyperledger/fabric-ca          latest          66cc132bd09c        2 weeks ago
hyperledger/fabric-tools       1.2.0           379602873003        2 weeks ago
hyperledger/fabric-tools       latest          379602873003        2 weeks ago
hyperledger/fabric-ccenv       1.2.0           6acf31e2d9a4        2 weeks ago
```

```
hyperledger/fabric-ccenv        latest              6acf31e2d9a4        2 weeks ago
hyperledger/fabric-orderer      1.2.0               4baf7789a8ec        2 weeks ago
hyperledger/fabric-orderer      latest              4baf7789a8ec        2 weeks ago
hyperledger/fabric-peer         1.2.0               82c262e65984        2 weeks ago
hyperledger/fabric-peer         latest              82c262e65984        2 weeks ago
hyperledger/fabric-zookeeper    0.4.8               1ffd64c98bad        2 months ago
hyperledger/fabric-zookeeper    latest              1ffd64c98bad        2 months ago
hyperledger/fabric-kafka        0.4.8               12d61042b176        2 months ago
hyperledger/fabric-kafka        latest              12d61042b176        2 months ago
hyperledger/fabric-couchdb      0.4.8               12eb8cf6aba1        2 months ago
hyperledger/fabric-couchdb      latest              12eb8cf6aba1        2 months ago

$ ls bin
configtxgen      cryptogen       fabric-ca-client    idemixgen      peer
configtxlator    discover        get-docker-images.sh    orderer
```

3.3

```
chaincode-docker-devmode cd chaincode-docker-devmode
```

3.4   Terminal 1 -

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

 SingleSampleMSPSolo orderer profile devmode

- hyperledger/fabric-orderer - order : 7050

- hyperledger/fabric-peer - 7051, 7053

- hyperledger/fabric-ccenv -

- hyperledger/fabric-tools - CLI

3.5   Terminal 2 -

```
docker exec -it chaincode bash
```

```
root@f7295468eff5:/opt/gopath/src/chaincode#
```

 ../chaincode

```
cd chaincode_example02/go
go build -o chaincode_example02
```

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```
CORE_PEER_ADDRESS=peer:7052 CORE_CHAINCODE_ID_NAME=mycc:0 ./chaincode_example02

    instantiate
```

3.6 Terminal 3 -

```
--peer-chaincodedev
    CLI
```

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

```
peer chaincode install -p chaincodedev/chaincode/chaincode_example02/go -n mycc -v 0
peer chaincode instantiate -n mycc -v 0 -c '{"Args":["init","a","100","b","200"]}' -C
```

    a 10 b

```
peer chaincode invoke -n mycc -c '{"Args":["invoke","a","b","10"]}' -C myc
```

    a a 90

```
peer chaincode query -n mycc -c '{"Args":["query","a"]}' -C myc
```

3.7

```
chaincode-example02 docker-compose-simple.yaml
    docker-compose-simple.yaml chaincode @1
```

```
chaincode:
  container_name: chaincode
  image: hyperledger/fabric-ccenv
  ...
  volumes:
      - /var/run/:/host/var/run/
      - ./msp:/etc/hyperledger/msp
      - ./../chaincode:/opt/gopath/src/chaincode //@1
  depends_on:
    - orderer
    - peer
```

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1. Getting Started, `https://hyperledger-fabric.readthedocs.io/en/release-1.2/getting_started.html`.

2. Fabric Sample, `https://github.com/hyperledger/fabric-samples`.

3. Using dev mode, `https://github.com/hyperledger/fabric-samples/tree/release-1.2/chaincode-docker-devmode`.