

# Hyperledger Fabric Cheatsheet

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## Document Objective

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- Bring up Hyperledger Fabric samples
- Bring up Marbles demo
- Test Nodejs SDK

## Document Reference

- [http://hyperledger-fabric.readthedocs.io/en/latest/build\\_network.html](http://hyperledger-fabric.readthedocs.io/en/latest/build_network.html)
- <https://github.com/IBM-Blockchain/marbles>
- <https://fabric-sdk-node.github.io/>

## Deployment

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### Hyperledger Fabric Samples

Based on [http://hyperledger-fabric.readthedocs.io/en/latest/build\\_network.html](http://hyperledger-fabric.readthedocs.io/en/latest/build_network.html), this is (not a complete doc) a briefing document, which just covers tricky step(s) intentionally.

- Clean- up the existing container on host

```
cd fabric-samples/first-network
./byfn.sh -m down
```

- Edit `/scripts/script.sh` and change to `set -o xtrace` and `set -o errexit`
- Start Fabric network

```
./byfn.sh -t 1200 -m up
```

Where `-t 1200` means to last `cli` container for 1200 seconds till it dies, instead of 60 by default. (Check the [details](#) and search `[-t <timeout>]`). When seeing the following, open **another** terminal and go proceed

```
===== All GOOD, BYFN execution completed =====
```

```
|  _  | |  \ | |  _  \
|  _  | |  \ | |  _  \
|  _  | |  \ | |  _  \
|  _  | |  \ | |  _  \
```

If you want to run in step by step manually, go through [http://hyperledger-fabric.readthedocs.io/en/latest/build\\_network.html#](http://hyperledger-fabric.readthedocs.io/en/latest/build_network.html#)

- Then issue the `query` and `invoke` commands

```
export CHANNEL_NAME=mychannel
```

```
docker exec -it cli peer chaincode query -C $CHANNEL_NAME -n mycc -c '{"Args":["que
docker exec -it cli peer chaincode invoke -o orderer.example.com:7050 --tls --cafi
```

## Marbles Demo

Pre- requisite:

- Download `marbles`
- Install `git`, `go` and `node.js` properly
- Start `fabric` samples

**Start** `fabcar`

Reference URL > <https://github.com/IBM-Blockchain/marbles>

```
cd ~/fabirc-samples/fabcar
./startFabric.sh
```

- Install dependency if they're not installed

```
sudo npm install
```

**Test network with** `fabcar`

```
node enrollAdmin.js
node registerUser.js
node query.js
```

## Install+ Instantiate chaincode

```
cd ~/marbles
npm install
cd ./scripts
node install_chaincode.js
node instantiate_chaincode.js
```

Install `gulp` then start it without tls

Reference URL > [https://github.com/IBM-Blockchain/marbles/blob/v4.0/docs/host\\_marbles\\_locally.md](https://github.com/IBM-Blockchain/marbles/blob/v4.0/docs/host_marbles_locally.md)

```
npm install gulp -g
npm install

gulp marbles_local
```

## Test SDK

Reference URL > <https://github.com/hyperledger/fabric-sdk-node>

- Refer to the doc and install dependency
- Start `fabric`

```
cd ~/fabric-sdk-node/test/fixtures
docker-compose -f docker-compose.yaml up -d
```

- Clean- up existing container

```
docker rm $(docker ps -aq)
```

- Test SDK

```
node test/integration/e2e/create-channel.js
node test/integration/e2e/join-channel.js
node test/integration/e2e/install-chaincode.js
node test/integration/e2e/instantiate-chaincode.js
node test/integration/e2e/invoke-transaction.js
node test/integration/e2e/query.js
```