

Shopping mall with Hyperledger Fabric

Trustful way to journey...

TWTJ

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<https://github.com/TWTJ/project>

Members



Kim Yoonji

*Front-end

*Server



Jeon Sangwook

*Server

*DB



Lee Yujin

*Fabric Network 구축

*Fabric Network 관리



Lee Dongwook

*Fabric Network 구축

*Fabric Chaincode 관리

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Contents

1. What?

- What is our project?

“온라인에서의 모든 행위는 우리의 재산입니다.”

1. “TWTJ” 쇼핑몰

2. Hyperledger Fabric (BlockChain) 네트워크

- 고객들의 정보 (나이, 성별, 결혼여부 등)
- 고객들의 구매내역 (상품정보)

Contents

2. Development environment



Front-end

Bootstrap

Server

*Node.js
(Express)*

Express **JS**

Database

MongoDB



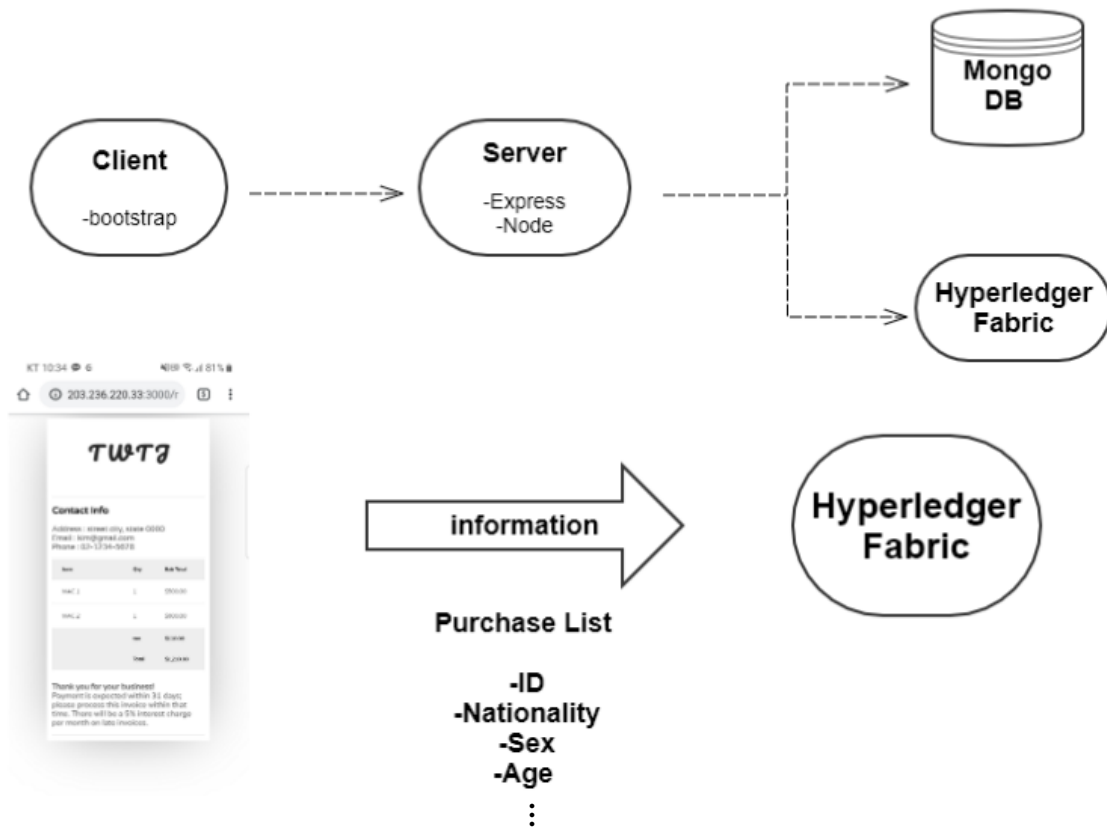
Blockchain

*Hyperledger
Fabric
& Docker*



Contents

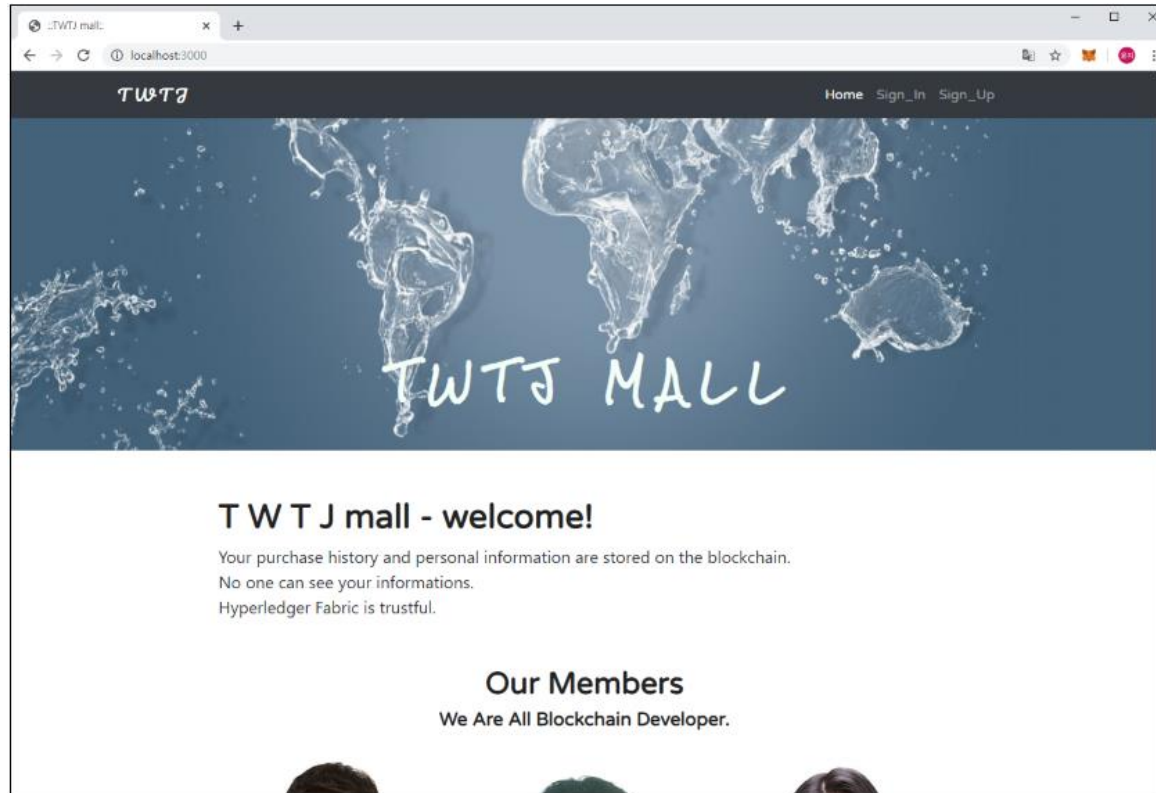
2. Development environment



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- Function description of each page



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Sign Up!

NAME :

ID :

PASSWORD :

E-MAIL :

AGE :

GENDER :
☐ 남자 ☐ 여자

CREATED WITH ♥ BY TWTJ

Sign In Now

E-MAIL

PASSWORD

☐ Remember Me

CREATED WITH ♥ BY TWTJ

회원가입 정보 : Name, ID, PW, E-mail, Age, Gender

Submit as company

:광고주용

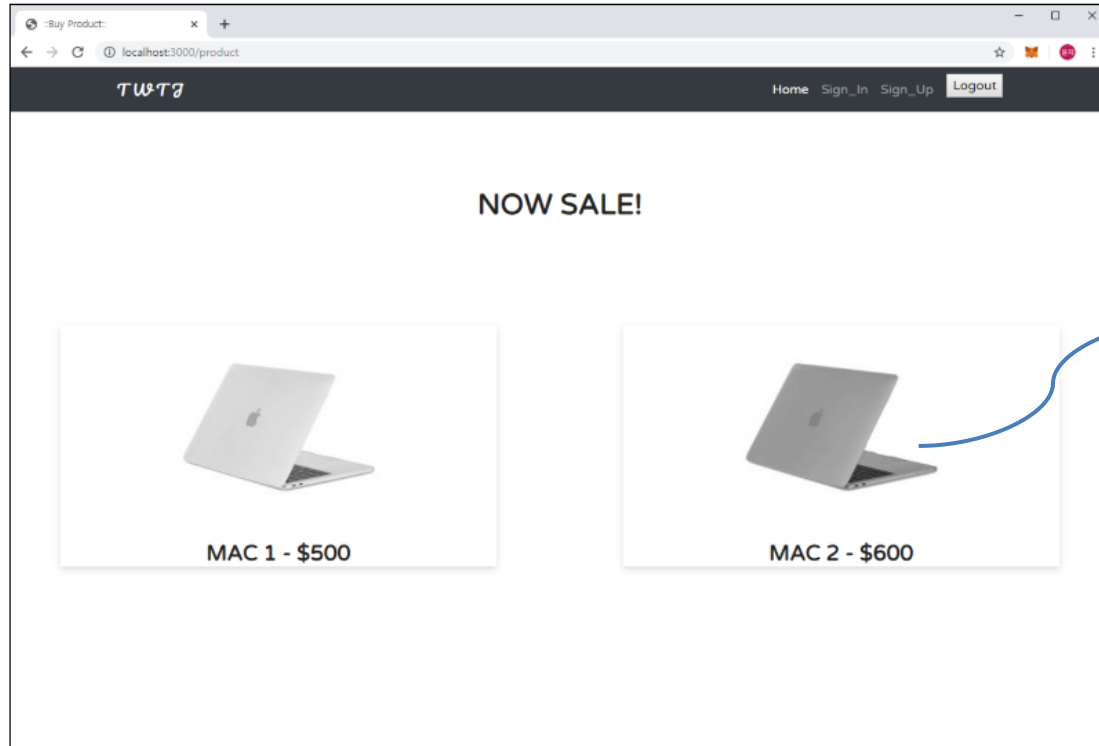
Submit

:사용자용

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3. Details

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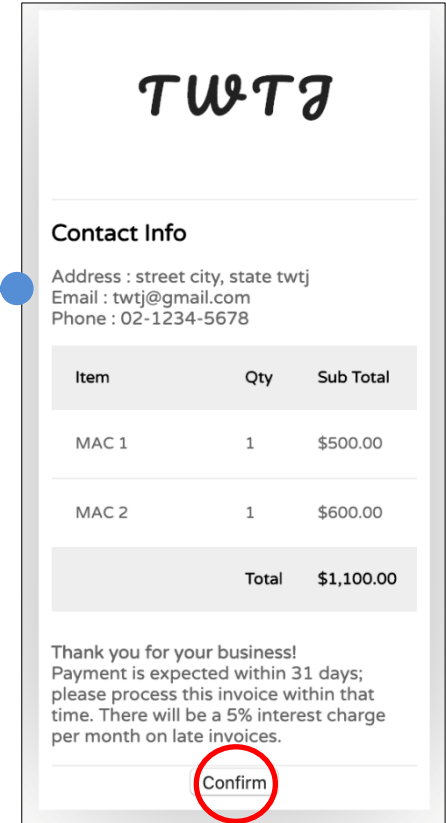
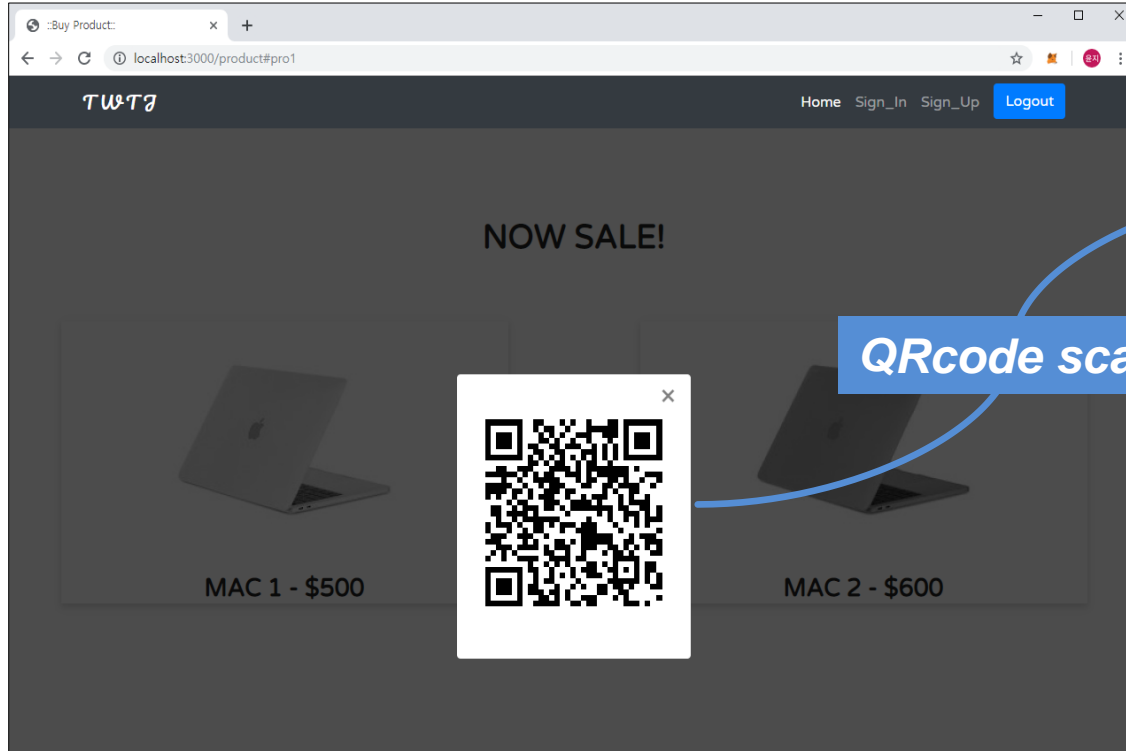
상품 구매 page

상품 이미지 -> 구매내역 QR code

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Transaction!!

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The image displays a web application interface with two database views and a welcome dialog.

mychannel_age View:

_id	price	product
0	null	null
1	["500", "600"]	["MAC1", "MAC2"]
2	["600"]	["MAC2"]
3	null	null
4	null	null
5	null	null
6	null	null

mychannel_gender View:

_id	price	product
female	["600", "600"]	["MAC2", "MAC2"]
male	["500"]	["MAC1"]

Welcome Dialog:

Welcome

Please do sign in first as a company.

Query all Ages Query all Genders

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3. Details

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배포된 Chaincode

```
admin@adminui-MacBook-Pro:~/Documents/GitHub/TWJ$ docker exec cli peer chaincode list --installed
```

Get installed chaincodes on peer:

```
Name: age, Version: 1.0, Path: github.com/age/go, Id: 8fd0629de7d3b3d626f3a807fcd5917ea29327a2186e8b6e113cdc3555e223cd
Name: gender, Version: 1.0, Path: github.com/gender/go, Id: 238aa849c7db8b10859979780e91ca004cace2f8bee85fd056131108453b1790
Name: twtj, Version: 1.0, Path: github.com/twtj/go, Id: 1c4949c59b5f5422a66b26b82a1a5ed5ce0ec002ca4383e2f909cf8f09f0d78cf
```

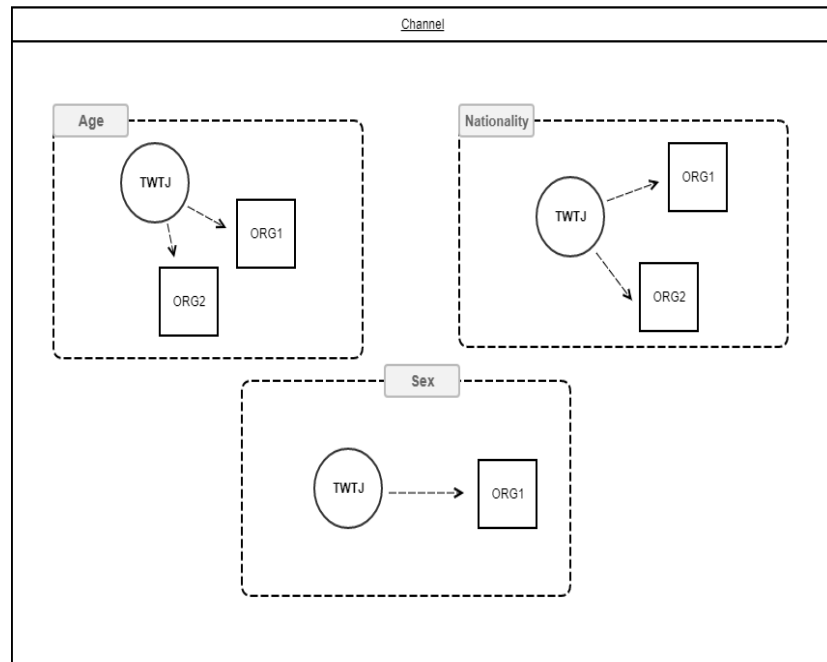
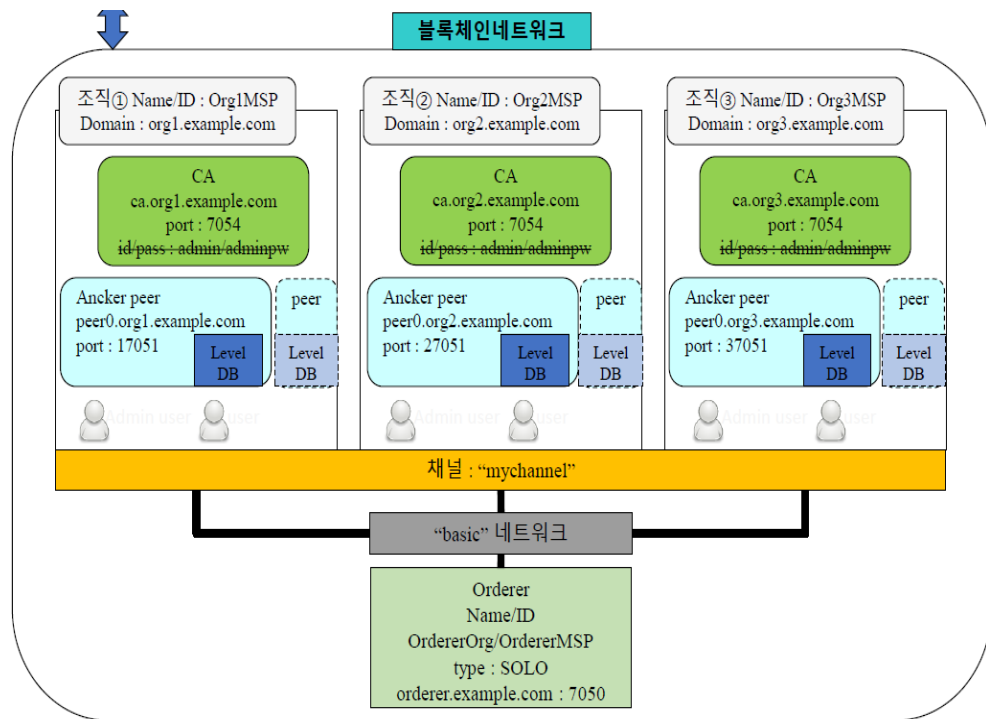
생성된 Block

```
admin@adminui-MacBook-Pro:~/Documents/GitHub/TWJ/fabric-test$ docker logs peer0.org1.example.com 2>1 | grep -i -E 'private|pvt|privdata'
2019-11-25 06:38:21.802 UTC [kvslogger] CommitWithPvtData -> INFO 02c [mychannel] Committed block [0] with 1 transaction(s) in 54ms (state_validation=0ms block_and_pvtdata_commit=6ms state_commit=44ms) commitHash=[]
2019-11-25 06:38:52.123 UTC [goSSIP.privdata] StoreBlock -> INFO 04e [mychannel] Received block [1] from buffer
2019-11-25 06:39:09.868 UTC [kvslogger] CommitWithPvtData -> INFO 05e [mychannel] Committed block [1] with 1 transaction(s) in 18767ms (state_validation=6ms block_and_pvtdata_commit=7ms state_commit=18761ms) commitHash=[65d51c6b6f786280e2d
b4f6ad3749b3f0c8e0ce425a799850f99308eae96ef7]
2019-11-25 06:39:11.838 UTC [goSSIP.privdata] StoreBlock -> INFO 065 [mychannel] Received block [2] from buffer
2019-11-25 06:39:13.873 UTC [kvslogger] CommitWithPvtData -> INFO 068 [mychannel] Committed block [2] with 1 transaction(s) in 32ms (state_validation=6ms block_and_pvtdata_commit=8ms state_commit=15ms) commitHash=[b8931dd59848baadcd05dc88ec
17162b7d8820ea37596b50e9cdc6dd8b112b9cd]
2019-11-25 06:39:22.177 UTC [goSSIP.privdata] StoreBlock -> INFO 065 [mychannel] Received block [3] from buffer
2019-11-25 06:39:48.874 UTC [kvslogger] CommitWithPvtData -> INFO 06d [mychannel] Committed block [3] with 1 transaction(s) in 18774ms (state_validation=1ms block_and_pvtdata_commit=6ms state_commit=18764ms) commitHash=[fde9152b7b30480580ef
e21e3a0b76af28599fde5d69de99e0cd0d91fa4e2e6]
2019-11-25 06:39:42.836 UTC [goSSIP.privdata] StoreBlock -> INFO 06e [mychannel] Received block [4] from buffer
2019-11-25 06:39:48.874 UTC [kvslogger] CommitWithPvtData -> INFO 071 [mychannel] Committed block [4] with 1 transaction(s) in 24ms (state_validation=8ms block_and_pvtdata_commit=6ms state_commit=8ms) commitHash=[7dc02b194dfc2c1a205711b3e6
2bf83e189f698858e2625802b20f61f02db79]
2019-11-25 06:39:53.188 UTC [goSSIP.privdata] StoreBlock -> INFO 075 [mychannel] Received block [5] from buffer
2019-11-25 06:39:59.275 UTC [kvslogger] CommitWithPvtData -> INFO 078 [mychannel] Committed block [5] with 1 transaction(s) in 53ms (state_validation=2ms block_and_pvtdata_commit=7ms state_commit=40ms) commitHash=[2f7d881d4e6b7878b7363ee6
baaf42f213f97de1e69b1e25fed2e35b58339cf]
2019-11-25 06:40:46.382 UTC [goSSIP.privdata] StoreBlock -> INFO 07f [mychannel] Received block [6] from buffer
2019-11-25 06:40:54.398 UTC [kvslogger] CommitWithPvtData -> INFO 082 [mychannel] Committed block [6] with 1 transaction(s) in 87ms (state_validation=12ms block_and_pvtdata_commit=9ms state_commit=62ms) commitHash=[807c9e202e1719af30de0828
45f671d258f13870b92fa913ad2e189898a8d5e1]
2019-11-25 06:40:47.828 UTC [goSSIP.privdata] StoreBlock -> INFO 085 [mychannel] Received block [7] from buffer
2019-11-25 06:40:54.398 UTC [kvslogger] CommitWithPvtData -> INFO 088 [mychannel] Committed block [7] with 1 transaction(s) in 28ms (state_validation=4ms block_and_pvtdata_commit=7ms state_commit=14ms) commitHash=[bd7c5e3250f3acd783e7ef3d
676617f1d6d08cc67d614e2c852b9f4f4e353e]
2019-11-25 06:40:49.896 UTC [goSSIP.privdata] StoreBlock -> INFO 08c [mychannel] Received block [8] from buffer
2019-11-25 06:40:49.896 UTC [kvslogger] CommitWithPvtData -> INFO 08e [mychannel] Committed block [8] with 1 transaction(s) in 26ms (state_validation=7ms block_and_pvtdata_commit=7ms state_commit=9ms) commitHash=[18764a1974c98b138e3587b11d
51f3492094982d627f8ae944cd65148ebbc9fe]
2019-11-25 06:40:52.233 UTC [goSSIP.privdata] StoreBlock -> INFO 095 [mychannel] Received block [9] from buffer
2019-11-25 06:40:52.234 UTC [kvslogger] CommitWithPvtData -> INFO 098 [mychannel] Committed block [9] with 1 transaction(s) in 70ms (state_validation=23ms block_and_pvtdata_commit=8ms state_commit=35ms) commitHash=[48464b5040e157dbd83e3e4b7
2894999c4808efb4ef9b24c87ad3f7e2e10c4fb7]
2019-11-25 06:40:54.398 UTC [goSSIP.privdata] StoreBlock -> INFO 09c [mychannel] Received block [10] from buffer
2019-11-25 06:40:54.398 UTC [kvslogger] CommitWithPvtData -> INFO 09e [mychannel] Committed block [10] with 1 transaction(s) in 36ms (state_validation=11ms block_and_pvtdata_commit=7ms state_commit=15ms) commitHash=[6256613ad49861edec0625
2f3783bf7120a72e578953867b90804addafec8]
2019-11-25 06:40:54.398 UTC [goSSIP.privdata] StoreBlock -> INFO 0a2 [mychannel] Received block [11] from buffer
2019-11-25 06:40:54.398 UTC [kvslogger] CommitWithPvtData -> INFO 0a4 [mychannel] Committed block [11] with 1 transaction(s) in 25ms (state_validation=10ms block_and_pvtdata_commit=7ms state_commit=12ms) commitHash=[4c7c4e7de09ad30e179c0c0f
8128dbae9db12c0cfe372296845d40fab240572]
2019-11-25 06:40:52.224 UTC [goSSIP.privdata] StoreBlock -> INFO 0a5 [mychannel] Received block [12] from buffer
2019-11-25 06:40:52.227 UTC [kvslogger] CommitWithPvtData -> INFO 0a6 [mychannel] Committed block [12] with 1 transaction(s) in 50ms (state_validation=10ms block_and_pvtdata_commit=6ms state_commit=30ms) commitHash=[e9576db8b06fcf22bbf28c79
7f44ae33136a8f5ca932d086b3a48e4379fab02]
2019-11-25 06:40:54.398 UTC [goSSIP.privdata] StoreBlock -> INFO 0a2 [mychannel] Received block [13] from buffer
2019-11-25 06:40:54.398 UTC [kvslogger] CommitWithPvtData -> INFO 0b4 [mychannel] Committed block [13] with 1 transaction(s) in 32ms (state_validation=12ms block_and_pvtdata_commit=7ms state_commit=10ms) commitHash=[b290615eb537bc4cc1a5148
85c518f70902c186fce234623cae5047a5e795695]
2019-11-25 06:40:54.398 UTC [goSSIP.privdata] StoreBlock -> INFO 0b8 [mychannel] Received block [14] from buffer
2019-11-25 06:40:54.398 UTC [kvslogger] CommitWithPvtData -> INFO 0ba [mychannel] Committed block [14] with 1 transaction(s) in 26ms (state_validation=5ms block_and_pvtdata_commit=7ms state_commit=10ms) commitHash=[71188e4b842bae59a98f4b8b
dd29261f6a2e5c863196fdb7f27f9797c58ba2461]
```

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- How to use Fabric?



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5. Why?

- Why use Fabric?

Private

Trust

Benefit

Q & A
Thank You