

Blockchain Private Network Deploy Demo

[中文版](#)

OS Env

```
~$ uname -a
Linux deploydemo 4.15.0-1025-gcp #26~16.04.1-Ubuntu SMP Wed Nov 21 10:13:20 UTC
2018 x86_64 x86_64 x86_64 GNU/Linux
```

Go and Geth Version

```
~$ geth version
Geth
Version: 1.8.12-stable
Git Commit: 37685930d953bcbe023f9bc65b135a8d8b8f1488
Architecture: amd64
Protocol Versions: [63 62]
Network Id: 1
Go Version: go1.10.3
```

1. install Golang

```
~$ wget https://dl.google.com/go/go1.10.3.linux-amd64.tar.gz
~$ sudo tar -C /usr/local -xzf go1.10.3.linux-amd64.tar.gz
~$ export PATH=$PATH:/usr/local/go/bin
```

2. install Geth client

```
~$ sudo add-apt-repository -y ppa:ethereum/ethereum
~$ sudo apt-get update
~$ sudo apt-get install ethereum
# Test
```

3. create account

```

# create data dir
~$ mkdir privateNet
~$ cd privateNet
# create account and specify a directory for storing chain data
~$ geth --datadir dataDir account new
Passphrase:
Repeat passphrase:
Address: {35891a52b96846f9c304dd6bc65eefdc795ed861}
# take note this account address for future usage
# echo password to file
~$ echo kaiyaxiong123 > dataDir/passwd

```

4. load genesis and config dump file

```

# load genesis file (jnullibtop.json)
~$ wget https://cdn.jsdelivr.net/gh/kaiya/deploydemo@master/jnullibtop.json

# load config dump file (config.toml)
~$ wget https://cdn.jsdelivr.net/gh/kaiya/deploydemo@master/config.toml

```

5. modify config file

```

# change dataset dir to your home directory
DatasetDir = "/home/xiongekaiya/.ethash"
# change HTTPPort to any port you want...
HTTPPort = 3778
ListenAddr = ":30300"
# !important change DataDir to your directory which you specify in step 3.
DataDir = "dataDir"

```

6. init network

```

~$ geth --datadir dataDir init jnullibtop.json

```

7. get node info

```

# start geth and attach to console
~$ geth --config config.toml console
# get node info in geth console
> admin.nodeInfo.enode
"enode://0db203c41c62f7cd930589aace87fece451479896d7b65e2c1148793b5679cd7f2180d205512676a550772614377a53e879d1bd643cf48d835bb7fcc0db0ac15@35.220.189.212:30300"
# take note the enode url

```

8. add peer

```

# add other peers in geth console
> admin.addPeer("peer's enode url")
# !attention, the ip addr in your peer's enode url must could be accessed by your
machine.
# list peers
> admin.peers
[
  {
    caps: ["eth/63"],
    id:
      "0db203c41c62f7cd930589aace87fece451479896d7b65e2c1148793b5679cd7f2180d205512676a5
      50772614377a53e879d1bd643cf48d835bb7fcc0db0ac15",
    name: "Geth/v1.8.20-stable-24d727b6/linux-amd64/go1.10.4",
    network: {
      inbound: false,
      localAddress: "202.116.174.1:47716",
      remoteAddress: "35.220.189.212:30300",
      static: true,
      trusted: false
    },
    protocols: {
      eth: {
        difficulty: 181377,
        head:
          "0xef06264fa715a2168c4e3f6b8f0dc7e090d4becf807e83461fd64e04f62d7d79",
        version: 63
      }
    }
  }
]

```

9. run geth
create start.sh file

```

#!/bin/bash
geth --config config.toml --unlock 0x${account_address} --password
./dataDir/passwd --targetgaslimit '9000000' --mine

```

run geth with nohup

```

nohup bash start.sh > run.log 2>&1 &

```

```
kaliya@test20:~(node2 (ssh))
816667.545bd1
INFO [01-09|22:46:45.001] ⚡ mined potential block          number=617349 hash=
f7f0bc_4ab1a5
INFO [01-09|22:46:45.002] Commit new mining work          number=617350 txs=0
uncles=0 elapsed=767.198µs
INFO [01-09|22:47:00.000] Successfully sealed new block    number=617350 hash=9
e3dfe_0e3323
INFO [01-09|22:47:00.001] ⚡ block reached canonical chain number=617345 hash=
844b28_4312c7
INFO [01-09|22:47:00.001] ⚡ mined potential block          number=617350 hash=
9e3dfe_0e3323
INFO [01-09|22:47:00.002] Commit new mining work          number=617351 txs=0
uncles=0 elapsed=783.065µs
INFO [01-09|22:47:15.000] Successfully sealed new block    number=617351 hash=3
5fc25_d9daaa
INFO [01-09|22:47:15.001] ⚡ block reached canonical chain number=617346 hash=
4f3097_9ab69a
INFO [01-09|22:47:15.001] ⚡ mined potential block          number=617351 hash=
35fc25_d9daaa
INFO [01-09|22:47:15.002] Commit new mining work          number=617352 txs=0
uncles=0 elapsed=789.252µs
> INFO [01-09|22:47:30.000] Successfully sealed new block    number=617352 hash
=289082_baaf77
INFO [01-09|22:47:30.001] ⚡ block reached canonical chain number=617347 hash=
0694d3_d2c880
INFO [01-09|22:47:30.001] ⚡ mined potential block          number=617352 hash=
289082_baaf77
INFO [01-09|22:47:30.002] Commit new mining work          number=617353 txs=0
uncles=0 elapsed=1.188ms
INFO [01-09|22:47:45.000] Successfully sealed new block    number=617353 hash=a
c4310_d80a60
INFO [01-09|22:47:45.001] ⚡ block reached canonical chain number=617348 hash=
40dad9_d54186
INFO [01-09|22:47:45.001] ⚡ mined potential block          number=617353 hash=
ac4310_d80a60
INFO [01-09|22:47:45.002] Commit new mining work          number=617354 txs=0
uncles=0 elapsed=874.816µs
> INFO [01-09|22:48:00.000] Successfully sealed new block    number=617354 hash
=686386_fa27b1
INFO [01-09|22:48:00.001] ⚡ block reached canonical chain number=617349 hash=
f7f0bc_4ab1a5
INFO [01-09|22:48:00.001] ⚡ mined potential block          number=617354 hash=
686386_fa27b1
INFO [01-09|22:48:00.002] Commit new mining work          number=617355 txs=0
uncles=0 elapsed=849.907µs
}

kaliya@deploydemo:~/privateNet (ssh)
94ms  number=531648 hash=0a2396_df0d09 age=2w21h15m size=768.00B count=192 elapsed=80.
INFO [01-09|14:48:04.199] Imported new block headers          135ms  number=531840 hash=4c2410_b255f1 age=2w20h27m count=192 elapsed=2.5
INFO [01-09|14:48:04.311] Imported new block receipts         44ms   number=531840 hash=4c2410_b255f1 age=2w20h27m size=768.00B count=384 elapsed=152
INFO [01-09|14:48:04.357] Imported new block headers          195ms  number=532224 hash=79bc2c_dc0016 age=2w18h51m count=384 elapsed=5.0
INFO [01-09|14:48:04.376] Imported new block receipts         78ms   number=532224 hash=79bc2c_dc0016 age=2w18h51m size=1.54kB count=192 elapsed=71.
INFO [01-09|14:48:04.451] Imported new block headers          170ms  number=532416 hash=546d4e_7f6682 age=2w18h3m count=192 elapsed=2.6
INFO [01-09|14:48:04.480] Imported new block receipts         70ms   number=532416 hash=546d4e_7f6682 age=2w18h3m size=768.00B count=192 elapsed=77.
INFO [01-09|14:48:04.532] Imported new block headers          267ms  number=532608 hash=61bc52_5bee0b age=2w17h15m count=192 elapsed=2.3
INFO [01-09|14:48:04.543] Imported new block receipts         87ms   number=532608 hash=61bc52_5bee0b age=2w17h15m size=768.00B count=384 elapsed=141
INFO [01-09|14:48:04.690] Imported new block headers          987ms  number=532992 hash=c9b6c9_8cee4b age=2w15h39m count=384 elapsed=4.9
INFO [01-09|14:48:04.739] Imported new block receipts         12ms   number=532992 hash=c9b6c9_8cee4b age=2w15h39m size=1.54kB count=192 elapsed=85.
INFO [01-09|14:48:04.780] Imported new block headers          338ms  number=533184 hash=c540d7_29dbc8 age=2w14h51m count=192 elapsed=2.6
INFO [01-09|14:48:04.802] Imported new block receipts         11ms   number=533184 hash=c540d7_29dbc8 age=2w14h51m size=768.00B count=384 elapsed=146
INFO [01-09|14:48:04.933] Imported new block headers          535ms  number=533568 hash=9f9ce4_be40e3 age=2w13h15m count=384 elapsed=5.1
INFO [01-09|14:48:05.023] Imported new block receipts         82ms   number=533568 hash=9f9ce4_be40e3 age=2w13h15m size=1.54kB count=192 elapsed=85.
INFO [01-09|14:48:05.023] Imported new block headers          244ms  number=533760 hash=9754e6_a780da age=2w12h27m count=128 elapsed=67.
INFO [01-09|14:48:05.098] Imported new block receipts         428ms  number=533696 hash=1be08a_88192c age=2w12h43m size=512.00B count=192 elapsed=70.
INFO [01-09|14:48:05.103] Imported new block headers          167ms  number=533952 hash=a6381a_2cfc65 age=2w11h39m count=64  elapsed=1.1
INFO [01-09|14:48:05.111] Imported new block receipts         66ms   number=533760 hash=9754e6_a780da age=2w12h27m size=10.43kB count=192 elapsed=69.
INFO [01-09|14:48:05.183] Imported new block headers          076ms  number=534144 hash=e59340_c01797 age=2w10h51m count=384 elapsed=5.1
INFO [01-09|14:48:05.196] Imported new block receipts         38ms   number=534144 hash=e59340_c01797 age=2w10h51m size=7.79kB count=192 elapsed=68.
INFO [01-09|14:48:05.271] Imported new block headers          830ms  number=534336 hash=0c1571_579a8c age=2w10h3m count=192 elapsed=2.9
INFO [01-09|14:48:05.280] Imported new block receipts          50ms   number=534336 hash=0c1571_579a8c age=2w10h3m size=768.00B
```

You can check log via tail command

```
tail -f run.log
```