

```
C:\Users\Duaa Algethami\cmdr (main)
λ cd ..

C:\Users\Duaa Algethami (main)
λ cd Desktop\

C:\Users\Duaa Algethami\Desktop (main)
λ cd demo\

C:\Users\Duaa Algethami\Desktop\demo (main)
λ ls
abigen.exe* clef.exe* evm.exe* puppeth.exe* wnode.exe*
bootnode.exe* COPYING geth.exe* rlpdump.exe*

C:\Users\Duaa Algethami\Desktop\demo (main)
λ geth --datadir ./node1 account new
INFO [12-18|10:43:12.549] Maximum peer count ETH=50 LES=0 total=50
Your new account is locked with a password. Please give a password. Do not forget this password.
Password:
Repeat password:

Your new key was generated

Public address of the key: 0x533B9C672d27F1e95181a3C008ff7F309f7DE94D
Path of the secret key file: node1\keystore\UTC--2021-12-18T07-43-14.258209400Z--533b9c672d27f1e95181a3c008ff7f309f7de94d

- You can share your public address with anyone. Others need it to interact with you.
- You must NEVER share the secret key with anyone! The key controls access to your funds!
- You must BACKUP your key file! Without the key, it's impossible to access account funds!
- You must REMEMBER your password! Without the password, it's impossible to decrypt the key!

C:\Users\Duaa Algethami\Desktop\demo (main)
λ geth --datadir ./node2 account new
INFO [12-18|10:44:45.326] Maximum peer count ETH=50 LES=0 total=50
Your new account is locked with a password. Please give a password. Do not forget this password.
Password:
Repeat password:

Your new key was generated
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Cmder

Your new key was generated

Public address of the key: 0x30d690Eb2d8BD6774c18d7C7969D5f7a82C7bDc3
Path of the secret key file: node2\keystore\UTC--2021-12-18T07-44-47.150433400Z--30d690eb2d8bd6774c18d7c7969d5f7a82c7bdc3

- You can share your public address with anyone. Others need it to interact with you.
- You must NEVER share the secret key with anyone! The key controls access to your funds!
- You must BACKUP your key file! Without the key, it's impossible to access account funds!
- You must REMEMBER your password! Without the password, it's impossible to decrypt the key!

C:\Users\Duaa Algethami\Desktop\demo (main)
λ geth --datadir ./node3 account new
INFO [12-18|10:45:36.813] Maximum peer count ETH=50 LES=0 total=50
Your new account is locked with a password. Please give a password. Do not forget this password.
Password:
Repeat password:

Your new key was generated

Public address of the key: 0x987c20Ff09595370e4b36c77726Ac3F3bec132cC
Path of the secret key file: node3\keystore\UTC--2021-12-18T07-45-38.291058400Z--987c20ff09595370e4b36c77726ac3f3bec132cc

- You can share your public address with anyone. Others need it to interact with you.
- You must NEVER share the secret key with anyone! The key controls access to your funds!
- You must BACKUP your key file! Without the key, it's impossible to access account funds!
- You must REMEMBER your password! Without the password, it's impossible to decrypt the key!

C:\Users\Duaa Algethami\Desktop\demo (main)
λ ls -la
total 332960
drwxr-xr-x 1 Duaa Algethami 197121      0 Dec 18 10:45 ./
drwxr-xr-x 1 Duaa Algethami 197121      0 Dec 18 10:14 ../
-rwxr-xr-x 1 Duaa Algethami 197121 46801905 Nov  7 2019 abigen.exe*
-rwxr-xr-x 1 Duaa Algethami 197121 46398573 Nov  7 2019 bootnode.exe*
-rwxr-xr-x 1 Duaa Algethami 197121 57882306 Nov  7 2019 clef.exe*
-rw-r--r-- 1 Duaa Algethami 197121    32397 Nov  7 2019 COPYING
-rwxr-xr-x 1 Duaa Algethami 197121 45629064 Nov  7 2019 evm.exe*
-rwxr-xr-x 1 Duaa Algethami 197121 65688413 Nov  7 2019 geth.exe*
drwxr-xr-x 1 Duaa Algethami 197121      0 Dec 18 10:43 node1/

Track 2 - Blockchain Fundamentals
PoTech 2021 Q4A Q1 - 12/18/2021
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Cmder

drwxr-xr-x 1 Duaa Algethami 197121      0 Dec 18 10:43 node1/
drwxr-xr-x 1 Duaa Algethami 197121      0 Dec 18 10:44 node2/
drwxr-xr-x 1 Duaa Algethami 197121      0 Dec 18 10:45 node3/
-rwxr-xr-x 1 Duaa Algethami 197121 24737862 Nov  7 2019 puppeth.exe*
-rwxr-xr-x 1 Duaa Algethami 197121  3617792 Nov  7 2019 rlpdump.exe*
-rwxr-xr-x 1 Duaa Algethami 197121 50127175 Nov  7 2019 wnode.exe*

C:\Users\Duaa Algethami\Desktop\demo (main)
λ dir
Volume in drive C is Windows
Volume Serial Number is B6CA-734C

Directory of C:\Users\Duaa Algethami\Desktop\demo

12/18/2021  10:45 AM  <DIR>          .
12/18/2021  10:45 AM  <DIR>          ..
11/07/2019  11:25 AM           46,801,905 abigen.exe
11/07/2021  11:25 AM           46,398,573 bootnode.exe
11/07/2019  11:25 AM           57,882,306 clef.exe
11/07/2019  11:21 AM              32,397 COPYING
11/07/2019  11:26 AM           45,629,064 evm.exe
11/07/2019  11:26 AM           65,688,413 geth.exe
12/18/2021  10:43 AM  <DIR>          node1
12/18/2021  10:44 AM  <DIR>          node2
12/18/2021  10:45 AM  <DIR>          node3
11/07/2019  11:24 AM           24,737,862 puppeth.exe
11/07/2019  11:25 AM           3,617,792 rlpdump.exe
11/07/2019  11:26 AM           50,127,175 wnode.exe
          9 File(s)      340,915,487 bytes
          5 Dir(s)      3,905,679,360 bytes free

C:\Users\Duaa Algethami\Desktop\demo (main)
λ dir node1
Volume in drive C is Windows
Volume Serial Number is B6CA-734C

Directory of C:\Users\Duaa Algethami\Desktop\demo\node1

12/18/2021  10:43 AM  <DIR>          .
12/18/2021  10:43 AM  <DIR>          ..
12/18/2021  10:43 AM  <DIR>          keystore
```

```
Cmder
12/18/2021 10:43 AM <DIR>      keystore
                        0 File(s)      0 bytes
                        3 Dir(s)      3,905,482,752 bytes free

C:\Users\Duaa Algethami\Desktop\demo (main)
λ puppeth.exe
+-----+
| Welcome to puppeth, your Ethereum private network manager |
|                                                             |
| This tool lets you create a new Ethereum network down to   |
| the genesis block, bootnodes, miners and ethstats servers  |
| without the hassle that it would normally entail.          |
|                                                             |
| Puppeth uses SSH to dial in to remote servers, and builds   |
| its network components out of Docker containers using the   |
| docker-compose toolset.                                     |
+-----+

Please specify a network name to administer (no spaces, hyphens or capital letters please)
> finnet

Sweet, you can set this via --network=finnet next time!

INFO [12-18|10:51:12.991] Administering Ethereum network      name=finnet
WARN [12-18|10:51:12.992] No previous configurations found      path="C:\\Users\\Duaa Algethami\\.puppeth\\finnet"

What would you like to do? (default = stats)
 1. Show network stats
 2. Configure new genesis
 3. Track new remote server
 4. Deploy network components
> 2

What would you like to do? (default = create)
 1. Create new genesis from scratch
 2. Import already existing genesis
> 1

Which consensus engine to use? (default = clique)
 1. Ethash - proof-of-work
 2. Clique - proof-of-authority
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Cmder
2. Clique - proof-of-authority
> 2

How many seconds should blocks take? (default = 15)
>

Which accounts are allowed to seal? (mandatory at least one)
> 0x533B9C672d27F1e95181a3C008ff7F309f7DE94D
> 0x30d690Eb2d8BD6774c18d7C7969D5f7a82C7bDc3
> 0x987c20Ff09595370e4b36c77726Ac3F3bec132cC
> 0x

Which accounts should be pre-funded? (advisable at least one)
> 0xE15a318194F7c48c8Fbb9fECC662B2Af0F230456
> 0x533B9C672d27F1e95181a3C008ff7F309f7DE94D
> 0x30d690Eb2d8BD6774c18d7C7969D5f7a82C7bDc3
> 0x987c20Ff09595370e4b36c77726Ac3F3bec132cC
> 0x

Should the precompile-addresses (0x1 .. 0xff) be pre-funded with 1 wei? (advisable yes)
> no

Specify your chain/network ID if you want an explicit one (default = random)
> 1231
INFO [12-18|11:10:18.839] Configured new genesis block

What would you like to do? (default = stats)
1. Show network stats
2. Manage existing genesis
3. Track new remote server
4. Deploy network components
> 2

1. Modify existing configurations
2. Export genesis configurations
3. Remove genesis configuration
> 2

Which folder to save the genesis specs into? (default = current)
Will create finnet.json, finnet-aleth.json, finnet-harmony.json, finnet-parity.json
>

geth.exe
Type here to search
Taskbar icons: File Explorer, Edge, Teams, OneDrive, Chrome, etc.
System tray: Search, Volume, Network, Date/Time: 11:41 AM 12/18/2021
```

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Cmder

Which folder to save the genesis specs into? (default = current)
Will create finnet.json, finnet-aleth.json, finnet-harmony.json, finnet-parity.json
>
INFO [12-18|11:11:43.453] Saved native genesis chain spec path=finnet.json
ERROR[12-18|11:11:43.455] Failed to create Aleth chain spec err="unsupported consensus engine"
ERROR[12-18|11:11:43.456] Failed to create Parity chain spec err="unsupported consensus engine"
INFO [12-18|11:11:43.458] Saved genesis chain spec client=harmony path=finnet-harmony.json

What would you like to do? (default = stats)
1. Show network stats
2. Manage existing genesis
3. Track new remote server
4. Deploy network components
>
INFO [12-18|11:12:01.027] No remote machines to gather stats from

What would you like to do? (default = stats)
1. Show network stats
2. Manage existing genesis
3. Track new remote server
4. Deploy network components
>
C:\Users\Duaa Algethami\Desktop\demo (main)
λ ls
abigen.exe* clef.exe* evm.exe* finnet-harmony.json node1/ node3/ rlpdump.exe*
bootnode.exe* COPYING finnet.json geth.exe* node2/ puppeth.exe* wnode.exe*

C:\Users\Duaa Algethami\Desktop\demo (main)
λ dir
Volume in drive C is Windows
Volume Serial Number is B6CA-734C

Directory of C:\Users\Duaa Algethami\Desktop\demo

12/18/2021 11:11 AM <DIR> .
12/18/2021 11:11 AM <DIR> ..
11/07/2019 11:25 AM 46,801,905 abigen.exe
11/07/2019 11:25 AM 46,398,573 bootnode.exe
11/07/2019 11:25 AM 57,882,306 clef.exe
11/07/2019 11:21 AM 32,397 COPYING
11/07/2019 11:26 AM 45,629,064 evm.exe

geth.exe
```



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Cmder

11/07/2019 11:26 AM 45,629,064 evm.exe
12/18/2021 11:11 AM 1,673 finnet-harmony.json
12/18/2021 11:11 AM 1,673 finnet.json
11/07/2019 11:26 AM 65,688,413 geth.exe
12/18/2021 10:43 AM <DIR> node1
12/18/2021 10:44 AM <DIR> node2
12/18/2021 10:45 AM <DIR> node3
11/07/2019 11:24 AM 24,737,862 puppeth.exe
11/07/2019 11:25 AM 3,617,792 rlpdump.exe
11/07/2019 11:26 AM 50,127,175 wnode.exe
11 File(s) 340,918,833 bytes
5 Dir(s) 3,893,051,392 bytes free

C:\Users\Duaa Algethami\Desktop\demo (main)
λ geth init --datadir node1 finnet.json
INFO [12-18|11:18:20.223] Maximum peer count ETH=50 LES=0 total=50
INFO [12-18|11:18:20.275] Allocated cache and file handles database="C:\\Users\\Duaa Algethami\\Desktop\\demo\\node1\\geth\\chaindata" cache=16.00MiB handles=1
INFO [12-18|11:18:20.304] Writing custom genesis block
INFO [12-18|11:18:20.313] Persisted trie from memory database nodes=5 size=863.00B time=995.9µs gcnodes=0 gcsiz=0.00B gctime=0s livenodes=1 livesize=0.00B
INFO [12-18|11:18:20.325] Successfully wrote genesis state database=chaindata hash=e976ee..842fd2
INFO [12-18|11:18:20.338] Allocated cache and file handles database="C:\\Users\\Duaa Algethami\\Desktop\\demo\\node1\\geth\\lightchaindata" cache=16.00MiB handles=16
INFO [12-18|11:18:20.365] Writing custom genesis block
INFO [12-18|11:18:20.369] Persisted trie from memory database nodes=5 size=863.00B time=0s gcnodes=0 gcsiz=0.00B gctime=0s livenodes=1 livesize=0.00B
INFO [12-18|11:18:20.382] Successfully wrote genesis state database=lightchaindata hash=e976ee..842fd2

C:\Users\Duaa Algethami\Desktop\demo (main)
λ dir node1
Volume in drive C is Windows
Volume Serial Number is B6CA-734C

Directory of C:\Users\Duaa Algethami\Desktop\demo\node1

12/18/2021 11:18 AM <DIR> .
12/18/2021 11:18 AM <DIR> ..
12/18/2021 11:18 AM <DIR> geth
12/18/2021 10:43 AM <DIR> keystore
0 File(s) 0 bytes
4 Dir(s) 3,888,914,432 bytes free

Week 10, Day 4
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C:\Users\Duaa Algethami\Desktop\demo (main)
λ dir node1\geth\
Volume in drive C is Windows
Volume Serial Number is B6CA-734C

Directory of C:\Users\Duaa Algethami\Desktop\demo\node1\geth

12/18/2021  11:18 AM  <DIR>      .
12/18/2021  11:18 AM  <DIR>      ..
12/18/2021  11:18 AM  <DIR>      chaindata
12/18/2021  11:18 AM  <DIR>      lightchaindata
               0 File(s)                0 bytes
               4 Dir(s)      3,888,480,256 bytes free

C:\Users\Duaa Algethami\Desktop\demo (main)
λ geth init --datadir node2 finnet.json
INFO [12-18|11:20:18.469] Maximum peer count          ETH=50 LES=0 total=50
INFO [12-18|11:20:18.522] Allocated cache and file handles database="C:\\Users\\Duaa Algethami\\Desktop\\demo\\node2\\geth\\chaindata" cache=16.00MiB handles=1

INFO [12-18|11:20:18.558] Writing custom genesis block
INFO [12-18|11:20:18.565] Persisted trie from memory database nodes=5 size=863.00B time=0s gcnodes=0 gcsiz=0.00B gctime=0s livenodes=1 livesize=0.00B
INFO [12-18|11:20:18.578] Successfully wrote genesis state database=chaindata hash=e976ee..842fd2
INFO [12-18|11:20:18.586] Allocated cache and file handles database="C:\\Users\\Duaa Algethami\\Desktop\\demo\\node2\\geth\\lightchaindata" cache=16.00MiB handles=1
es=16

INFO [12-18|11:20:18.620] Writing custom genesis block
INFO [12-18|11:20:18.628] Persisted trie from memory database nodes=5 size=863.00B time=386.5µs gcnodes=0 gcsiz=0.00B gctime=0s livenodes=1 livesize=0.00B
INFO [12-18|11:20:18.638] Successfully wrote genesis state database=lightchaindata hash=e976ee..842fd2

C:\Users\Duaa Algethami\Desktop\demo (main)
λ geth init --datadir node3 finnet.json
INFO [12-18|11:21:34.935] Maximum peer count          ETH=50 LES=0 total=50
INFO [12-18|11:21:34.989] Allocated cache and file handles database="C:\\Users\\Duaa Algethami\\Desktop\\demo\\node3\\geth\\chaindata" cache=16.00MiB handles=1

INFO [12-18|11:21:35.041] Writing custom genesis block
INFO [12-18|11:21:35.046] Persisted trie from memory database nodes=5 size=863.00B time=0s gcnodes=0 gcsiz=0.00B gctime=0s livenodes=1 livesize=0.00B
INFO [12-18|11:21:35.058] Successfully wrote genesis state database=chaindata hash=e976ee..842fd2
INFO [12-18|11:21:35.068] Allocated cache and file handles database="C:\\Users\\Duaa Algethami\\Desktop\\demo\\node3\\geth\\lightchaindata" cache=16.00MiB handles=1
es=16

INFO [12-18|11:21:35.109] Writing custom genesis block
INFO [12-18|11:21:35.114] Persisted trie from memory database nodes=5 size=863.00B time=0s gcnodes=0 gcsiz=0.00B gctime=0s livenodes=1 livesize=0.00B
```



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Cmder
λ cd ..

C:\Users\Duaa Algethami (main)
λ cd Desktop\demo\

C:\Users\Duaa Algethami\Desktop\demo (main)
λ geth --datadir node1 --unlock "533B9C672d27F1e95181a3C008ff7F309f7DE94D" --mine --rpc --allow-insecure-unlock
INFO [12-19|07:30:29.042] Bumping default cache on mainnet      provided=1024 updated=4096
INFO [12-19|07:30:29.054] Maximum peer count                     ETH=50 LES=0 total=50
INFO [12-19|07:30:29.139] Starting peer-to-peer node             instance=Geth/v1.9.7-stable-a718daa6/windows-amd64/go1.13.4
INFO [12-19|07:30:29.149] Allocated trie memory caches           clean=1024.00MiB dirty=1024.00MiB
INFO [12-19|07:30:29.157] Allocated cache and file handles       database="C:\Users\Duaa Algethami\Desktop\demo\node1\geth\chaindata" cache=2.00GiB handles=819
2
INFO [12-19|07:30:29.476] Opened ancient database                database="C:\Users\Duaa Algethami\Desktop\demo\node1\geth\chaindata\ancient"
INFO [12-19|07:30:29.506] Initialised chain configuration         config="{ChainID: 1231 Homestead: 0 DAO: <nil> DAOSupport: false EIP150: 0 EIP155: 0 EIP158: 0 Byzant
ium: 0 Constantinople: 0 Petersburg: 0 Istanbul: 0 Engine: clique}"
INFO [12-19|07:30:29.532] Initialising Ethereum protocol         versions="[64 63]" network=1 dbversion=7
WARN [12-19|07:30:29.562] Head state missing, repairing chain    number=1011 hash=e037f8..85cad2
INFO [12-19|07:30:29.615] Rewound blockchain to past state       number=3 hash=b570b1..d7bbe7
INFO [12-19|07:30:29.623] Loaded most recent local header        number=1011 hash=e037f8..85cad2 td=2017 age=20m1s
INFO [12-19|07:30:29.630] Loaded most recent local full block    number=3 hash=b570b1..d7bbe7 td=5 age=14h54m8s
INFO [12-19|07:30:29.639] Loaded most recent local fast block    number=1011 hash=e037f8..85cad2 td=2017 age=20m1s
INFO [12-19|07:30:29.826] Setting new local account              address=0xE15a318194F7c48c8Fbb9fECC662B2Af0F230456
INFO [12-19|07:30:29.834] Loaded local transaction journal       transactions=5 dropped=0
INFO [12-19|07:30:29.842] Regenerated local transaction journal   transactions=2 accounts=1
WARN [12-19|07:30:29.849] Switch sync mode from fast sync to full sync
INFO [12-19|07:30:29.921] New local node record                  seq=14 id=1b4d81d0c04d2f80 ip=127.0.0.1 udp=30303 tcp=30303
INFO [12-19|07:30:29.933] Started P2P networking                 self=enode://01ab95eae1e9a5ce1e1a0ee1bd4ed02f9a350dba8b0c8c6b5a638e335447a1fc16a408036f471780cf94d705
a339870a8720b83234c27a66f9cc00fa71ecb355@127.0.0.1:30303
INFO [12-19|07:30:29.935] IPC endpoint opened                    url=\\\\.\\pipe\\geth.ipc
INFO [12-19|07:30:29.962] HTTP endpoint opened                  url=http://127.0.0.1:8545 cors= vhosts=localhost
Unlocking account 533B9C672d27F1e95181a3C008ff7F309f7DE94D | Attempt 1/3
Password:
INFO [12-19|07:30:32.016] Unlocked account                      address=0x533B9C672d27F1e95181a3C008ff7F309f7DE94D
INFO [12-19|07:30:32.026] Transaction pool price threshold updated price=1000000000
INFO [12-19|07:30:32.033] Transaction pool price threshold updated price=1000000000
INFO [12-19|07:30:32.039] Etherbase automatically configured    address=0x533B9C672d27F1e95181a3C008ff7F309f7DE94D
INFO [12-19|07:30:32.047] Commit new mining work                 number=4 sealhash=ca5c77..c24c1c uncles=0 txs=0 gas=0 fees=0 elapsed=1.011ms
INFO [12-19|07:30:32.047] Signed recently, must wait for others
INFO [12-19|07:30:35.103] New local node record                  seq=15 id=1b4d81d0c04d2f80 ip=176.47.65.94 udp=2772 tcp=30303
```

```
Cmder

C:\Users\Duaa Algethami\cmdr (main)
λ cd..

C:\Users\Duaa Algethami (main)
λ cd Desktop\demo\

C:\Users\Duaa Algethami\Desktop\demo (main)
λ geth --datadir ./node2 --unlock "30d690Eb2d8BD6774c18d7C7969D5f7a82C7bDc3" --ipcdisable --mine --port 30304 --bootnodes enode://01ab95eae1e9a5ce1e1a0ee1bd4ed02f9a350d
ba8b0c8c6b5a638e335447a1fc16a408036f471780cf94d705a339870a8720b83234c27a66f9cc00fa71ecb355@127.0.0.1:30303
INFO [12-19|07:31:17.150] Bumping default cache on mainnet      provided=1024 updated=4096
INFO [12-19|07:31:17.159] Maximum peer count                    ETH=50 LES=0 total=50
INFO [12-19|07:31:17.231] Starting peer-to-peer node            instance=Geth/v1.9.7-stable-a718daa6/windows-amd64/go1.13.4
INFO [12-19|07:31:17.242] Allocated trie memory caches          clean=1024.00MiB dirty=1024.00MiB
INFO [12-19|07:31:17.249] Allocated cache and file handles      database="C:\\Users\\Duaa Algethami\\Desktop\\demo\\node2\\geth\\chaindata" cache=2.00GiB handles=819
2
INFO [12-19|07:31:17.371] Opened ancient database                database="C:\\Users\\Duaa Algethami\\Desktop\\demo\\node2\\geth\\chaindata\\ancient"
INFO [12-19|07:31:17.385] Initialised chain configuration        config="{ChainID: 1231 Homestead: 0 DAO: <nil> DAOSupport: false EIP150: 0 EIP155: 0 EIP158: 0 Byzant
ium: 0 Constantinople: 0 Petersburg: 0 Istanbul: 0 Engine: clique}"
INFO [12-19|07:31:17.405] Initialising Ethereum protocol        versions="[64 63]" network=1 dbversion=7
WARN [12-19|07:31:17.629] Head state missing, repairing chain    number=1011 hash=e037f8...85cad2
INFO [12-19|07:31:17.661] Rewound blockchain to past state       number=3 hash=b570b1...d7bbe7
INFO [12-19|07:31:17.671] Loaded most recent local header        number=1011 hash=e037f8...85cad2 td=2017 age=20m49s
INFO [12-19|07:31:17.677] Loaded most recent local full block    number=3 hash=b570b1...d7bbe7 td=5 age=14h54m56s
INFO [12-19|07:31:17.689] Loaded most recent local fast block    number=1011 hash=e037f8...85cad2 td=2017 age=20m49s
INFO [12-19|07:31:17.886] Loaded local transaction journal       transactions=0 dropped=0
INFO [12-19|07:31:17.895] Regenerated local transaction journal   transactions=0 accounts=0
WARN [12-19|07:31:17.901] Switch sync mode from fast sync to full sync
INFO [12-19|07:31:18.132] New local node record                 seq=15 id=5d1c1cf74ab9ba75 ip=127.0.0.1 udp=30304 tcp=30304
INFO [12-19|07:31:18.132] Unlocking account 30d690Eb2d8BD6774c18d7C7969D5f7a82C7bDc3 | Attempt 1/3
[07Password: :31:18.145] Started P2P networking self=enode://ad2afe8eca00b98f75d61c6b85876da1750309e42c2d6b98d2976ad01882a3cb1d8bf42ef7c7e14bfa0282b74
7da1d00304bf2b5db2bf2d5df4028aee5a1ff93@127.0.0.1:30304
INFO [12-19|07:31:21.995] New local node record                 seq=16 id=5d1c1cf74ab9ba75 ip=176.47.65.94 udp=5021 tcp=30304
INFO [12-19|07:31:28.148] Block synchronisation started
INFO [12-19|07:31:28.187] Importing sidechain segment           start=4 end=1011
```

```
Cmder

C:\Users\Duaa Algethami\cmdr (main)
λ cd ..

C:\Users\Duaa Algethami (main)
λ cd Desktop\demo\

C:\Users\Duaa Algethami\Desktop\demo (main)
λ geth --datadir ./node3 --unlock "087c20Ff09595370e4b36c77726Ac3F3bec132cC" --ipcdisable --mine --port 30305 --bootnodes enode://01ab95eae1e9a5ce1e1a0ee1bd4ed02f9a350d
ba8b0c8c6b5a638e335447a1fc16a408036f471780cf94d705a339870a8720b83234c27a66f9cc00fa71ecb355@127.0.0.1:30303
INFO [12-19|07:32:07.270] Bumping default cache on mainnet      provided=1024 updated=4096
INFO [12-19|07:32:07.281] Maximum peer count                    ETH=50 LES=0 total=50
INFO [12-19|07:32:07.353] Starting peer-to-peer node           instance=Geth/v1.9.7-stable-a718daa6/windows-amd64/go1.13.4
INFO [12-19|07:32:07.364] Allocated trie memory caches        clean=1024.00MiB dirty=1024.00MiB
INFO [12-19|07:32:07.371] Allocated cache and file handles     database="C:\\Users\\Duaa Algethami\\Desktop\\demo\\node3\\geth\\chaindata" cache=2.00GiB handles=819
2
INFO [12-19|07:32:07.539] Opened ancient database              database="C:\\Users\\Duaa Algethami\\Desktop\\demo\\node3\\geth\\chaindata\\ancient"
INFO [12-19|07:32:07.553] Initialised chain configuration      config="{ChainID: 1231 Homestead: 0 DAO: <nil> DAOSupport: false EIP150: 0 EIP155: 0 EIP158: 0 Byzant
ium: 0 Constantinople: 0 Petersburg: 0 Istanbul: 0 Engine: clique}"
INFO [12-19|07:32:07.568] Initialising Ethereum protocol      versions="[64 63]" network=1 dbversion=7
WARN [12-19|07:32:07.797] Head state missing, repairing chain  number=1011 hash=e037f8...85cad2
INFO [12-19|07:32:07.831] Rewound blockchain to past state    number=3 hash=b570b1...d7bbe7
INFO [12-19|07:32:07.841] Loaded most recent local header     number=1011 hash=e037f8...85cad2 td=2017 age=21m39s
INFO [12-19|07:32:07.851] Loaded most recent local full block number=3 hash=b570b1...d7bbe7 td=5 age=14h55m46s
INFO [12-19|07:32:07.859] Loaded most recent local fast block number=1011 hash=e037f8...85cad2 td=2017 age=21m39s
INFO [12-19|07:32:08.054] Loaded local transaction journal    transactions=0 dropped=0
INFO [12-19|07:32:08.061] Regenerated local transaction journal transactions=0 accounts=0
WARN [12-19|07:32:08.067] Switch sync mode from fast sync to full sync
INFO [12-19|07:32:08.174] New local node record              seq=10 id=b0d4c218d44a19a8 ip=127.0.0.1 udp=30305 tcp=30305
INFO [12-19|07:32:08.174] Unlocking account 987c20Ff09595370e4b36c77726Ac3F3bec132cC | Attempt 1/3
7:3Password: 2:08.186] Started P2P networking self=enode://b49e7b3db602f73a4138334d3d35794b65bf3179c26edc5aa7f104ab81f40af39eedda54891212b1b1f8b710fa0
384ffc9954031100f46a4f7e191cb76bd7916@127.0.0.1:30305

INFO [12-19|07:32:30.188] Unlocked account                   address=0x987c20Ff09595370e4b36c77726Ac3F3bec132cC
INFO [12-19|07:32:30.196] Transaction pool price threshold updated price=1000000000
INFO [12-19|07:32:30.202] Transaction pool price threshold updated price=1000000000
INFO [12-19|07:32:30.209] Etherbase automatically configured address=0x987c20Ff09595370e4b36c77726Ac3F3bec132cC
INFO [12-19|07:32:30.218] Commit new mining work             number=4 sealhash=39e86a...e80bd0 uncles=0 txs=0 gas=0 fees=0 elapsed=0s
INFO [12-19|07:32:30.223] Successfully sealed new block      number=4 sealhash=39e86a...e80bd0 hash=d6d731...e49547 elapsed=4.699ms
INFO [12-19|07:32:30.244] Ⓜ mined potential block            number=4 hash=d6d731...e49547
INFO [12-19|07:32:30.244] Signed recently, must wait for others
```

remix.ethereum.org/#optimize=false&runs=200&evmVersion=null&version=soljson-v0.8.7+commit.e28d00a7.js

DEPLOY & RUN TRANSACTIONS

ENVIRONMENT

Injected Web3

Main (1) network

ACCOUNT

0xE15...30456 (904625697)

GAS LIMIT

3000000

VALUE

0 Wei

CONTRACT

contract4 - contract.sol

Deploy string_name, string symbol

☒ Publish to IPFS

OR

At Address Load contract from Address

Transactions recorded 1

Deployed Contracts

```
1 pragma solidity ^0.8.0;
2
3 import "https://raw.githubusercontent.com/OpenZeppelin/openzeppelin-contracts/4.6.0/contracts/token/ERC20/ERC20.sol";
4
5 contract contract4 is ERC20 {
6
7     constructor (string memory _name, string memory _symbol) {
8         _mint(msg.sender, 10**30);
9     }
10 }
11
```

creation of contract4 pending...

[block:1031 txIndex:0] from: 0xE15...30456 to: contract4.
hash: 0xb83...5bd1c

Account 1
0xE15...0456

Connected

483203803742801036717

Buy Send Swap

Assets Activity

Contract Deployment -0 ETH
Dec 19 · remix.ethereum.org

Contract Deployment -0 ETH
Cancelled · ...mix.ethereum.org

Debug

Type here to search

75°F 7:38 AM 12/19/2021

remix.ethereum.org/#optimize=false&runs=200&evmVersion=null&version=soljson-v0.8.7+commit.e28d00a7.js

DEPLOY & RUN TRANSACTIONS

ENVIRONMENT
Injected Web3

Main (1) network

ACCOUNT
0xE15...30456 (904625697)

GAS LIMIT
3000000

VALUE
0 Wei

CONTRACT
contract4 - contract.sol

Deploy string_name, string symbol

☒ Publish to IPFS

OR

At Address Load contract from Address

Transactions recorded 1

Deployed Contracts

```
1 pragma solidity ^0.8.0;
2
3 import "https://raw.githubusercontent.com/OpenZeppelin/openzeppelin-contracts/4.4.0/contracts/token/ERC20/ERC20.sol";
4
5 contract contract4 is ERC20 {
6
7     constructor (string memory _name, string memory _symbol) {
8         _mint(msg.sender, 10**30);
9     }
10 }
11 }
```

creation of contract4 pending...

[block:1031 txIndex:0] from: 0xE15...30456 to: contract4.
hash: 0xb83...5bd1c

Contract Deployment

Details

0xE15...0456 → New Contract

Transaction	
Nonce	9
Amount	-0 ETH
Gas Limit (Units)	1208752
Gas Used (Units)	1208752
Gas price	1.1
Total	0.00132963 ETH

Activity Log

- Transaction created with a value of 0 at 07:37 on 12/19/2021.
- Transaction submitted with estimated gas fee of 0.001 ETH at 07:37 on 12/19/2021.
- Transaction confirmed at 07:37 on 12/19/2021.

Debug

Type here to search

75°F 7:38 AM 12/19/2021

remix.ethereum.org/#optimize=false&runs=200&evmVersion=null&version=soljson-v0.8.7+commit.e28d00a7.js

DEPLOY & RUN TRANSACTIONS

ENVIRONMENT

Injected Web3

Main (1) network

ACCOUNT

0xE15...30456 (904625697)

GAS LIMIT

3000000

VALUE

0 Wei

CONTRACT

contract4 - contract.sol

Deploy string_name, string symbol

☒ Publish to IPFS

OR

At Address Load contract from Address

Transactions recorded 1

Deployed Contracts

```
1 pragma solidity ^0.8.0;
2
3 import "https://raw.githubusercontent.com/OpenZeppelin/openzeppelin-contracts/4.4.0/contracts/token/ERC20/ERC20.sol";
4
5 contract contract4 is ERC20 {
6
7     constructor (string memory _name, string memory _symbol) ERC20(_name, _symbol) {}
8     _mint(msg.sender, 10**30);
9
10 }
11 }
```

creation of contract4 pending...

[block:1031 txIndex:0] from: 0xE15...30456 to: contract4.0 hash: 0xb83...5bd1c

Account 1 0x987...32cC

New address detected! Click here to add to your address book.

SENDING

24

Estimated gas fee 0.0000231 0.000023 ETH

Max fee: 0.0000231 ETH

Total 24.0000231 24.0000231 ETH

Amount + gas fee Max amount: 24.0000231 ETH

Reject Confirm

Debug

Type here to search

75°F 7:40 AM 12/19/2021

Browser tabs: Gmail, What is Ether..., Discord, Week 10, Day..., Google ترجمة..., abi - مستندات..., fintech-assign..., Remix - Ether..., +

Address bar: remix.ethereum.org/#optimize=false&runs=200&evmVersion=null&version=soljson-v0.8.7+commit.e28d00a7.js

Left Panel: DEPLOY & RUN TRANSACTIONS

- ENVIRONMENT: Injected Web3
- Main (1) network
- ACCOUNT: 0xE15...30456 (904625697)
- GAS LIMIT: 3000000
- VALUE: 0 Wei
- CONTRACT: contract4 - contract.sol
- Deploy (string_name, string symbol)
- ☒ Publish to IPFS
- OR
- At Address (Load contract from Address)
- Transactions recorded: 1
- Deployed Contracts

Center Panel: contract.sol

```
1 pragma solidity ^0.8.0;
2
3 import "https://raw.githubusercontent.com/OpenZeppelin/openzeppelin-contracts/4.6.0/contracts/token/ERC20/ERC20.sol";
4
5 contract contract4 is ERC20 {
6
7     constructor (string memory _name, string memory _symbol) {
8         _mint(msg.sender, 10**30);
9     }
10 }
11
```

Bottom Panel: creation of contract4 pending... [block:1031 txIndex:0] from: 0xE15...30456 to: contract4. hash: 0xb83...5bd1c

Right Panel: finnet

Account 1
0xE15...0456

483203803742801036717

Buy Send Swap

Assets Activity

Send
Dec 19 · To: 0x987...32cc -24 ETH -24 ETH

Contract Deployment
Dec 19 · remix.ethereum.org -0 ETH -0 ETH

Debug

Windows Taskbar: Type here to search, 75°F, 7:41 AM 12/19/2021

Browser tabs: Gmail, What is Ether..., Discord, Week 10, Day..., Google ترجمة..., abi - مستندات..., fintech-assign..., Remix - Ether..., +

Address bar: remix.ethereum.org/#optimize=false&runs=200&evmVersion=null&version=soljson-v0.8.7+commit.e28d00a7.js

Left Panel: DEPLOY & RUN TRANSACTIONS

- ENVIRONMENT: Injected Web3
- Main (1) network
- ACCOUNT: 0xE15...30456 (904625697)
- GAS LIMIT: 3000000
- VALUE: 0 Wei
- CONTRACT: contract4 - contract.sol
- Deploy (string_name, string symbol)
- ☒ Publish to IPFS
- OR
- At Address (Load contract from Address)
- Transactions recorded 1
- Deployed Contracts

Center Panel: contract.sol

```
1 pragma solidity ^0.8.0;
2
3 import "https://raw.githubusercontent.com/OpenZeppelin/openzeppelin-contracts/4.4.0/contracts/token/ERC20/ERC20.sol";
4
5 contract contract4 is ERC20 {
6
7     constructor (string memory _name, string memory _symbol) {
8         _mint(msg.sender, 10**30);
9     }
10 }
11 }
```

Bottom Panel: creation of contract4 pending...

Transaction Log: [block:1031 txIndex:0] from: 0xE15...30456 to: contract4. hash: 0xb83...5bd1c

Right Panel: Send

Details

0xE15...0456 → 0x987...32cC

Transaction

Nonce	10
Amount	-24 ETH
Gas Limit (Units)	21000
Gas Used (Units)	21000
Gas price	1.1
Total	24.0000231 ETH

Activity Log

- Transaction created with a value of 24 at 07:40 on 12/19/2021.
- Transaction submitted with estimated gas fee of 23100 GWEI at 07:41 on 12/19/2021.
- Transaction confirmed at 07:41 on 12/19/2021.

Windows Taskbar: Type here to search, 75°F, 7:41 AM 12/19/2021