

How to connect to UnicalCoin

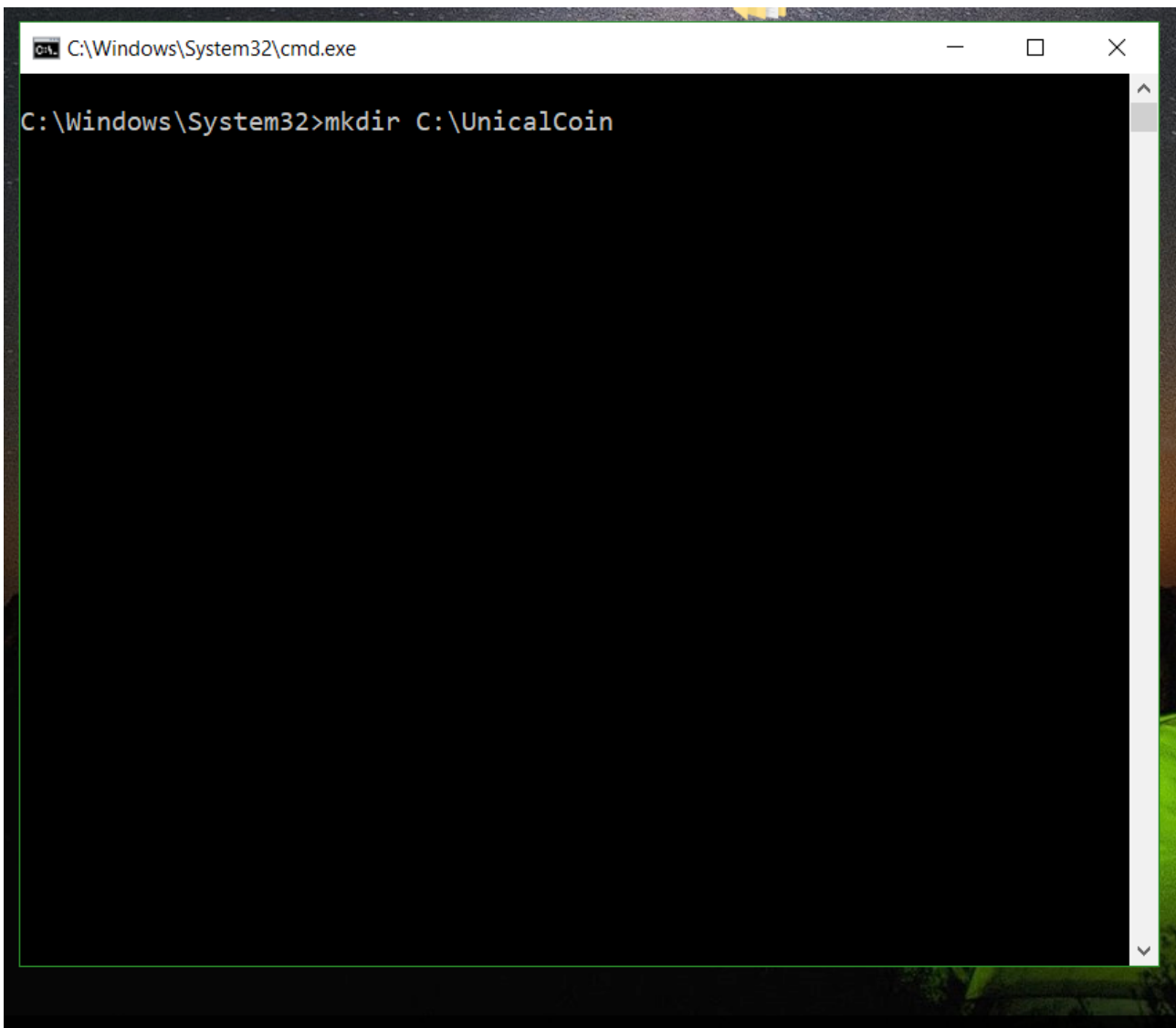
How open terminal in windows:

- A) Click “Start” button;
- B) Digit in the search-bar “cmd”
- C) Press enter

Step 1:

Create a new folder where will be stored all the files relatives to the blockchain, from nw we will refer to this folder whit the placeholder < BLOCKCHAIN_DIR>

example: “**mkdir C:\UnicalCoin**”

A screenshot of a Windows Command Prompt window. The title bar at the top reads "C:\Windows\System32\cmd.exe" and includes standard window controls (minimize, maximize, close). The command prompt area is black with white text. The command "C:\Windows\System32>mkdir C:\UnicalCoin" has been entered and executed. A vertical scrollbar is visible on the right side of the command prompt area.

Step 2

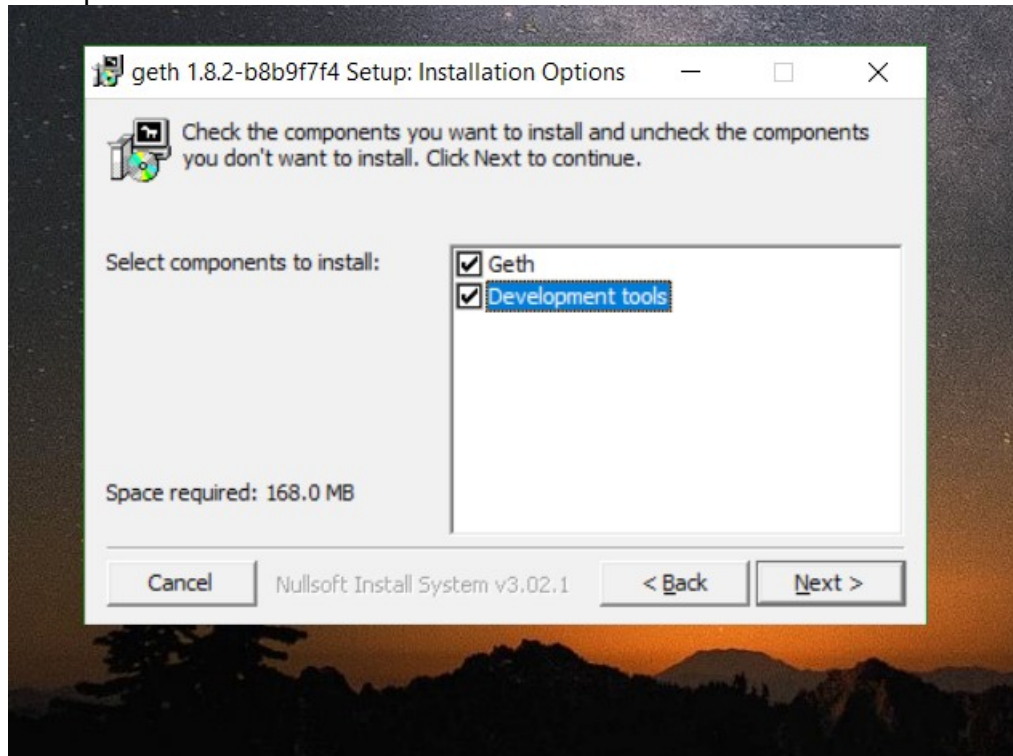
Download the genesis.json from https://github.com/marcuzzu/eth_private_network and copy it in the folder <BLOCKCHAIN_DIR>.

Example: “C:\UnicalCoin\”

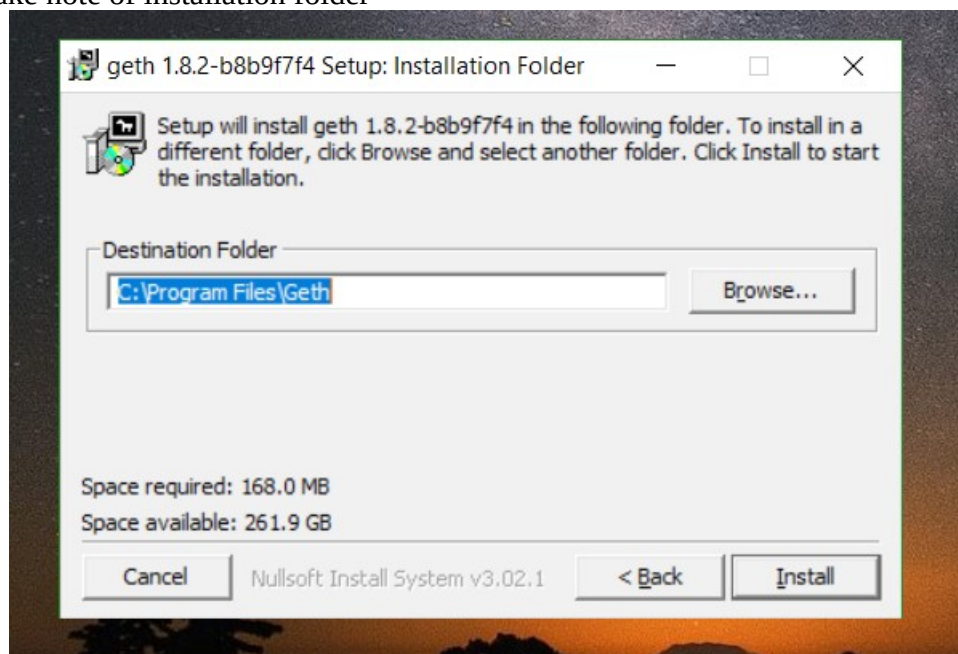
Step 3

Download from the official site <https://geth.ethereum.org/downloads/> the last version of Geth for your system, and install it. Windows default installation folder is : “C:\Program Files\Geth”

1) check Development tools

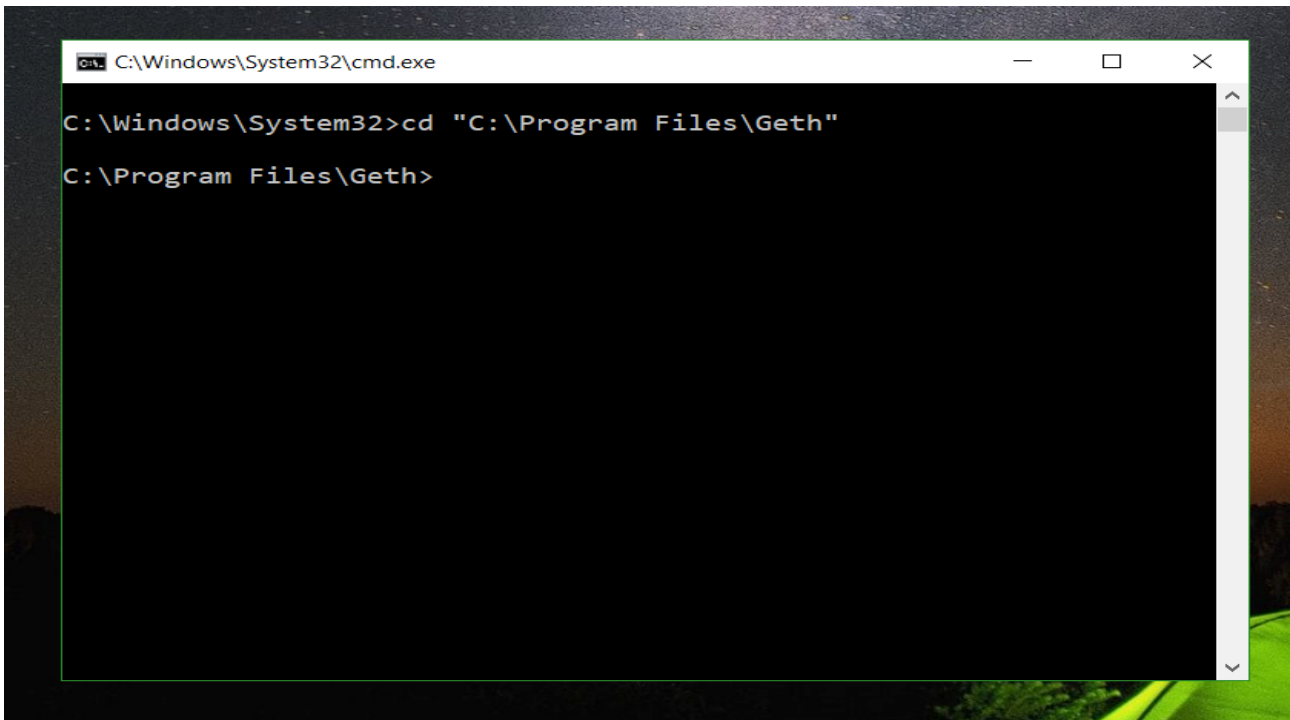


2) Take note of installation folder



Step 4

Open a terminal and navigate to the installation folder of “Geth” program:
example: execute in a terminal “**cd "C:\Program Files\Geth" "**”



```
C:\Windows\System32\cmd.exe

C:\Windows\System32>cd "C:\Program Files\Geth"
C:\Program Files\Geth>
```

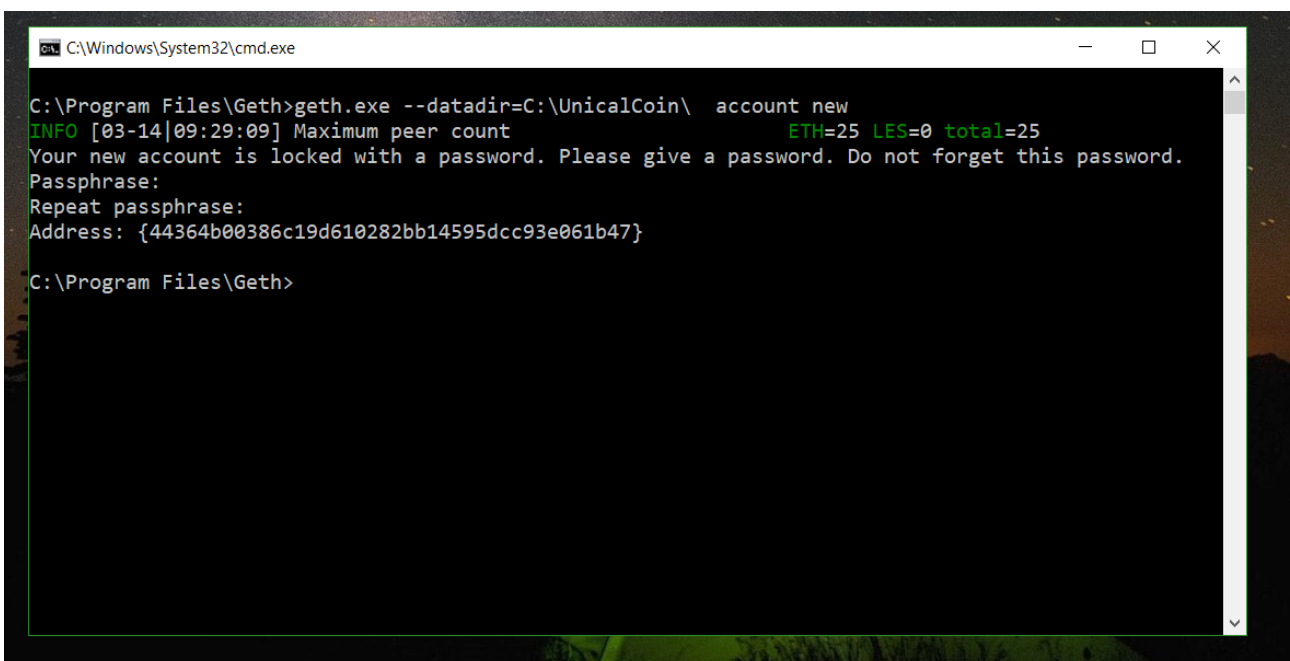
Step 5

Now is time to create your account, so in the same terminal execute the following command:

“**geth.exe --datadir=<BLOCKCHAIN_DIR> account new**”

the system will ask you to insert a password. Store it in a secure place.

Example: “**geth.exe --datadir=C:\UnicalCoin\ account new**”



```
C:\Windows\System32\cmd.exe

C:\Program Files\Geth>geth.exe --datadir=C:\UnicalCoin\ account new
INFO [03-14|09:29:09] Maximum peer count          ETH=25 LES=0 total=25
Your new account is locked with a password. Please give a password. Do not forget this password.
Passphrase:
Repeat passphrase:
Address: {44364b00386c19d610282bb14595dcc93e061b47}

C:\Program Files\Geth>
```

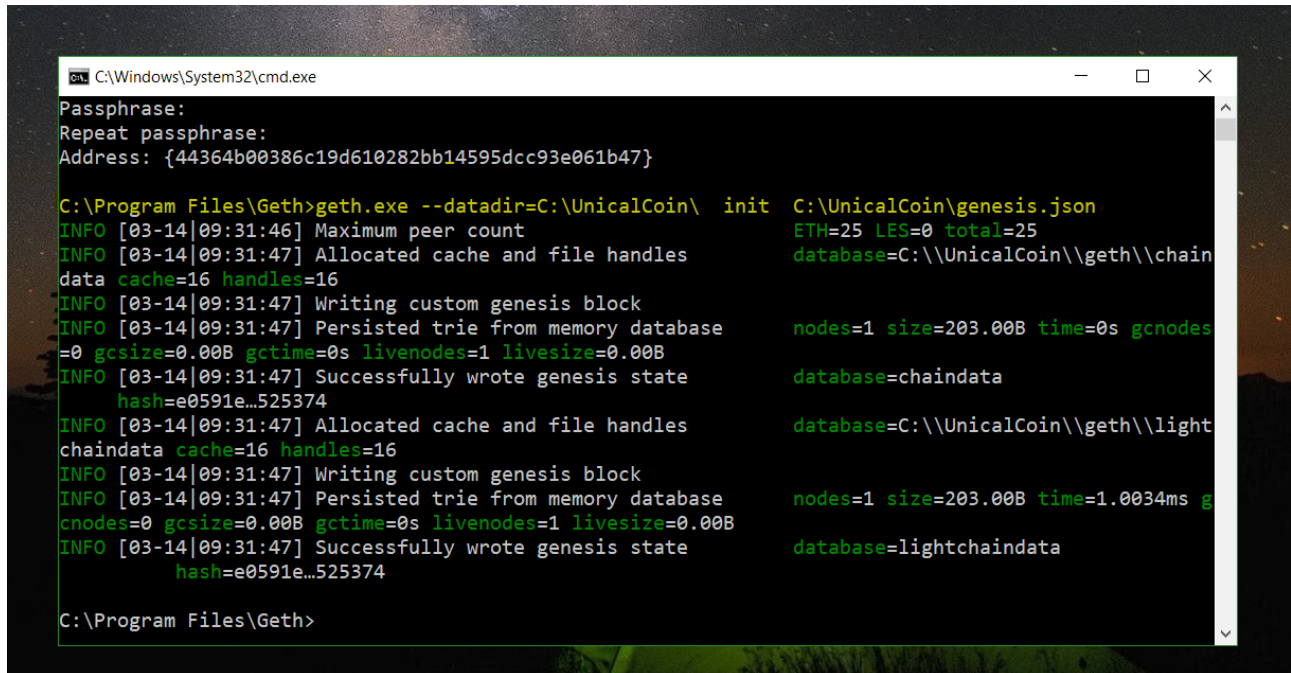
Step 6

Initialize the blockchain using the init command, so from the Geth installation folder execute:

“geth.exe --datadir=<BLOCKCHAIN_DIR> init <BLOCKCHAIN_DIR>\genesis.json

so following our example execute:

“geth.exe --datadir=C:\UnicalCoin\ init C:\UnicalCoin\genesis.json”



```
C:\Windows\System32\cmd.exe
Passphrase:
Repeat passphrase:
Address: {44364b00386c19d610282bb14595dcc93e061b47}

C:\Program Files\Geth>geth.exe --datadir=C:\UnicalCoin\ init C:\UnicalCoin\genesis.json
INFO [03-14|09:31:46] Maximum peer count          ETH=25 LES=0 total=25
INFO [03-14|09:31:47] Allocated cache and file handles database=C:\\UnicalCoin\\geth\\chain
data cache=16 handles=16
INFO [03-14|09:31:47] Writing custom genesis block
INFO [03-14|09:31:47] Persisted trie from memory database nodes=1 size=203.00B time=0s gcnodes
=0 gcsiz=0.00B gctime=0s livenodes=1 livesize=0.00B
INFO [03-14|09:31:47] Successfully wrote genesis state database=chaindata
hash=e0591e...525374
INFO [03-14|09:31:47] Allocated cache and file handles database=C:\\UnicalCoin\\geth\\light
chaindata cache=16 handles=16
INFO [03-14|09:31:47] Writing custom genesis block
INFO [03-14|09:31:47] Persisted trie from memory database nodes=1 size=203.00B time=1.0034ms g
cnodes=0 gcsiz=0.00B gctime=0s livenodes=1 livesize=0.00B
INFO [03-14|09:31:47] Successfully wrote genesis state database=lightchaindata
hash=e0591e...525374

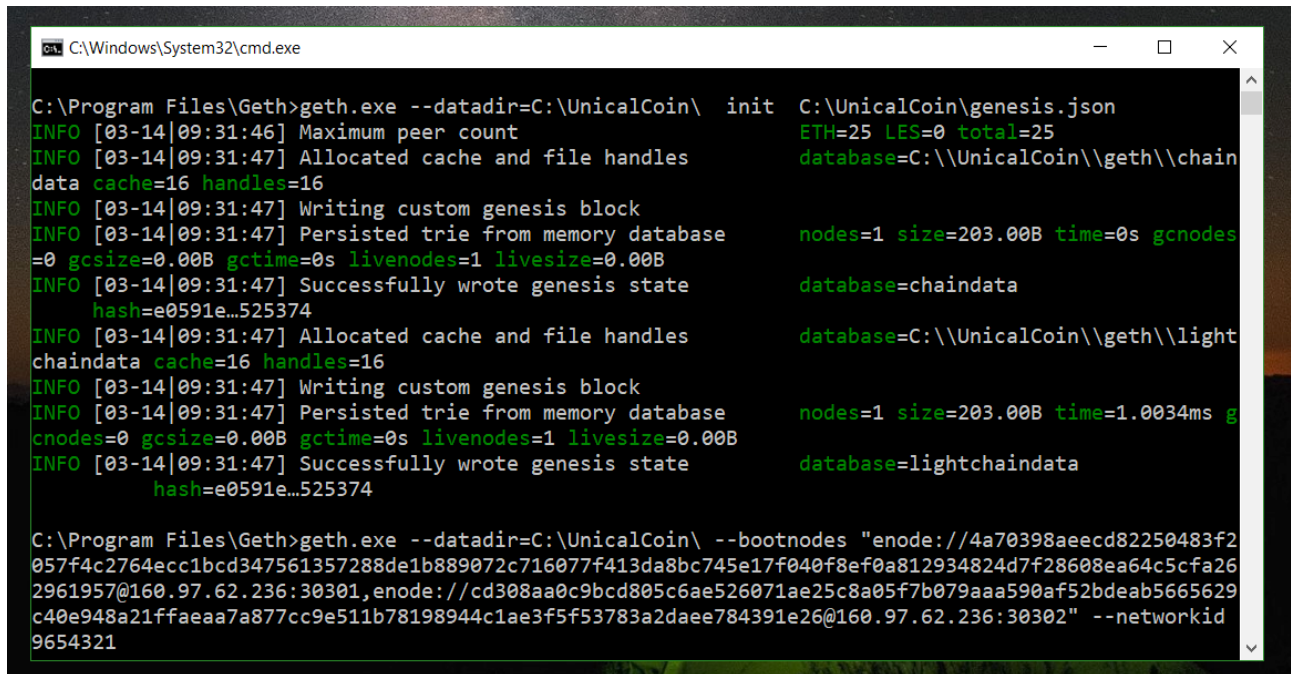
C:\Program Files\Geth>
```

Step 7

Once finished you can start synchronize whit the UnicalCoin blockchain so in the same terminal execute:

"geth.exe --datadir=C:\UnicalCoin\ --bootnodes

"enode://4a70398aeecd82250483f2057f4c2764ecc1bcd347561357288de1b889072c716077f413da8bc745e17f040f8ef0a812934824d7f28608ea64c5cfa262961957@160.97.62.236:30301,enode://cd308aa0c9bcd805c6ae526071ae25c8a05f7b079aaa590af52bdeab5665629c40e948a21ffaeea7a877cc9e511b78198944c1ae3f5f53783a2daee784391e26@160.97.62.236:30302" --networkid 9654321"



```
C:\Windows\System32\cmd.exe

C:\Program Files\Geth>geth.exe --datadir=C:\UnicalCoin\ init C:\UnicalCoin\genesis.json
INFO [03-14|09:31:46] Maximum peer count           ETH=25 LES=0 total=25
INFO [03-14|09:31:47] Allocated cache and file handles database=C:\\UnicalCoin\\geth\\chain
data cache=16 handles=16
INFO [03-14|09:31:47] Writing custom genesis block
INFO [03-14|09:31:47] Persisted trie from memory database nodes=1 size=203.00B time=0s gcnodes
=0 gcsiz=0.00B gctime=0s livenodes=1 livesize=0.00B
INFO [03-14|09:31:47] Successfully wrote genesis state database=chaindata
hash=e0591e...525374
INFO [03-14|09:31:47] Allocated cache and file handles database=C:\\UnicalCoin\\geth\\light
chaindata cache=16 handles=16
INFO [03-14|09:31:47] Writing custom genesis block
INFO [03-14|09:31:47] Persisted trie from memory database nodes=1 size=203.00B time=1.0034ms g
cnodes=0 gcsiz=0.00B gctime=0s livenodes=1 livesize=0.00B
INFO [03-14|09:31:47] Successfully wrote genesis state database=lightchaindata
hash=e0591e...525374

C:\Program Files\Geth>geth.exe --datadir=C:\UnicalCoin\ --bootnodes "enode://4a70398aeecd82250483f2
057f4c2764ecc1bcd347561357288de1b889072c716077f413da8bc745e17f040f8ef0a812934824d7f28608ea64c5cfa26
2961957@160.97.62.236:30301,enode://cd308aa0c9bcd805c6ae526071ae25c8a05f7b079aaa590af52bdeab5665629
c40e948a21ffaeea7a877cc9e511b78198944c1ae3f5f53783a2daee784391e26@160.97.62.236:30302" --networkid
9654321
```

Step 8

After some minutes your node should be synchronized.

```
1 INFO [03-14|09:41:33] Imported new block headers      count=109  elapsed=122.327ms  number=36205  hash=70d5b4...d4b0a7  ignored=0
INFO [03-14|09:41:33] Imported new block receipts      count=43   elapsed=1.004ms   number=36139  hash=f3e9e2...ff284d  size=172.00B  ignored=0
INFO [03-14|09:41:33] Imported new state entries       count=2    elapsed=0s        process=5    pending=0  retry=0  duplicate=0  unexpected=0
INFO [03-14|09:41:33] Imported new block receipts      count=1    elapsed=0s        number=36140  hash=bf5b89...1c5bb8  size=4.00B   ignored=0
INFO [03-14|09:41:33] Committed new head block        number=36140  hash=bf5b89...1c5bb8
INFO [03-14|09:41:33] Imported new chain segment       blocks=65  txs=0  mgas=0.000  elapsed=18.048ms  mgasps=0.000  number=36205  hash=70d5b4...d4b0a7  cache=17.28kB
INFO [03-14|09:41:33] Upgrading chain index           type=bloombits  percentage=0
2 INFO [03-14|09:41:35] Finished upgrading chain index   type=bloombits
INFO [03-14|09:41:35] Fast sync complete, auto disabling
3 INFO [03-14|09:41:42] Imported new chain segment       blocks=1   txs=0  mgas=0.000  elapsed=5.048ms  mgasps=0.000  number=36206  hash=5c7dfb...dc6273  cache=17.54kB
INFO [03-14|09:41:49] Imported new chain segment       blocks=1   txs=0  mgas=0.000  elapsed=4.369ms  mgasps=0.000  number=36207  hash=77bd27...bfe666  cache=17.81kB
INFO [03-14|09:41:50] Imported new chain segment       blocks=1   txs=0  mgas=0.000  elapsed=4.979ms  mgasps=0.000  number=36208  hash=98c091...eef797  cache=18.07kB
INFO [03-14|09:41:50] Mining too far in the future    wait=6s
```

- 1) At the beginning console will show you a lot of imports that mean that you are downloading the blockchain (effectively you are not downloading the entire blockchain but just the header of the previous blocks, this is done by the “Fast synck” mode that is automatic enabled during the first time that you synchronize).
- 2) After a while the synchronization will finish and you will read on the console “ Fast sync complete, auto disabled”
- 3) Now program is still running because the network still continue the create block, you can notice that by a sequence of log like: “Imported new chain segment...”

NB. is possible to stop and restart the node adding some parameters to the last command:

--mine --minerthreads=1	allow you to start mining with X thread for example 1
2>>C:\UnicalCoin\geth.log	allow you to redirect the lo to a file for example geth.log
--verbosity 4	show much more log
console	anble the javascript console to manage and query the node