

1. In gitbash navigate to the project folder, run puppet commend.
2. Name your network.

```
will@DESKTOP-BBT1K99 MINGW64 ~/Downloads/Blockchain-Tools (master)
$ puppeth
+-----+
| 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)
> zbcoin

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

INFO [05-26|12:02:07.901] Administering Ethereum network      name=zbcoin
WARN [05-26|12:02:07.902] No previous configurations found      path=C:\Users\531hy\.puppeth\zbcoin
```

3. Select the options as shown below.
4. Prefund your account by providing your account address.
5. Specify your chain/network ID, use same ID as your MyCrypto Network ID.

```
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
> 1

Which accounts should be pre-funded? (advisable at least one)
> 0xf2Aa69925Ef5d26A02586F10f9Ea949D35740C4a
> 0x

Should the precompile-addresses (0x1 .. 0xff) be pre-funded with 1 wei? (advisable yes)
>

Specify your chain/network ID if you want an explicit one (default = random)
> 333
INFO [05-26|12:02:45.692] Configured new genesis block
```

6. Select options as shown below.
7. Create zbcoin.json
8. Exit.

```

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 zbcoin.json, zbcoin-aleth.json, zbcoin-harmony.json, zbcoin-parity.json
> zbcoin
INFO [05-26|12:03:56.777] Saved native genesis chain spec      path=zbcoin\zbcoin.json
INFO [05-26|12:03:56.780] Saved genesis chain spec              client=aleth path=zbcoin\zbcoin-aleth.json
INFO [05-26|12:03:56.782] Saved genesis chain spec              client=parity path=zbcoin\zbcoin-parity.json
INFO [05-26|12:03:56.786] Saved genesis chain spec              client=harmony path=zbcoin\zbcoin-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
>

```

9. Create node1 and 2.

```

will@DESKTOP-BBT1K99 MINGW64 ~/Downloads/Blockchain-Tools (master)
$ geth account new --datadir node1
INFO [05-26|12:04:27.760] 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.
!! Unsupported terminal, password will be echoed.
Password: 
Repeat password: 

Your new key was generated

Public address of the key:  0x708d9b10837735Fc3F503208848D201c7b0d517e
Path of the secret key file: node1\keystore\UTC--2021-05-26T17-04-31.501326900Z--708d9b10837735fc3f503208848d201c7b0d517e

- 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!

will@DESKTOP-BBT1K99 MINGW64 ~/Downloads/Blockchain-Tools (master)
$ geth account new --datadir node2
INFO [05-26|12:04:37.714] 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.
!! Unsupported terminal, password will be echoed.
Password: 
Repeat password: 

Your new key was generated

Public address of the key:  0xdD4f19101234d84fAB18B3a7e0E5b15C4AE91577
Path of the secret key file: node2\keystore\UTC--2021-05-26T17-04-41.120192700Z--dd4f19101234d84fab18b3a7e0e5b15c4ae91577

- 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!

```

10. Initialize both nodes.

```

will@DESKTOP-BBT1K99 MINGW64 ~/Downloads/Blockchain-Tools (master)
$ geth init zbcoin\zbcoin.json --datadir node1
INFO [05-26|12:07:14.969] Maximum peer count           ETH=50 LES=0 total=50
INFO [05-26|12:07:14.973] Set global gas cap           cap=25,000,000
INFO [05-26|12:07:14.973] Allocated cache and file handles database=C:\Users\S31hy\Downloads\Blockchain-Tools\node1\geth\chaindata cache=16.00MiB handles=16
INFO [05-26|12:07:14.986] Writing custom genesis block  nodes=356 size=50.51KiB time=2.223ms gcnodes=0 gcsiz=0.008 gctime=0s livenodes=1 livenessize=0.00
INFO [05-26|12:07:14.995] Persisted trie from memory database database=chaindata hash=985d96..59b47c
INFO [05-26|12:07:14.996] Successfully wrote genesis state database=C:\Users\S31hy\Downloads\Blockchain-Tools\node1\geth\lightchaindata cache=16.00MiB handles=16
INFO [05-26|12:07:15.008] Writing custom genesis block  nodes=356 size=50.51KiB time=2.3601ms gcnodes=0 gcsiz=0.008 gctime=0s livenodes=1 livenessize=0.0
INFO [05-26|12:07:15.016] Persisted trie from memory database database=C:\Users\S31hy\Downloads\Blockchain-Tools\node1\geth\lightchaindata hash=985d96..59b47c
INFO [05-26|12:07:15.017] Successfully wrote genesis state database=lightchaindata hash=985d96..59b47c

will@DESKTOP-BBT1K99 MINGW64 ~/Downloads/Blockchain-Tools (master)
$ geth init zbcoin\zbcoin.json --datadir node2
INFO [05-26|12:07:30.052] Maximum peer count           ETH=50 LES=0 total=50
INFO [05-26|12:07:30.056] Set global gas cap           cap=25,000,000
INFO [05-26|12:07:30.056] Allocated cache and file handles database=C:\Users\S31hy\Downloads\Blockchain-Tools\node2\geth\chaindata cache=16.00MiB handles=16
INFO [05-26|12:07:30.066] Writing custom genesis block  nodes=356 size=50.51KiB time=1.9998ms gcnodes=0 gcsiz=0.008 gctime=0s livenodes=1 livenessize=0.0
INFO [05-26|12:07:30.075] Persisted trie from memory database database=chaindata hash=985d96..59b47c
INFO [05-26|12:07:30.076] Successfully wrote genesis state database=C:\Users\S31hy\Downloads\Blockchain-Tools\node2\geth\lightchaindata cache=16.00MiB handles=16
INFO [05-26|12:07:30.087] Writing custom genesis block  nodes=356 size=50.51KiB time=2.0005ms gcnodes=0 gcsiz=0.008 gctime=0s livenodes=1 livenessize=0.0
INFO [05-26|12:07:30.095] Persisted trie from memory database database=C:\Users\S31hy\Downloads\Blockchain-Tools\node2\geth\lightchaindata hash=985d96..59b47c
INFO [05-26|12:07:30.096] Successfully wrote genesis state database=lightchaindata hash=985d96..59b47c

```

11. Start mining using node1.
12. Successfully started mining when we see the circled messages.
13. Save enode address.

```

will@DESKTOP-BBT1K99 MINGW64 ~/Downloads/Blockchain-Tools (master)
$ geth --datadir node1 --mine --miner.threads 1 --allow-insecure-unlock
INFO [05-26|12:16:11.603] Starting Geth on Ethereum mainnet...
INFO [05-26|12:16:11.604] Bumping default cache on mainnet provided=1024 updated=4096
INFO [05-26|12:16:11.607] Maximum peer count           ETH=50 LES=0 total=50
INFO [05-26|12:16:11.610] Set global gas cap           cap=25,000,000
INFO [05-26|12:16:11.610] Allocated trie memory caches clean=614.00MiB dirty=1024.00MiB
INFO [05-26|12:16:11.612] Allocated cache and file handles database=C:\Users\S31hy\Downloads\Blockchain-Tools\node1\geth\chaindata cache=2.00GiB handles=8
INFO [05-26|12:16:11.663] Opened ancient database       database=C:\Users\S31hy\Downloads\Blockchain-Tools\node1\geth\chaindata\ancient readonly=false
INFO [05-26|12:16:11.664] Initialised chain configuration config="{chainID: 333 Homestead: 0 DAO: <nil> DAOSupport: false EIP150: 0 EIP155: 0 EIP158: 0 B
Engine: ethash}"
INFO [05-26|12:16:11.667] Disk storage enabled for ethash caches dir=C:\Users\S31hy\Downloads\Blockchain-Tools\node1\geth\ethash count=3
INFO [05-26|12:16:11.667] Disk storage enabled for ethash DAGs dir=C:\Users\S31hy\AppData\Local\Ethash count=2
INFO [05-26|12:16:11.667] Initialising Ethereum protocol network=1 dbversion=<nil>
INFO [05-26|12:16:11.669] Loaded most recent local header number=0 hash=985d96..59b47c td=524,288 age=13m58s
INFO [05-26|12:16:11.669] Loaded most recent local full block number=0 hash=985d96..59b47c td=524,288 age=13m58s
INFO [05-26|12:16:11.669] Loaded most recent local fast block number=0 hash=985d96..59b47c td=524,288 age=13m58s
WARN [05-26|12:16:11.669] Failed to load snapshot, regenerating err="missing or corrupted snapshot"
INFO [05-26|12:16:11.669] Rebuilding state snapshot
INFO [05-26|12:16:11.670] Resuming state snapshot generation root=7bc41c..39a216 accounts=0 slots=0 storage=0.008 elapsed="525.8µs"
INFO [05-26|12:16:11.671] Regenerated local transaction journal transactions=0 accounts=0
INFO [05-26|12:16:11.724] Allocated fast sync bloom size=2.00GiB
WARN [05-26|12:16:11.726] Error reading unclean shutdown markers error="leveldb: not found"
INFO [05-26|12:16:11.726] Starting peer-to-peer node instance=Geth/v1.10.3-stable-991384a7/windows-amd64/go1.16.3
INFO [05-26|12:16:11.731] Initialized state bloom item=356 error=rate=0.000 elapsed=5.980ms
INFO [05-26|12:16:11.743] New local node record seq=1 id=ee1265Fed99b21 ip=127.0.0.1 udp=30303 tcp=30303
INFO [05-26|12:16:11.746] IPC endpoint opened url=\\.\pipe\geth.ipc
INFO [05-26|12:16:11.746] Transaction pool price threshold updated price=1,000,000,000
INFO [05-26|12:16:11.746] Updated mining threads threads=1
INFO [05-26|12:16:11.746] Transaction pool price threshold updated price=1,000,000,000
INFO [05-26|12:16:11.746] Etherbase automatically configured address=0x708d9b10837735Fc3F503208848D201c7b0d517e
INFO [05-26|12:16:11.746] Commit new mining work number=1 sealhash=2de4e8..4ec990 uncles=0 txs=0 gas=0 fees=0 elapsed=0s
INFO [05-26|12:16:11.746] Started P2P networking self=enode://168c56b7f1518c189adb6cf0a0b5895897c567703c2d7ac23a92db632010a0e131f18efef4f2efef
INFO [05-26|12:16:11.749] Generated state snapshot accounts=257 txs=0 storage=9.59KiB elapsed=60.291ms
INFO [05-26|12:16:14.179] New local node record seq=2 id=ee1265Fed99b21 ip=24.15.227.209 udp=30303 tcp=30303
INFO [05-26|12:16:18.046] Successfully sealed new block number=1 sealhash=2de4e8..4ec990 hash=f7b7151..789a99 elapsed=6.299s
INFO [05-26|12:16:18.047] Mined potential block number=1 hash=f7b7151..789a99
INFO [05-26|12:16:18.047] Commit new mining work number=2 sealhash=518593..b9229d uncles=0 txs=0 gas=0 fees=0 elapsed=0s
INFO [05-26|12:16:18.083] Mapped network port proto=udp extport=30303 intport=30303 interface="UPNP IGDv2-IP1"
INFO [05-26|12:16:21.576] Successfully sealed new block number=2 sealhash=518593..b9229d hash=92d192..ec3f9d elapsed=3.528s
INFO [05-26|12:16:21.576] Mined potential block number=2 hash=92d192..ec3f9d

```

14. Open a new gitbash window.
15. Connect node2 to node1 by using node1's enode address.
16. Connect was successful if we see "Imported new chain segment"

```

w11@DESKTOP-BT1K89 MINGW64 ~/Downloads/Blockchain-Tools (master)
$ geth --datadir node2 --port 30304 --rpc --bootnodes "enode://168c565b7f1518c189adb6cfaab0b5895897c567703c2d7ac23a92db632010a0ea131f18efe4f2efef250c6708d11d92e148a4b990fed7748b256069bd3010e5812
INFO [05-2612:20:30.455] Starting Geth on Ethereum mainnet... provided=1024 updated=4096
INFO [05-2612:20:30.456] Bumping default cache on mainnet Ctx=50 LC=0 GC=4=50
INFO [05-2612:20:30.456] Maximum peer count WARN [05-2612:20:30.457] The flag --rpc is deprecated and will be removed June 2021, please use --http
INFO [05-2612:20:30.459] Set global gas cap cap=25,000,000
INFO [05-2612:20:30.459] Allocated trie memory caches clean=614.00MiB dirty=1024.00MiB
INFO [05-2612:20:30.459] Allocated cache and file handles database=C:\Users\S3lhy\Downloads\Blockchain-Tools\node2\geth\chaindata\cache=2.00GiB handles=8192
INFO [05-2612:20:30.506] Opened ancient database database=C:\Users\S3lhy\Downloads\Blockchain-Tools\node2\geth\chaindata\ancient\readonly=false
INFO [05-2612:20:30.508] Initialised chain configuration config={ChainID: 333 Homestead: 0 DAO: <nil> DAOsupport: false EIP150: 0 EIP155: 0 EIP158: 0 Byzantium: 0 Constantinople: 0 Petersburg: 0}
INFO [05-2612:20:30.512] Disk storage enabled for ethash caches dir=C:\Users\S3lhy\Downloads\Blockchain-Tools\node2\geth\ethash\count=3
INFO [05-2612:20:30.512] Disk storage enabled for ethash DAGs dir=C:\Users\S3lhy\AppData\Local\Ethash\count=2
INFO [05-2612:20:30.512] Initialising Ethereum protocol network=1 dbversion=8
INFO [05-2612:20:30.534] Loaded most recent local header number=0 hash=985d96..59b47c td=524,288 age=18m17s
INFO [05-2612:20:30.534] Loaded most recent local full block number=0 hash=985d96..59b47c td=524,288 age=18m17s
INFO [05-2612:20:30.534] Loaded most recent local fast block number=0 hash=985d96..59b47c td=524,288 age=18m17s
INFO [05-2612:20:30.535] Loaded local transaction journal transactions=0 dropped=0
INFO [05-2612:20:30.537] Regenerated local transaction journal transaction=0 accounts=0
INFO [05-2612:20:30.587] Allocated fast sync bloom size=2.00GiB
INFO [05-2612:20:30.589] Starting peer-to-peer node instance=Geth/v1.10.3-stable-991384a7/windows-amd64/go1.16.3
INFO [05-2612:20:30.594] Initialized state bloom items=356 errorrate=0.000 elapsed=4.998ms
INFO [05-2612:20:30.615] New local node record seq=3 id=9ed61cf9a4cb8592 ip=127.0.0.1 udp=30304 tcp=30304
INFO [05-2612:20:30.616] HTTP server started endpoint=127.0.0.1:8545 prefix= cors= vhosts=localhost
INFO [05-2612:20:30.617] Started P2P networking self=enode://b1e742955948ce5a05255f3b891940b45829b6503a3d189ada892cb1e2a15036a29f658ad22077187b2eda3b96d2b7d4cc3c091e764c68ea
INFO [05-2612:20:33.141] New local node record seq=4 id=9ed61cf9a4cb8592 ip=24.15.227.209 udp=30304 tcp=30304
INFO [05-2612:20:33.461] Mapped network port proto=udp extport=30304 intport=30304 interface="UPNP IGDv1-IP1"
INFO [05-2612:20:33.947] Mapped network port proto=tcp extport=30304 intport=30304 interface="UPNP IGDv1-IP1"
ERROR [05-2612:20:37.227] Snapshot extension registration failed peer=e70811b4 err="peer connected on snap without compatible eth support"
INFO [05-2612:20:40.618] Block synchronisation started peercount=1 tried=22 static=0
INFO [05-2612:20:41.773] Imported new block headers count=41 elapsed=1.150s number=41 hash=348021..87eb7d
INFO [05-2612:20:41.840] Downloader queue stats receiptTasks=0 blockTasks=0 itemSize=566.318 throttle=8192
INFO [05-2612:20:41.840] Imported new chain segment blocks=41 txs=0 mgas=0.000 elapsed=65.930ms mgasps=0.000 number=41 hash=348021..87eb7d dirty=66.00KiB
INFO [05-2612:20:41.840] Fast sync complete, auto disabling blocks=1 txs=0 mgas=0.000 elapsed=3.651ms mgasps=0.000 number=42 hash=83034e..37e6dd dirty=67.61KiB
INFO [05-2612:20:49.577] Imported new chain segment blocks=1 txs=0 mgas=0.000 elapsed=3.999ms mgasps=0.000 number=43 hash=26bdec..4d3535 dirty=69.21KiB
INFO [05-2612:20:49.781] Imported new chain segment

```

17. Go to MyCrypto and set up your custom node as shown below.

18. Close MyCrypto and reopen it up to get connected to your custom node.

Set Up Your Custom Node



[Redacted]

Node Name

zbcoin

Network

Custom ▼

Network Name

zbcoin

Currency

ETH

Chain ID

333

[Redacted]

URL

http://127.0.0.1:8545

☐ HTTP Basic Authentication

Cancel

Save & Use Custom Node

19. Send test ETH transfer to ourself.

Send Ether & TokensRequest PaymentWallet InfoRecent TransactionsAddress BookChange Wallet

To Address

0xf2Aa69925Ef5d26A02586F10f9Ea949D35740C4a

Amount

100000

ETH

Transaction Fee

CheapFast

0.00042 ETH / \$1.13

+ Advanced

You're sending to yourself. Are you sure you want to do that?

Send Transaction

Account Address

0xf2Aa69925Ef5d26A02586F10f9Ea949D35740C4a

copy addressadd label

Account Balance

904,625,697,166,532,776,74
6,648,320,380,374,280,183,6
71,755,200,316,906,558.2624 ETH

Exchange Coins & TokensShapeShift

Token Balances

No tokens found

20. Transfer was done.

```
INFO [05-26|12:26:05.356] Looking for peers
INFO [05-26|12:26:10.213] Imported new chain segment
INFO [05-26|12:26:15.363] Looking for peers
INFO [05-26|12:26:16.019] Imported new chain segment
INFO [05-26|12:26:17.713] Setting new local account
INFO [05-26|12:26:17.713] Submitted transaction
00,000,000,000
INFO [05-26|12:26:20.834] Imported new chain segment
INFO [05-26|12:26:24.613] Imported new chain segment
INFO [05-26|12:26:25.370] Looking for peers
INFO [05-26|12:26:34.357] Imported new chain segment
INFO [05-26|12:26:35.638] Looking for peers
INFO [05-26|12:26:37.400] Imported new chain segment
peercount=1 tried=36 static=0
blocks=1 txs=0 mgas=0.000 elapsed=5.167ms mgasps=0.000 number=83 hash=9b76c9...d950e4 dirty=133.39KiB
peercount=1 tried=33 static=0
blocks=1 txs=0 mgas=0.000 elapsed=4.732ms mgasps=0.000 number=84 hash=d74ba5...96acdf dirty=135.00KiB
address=0xf2Aa69925Ef5d26A02586F10f9Ea949D35740C4a
hash=0xe6039d0f6f2051cd0bfec85713eb6d91320b3bd4fb6635aff2f338c26fbc6e1e from=0xf2Aa69925Ef5d26A02586F10f9Ea949D35740C4a nonce=0
blocks=1 txs=1 mgas=0.021 elapsed=4.452ms mgasps=4.685 number=85 hash=efc845...920ce6 dirty=137.52KiB
blocks=1 txs=0 mgas=0.000 elapsed=4.778ms mgasps=0.000 number=86 hash=ac0ea7...c8a457 dirty=139.13KiB
peercount=1 tried=42 static=0
blocks=1 txs=0 mgas=0.000 elapsed=4.617ms mgasps=0.000 number=87 hash=bdcd55...14cac0 dirty=140.73KiB
peercount=1 tried=35 static=0
blocks=1 txs=0 mgas=0.000 elapsed=4.173ms mgasps=0.000 number=88 hash=5b3a5e...127fbb dirty=142.33KiB
```