Bossteck's Tor Masternode Guide

for running multiple masternodes

OVERVIEW & PURPOSE

This guide is for Windows but should work with any MN coin and OS platform, most coins that I have found work using a Qt wallet. The reason I use this method to run masternodes is that it's a lot easier to control my nodes and a quick setup to add more. It could also save you vps costs, the only drawback is that you have to have a computer running 24/7 online but if you stake then you are already doing this..

WHAT YOU WILL NEED

1. The latest version of the masternode coin wallet.
2. The Tor Web Browser v9.0.2 for Windows system here https://tor.en.uptodown.com/windows/download/2159732
3. IMPORTANT! Prevent Tor Browser updating. After installing the Tor Web Browser v9.0.2 locate the firefox.exe and make it read only to prevent it ever updating.
4. A computer suitable for running 24/7 and online.

STEP 1 - SETUP YOUR MAIN WALLET (CONTROLLER WALLET)

1. If you already have a masternode coin wallet installed already then go to 2. If not then install the masternode coin wallet as normal and fully sync.
2. First go to recieve address and create new address for how many masternodes you will need, label them mn1, mn2, mn3, mn4 ect.. like this >

Label	Address
mn1	BPEQC8W4SWApS1E5bLXutiMMQrvaYedG5S
mn2	BNq3JBvzAnusFXbMWscEWr8NroMFe3awuq
mn3	BAykxVyAn72PSFeCK88f8aN3fak6zyAvPC
mn4	BAwAjD477QFhTrvrUetSUwCqL9bZqKtWRU

3. Next go to the debug console in the wallet and generate the private keys for your masternodes. Type `masternode genkey or createmasternodekey` to generate a private key for each masternode, then copy the private keys and paste them in the text document like this >

```
mn1 genkey       ..979hity6u67h8GHRDSJKXCNN5BDBbKHbj4a3NN4VM8nWU
mn2 genkey       ..5864878HIUTGJ7h8GHRDSJKXCNN5BDBbKHbj4a3NN4VM8
mn3 genkey       ..UHFTDFHL880344JHRDSJKXCNN5BDBbKHbj4a3NN4VM8nW
mn4 genkey       ..544YG7R55K67h76YTIJHHIKHbj4a3NN4VM8nWUHHGUF5H
```

4. Transfer the correct amount of coins to your wallet from the exchange that you will need for each masternode, I.e if a coins masternode collateral is 5,000 then you need 5,000 coins for mn1,mn2,mn3.. Make sure you have enough to cover the transfer fee, so send 15,010 for 3 nodes for example. If you already have the correct amount of coins in your wallet for your nodes then go to step 5.
5. Now send the exact collateral to each mn# address, starting with mn1, It's a good idea to lock the collateral in coin control to prevent Staking, wait for the coins to confirm each time at least 8 confirms, then open the debug console and type `masternode outputs or getmasternodeoutputs` each masternode address you send coins to will create a transaction output id like this "a97c835aae17ebde01155c48w8b73e5bd763fee5bb4ff1650c4479578f8e9ed6" : "1" copy and save them in your text document like this >

```
mn1 outputs      "7tu07hh8h68j99h9yhldg6gffn5bd763fee5bbc9f1650c4479558f8e9ed6" : "1"
mn2 outputs      "hs8669cah9c7k0s7c6s789jc97s0c9f1650c4479558fs89a07sf6shh8s7f" : "0"
mn3 outputs      "4whhgr77hwg7hllahgflbn8c6c59c7c97c9dbbc9f1650cduy9jkskje9fd6" : "0"
mn4 outputs      "97e9w67kf97690w6dh869h9yhldg6gffn5bd7e5bbsdc9gf16e446dds5gg0" : "1"
```

6. Now save the info text document, we now also need to backup the wallet and save this to a safe place. You can do this one of to ways, if the wallet client has a backup option in the menu then use this, if not then turn off the wallet, go to the coins blockchain folder (in windows its C:\Users****\AppData\Roaming\COIN NAME) there you will find wallet.dat copy that to a safe place.

STEP 2 - INSTALL TOR BROWSER & EDITING THE TORRC FILE

1. Download the Tor Web Browser installation file, install and follow the instructions.
2. When the Tor Web Browser has finished installing, locate the firefox.exe and make it read only to prevent it ever updating, then run it once then close the browser.

3. Next we need to locate and edit a file called torrc, the file can be found normally in (Tor Browser\Browser\TorBrowser\Data\Tor) where you installed it.
4. Once the torrc file is located, create a shortcut on your desktop to it for easy editing.
5. Open the torrc file in a text editor, you will see other text in there, do not delete this text.
6. Now you will need to add the following lines of text, (If there is already text in the file just start underneath it). Add a line for each masternodes, make sure the <**LOCATION**> is correct, this is where you installed the Tor Browser, example >

   HiddenServiceDir C:\Program Files (x86)\Tor Browser\node*1**
   HiddenServiceVersion 2
   HiddenServicePort 19800 127.0.0.1:19801

   Add a line for each masternode using your default masternodes port <**MN PORT**>. *** Is where you put the masternode coin ticker. The next thing you will have to do is the port number after 127.0.0.1: you can choose any sequence, just make sure it's not a port in use and add as many as you need. I use 9901 for mn1 then 9902 for mn2 ect in this example below >

   HiddenServiceDir <LOCATION>\Tor Browser\node*1**
   HiddenServiceVersion 2
   HiddenServicePort <MN PORT> 127.0.0.1:9901

   HiddenServiceDir <LOCATION>\Tor Browser\node*2**
   HiddenServiceVersion 2
   HiddenServicePort <MN PORT> 127.0.0.1:9902

   HiddenServiceDir <LOCATION>\Tor Browser\node*3**
   HiddenServiceVersion 2
   HiddenServicePort <MN PORT> 127.0.0.1:9903

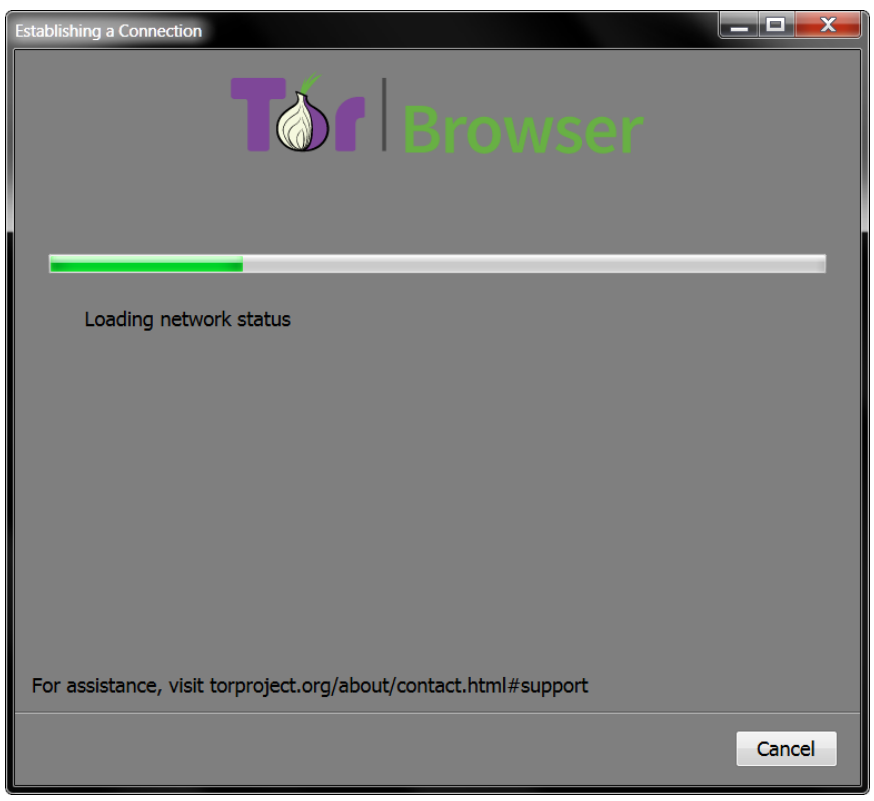
   HiddenServiceDir <LOCATION>\Tor Browser\node*4**
   HiddenServiceVersion 2
   HiddenServicePort <MN PORT> 127.0.0.1:9904

7. Make sure your <**LOCATION**> & <**MN PORT**> are correct. You can use any port numbers but they must be different for every coin. For example one coin 9901 and another coin 8801 for mn1..
8. Once you have done this click save in the editor to save the torrc file configuration.

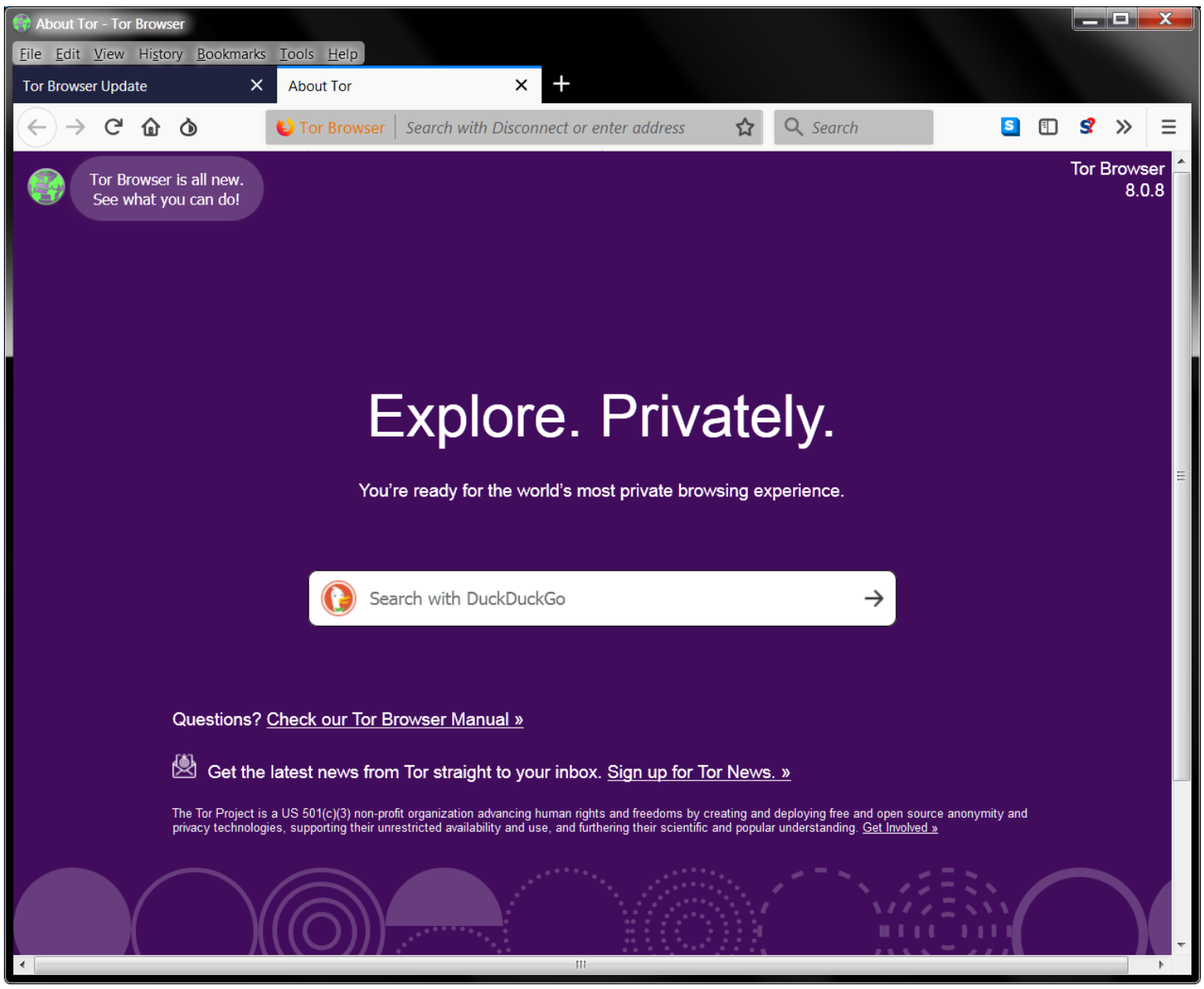
STEP 3 - CREATING .ONION ADDRESSES

1. Now start Tor Web Browser.

2. Once it's connecting this box will popup.

3. 

4. Connected you will be faced with a screen like this below.



5. The Tor Web Browser has automatically created your onion IP addresses and the masternode coin folders you used in the torrc config file.

6. Close Tor Web Browser, then re-open the torrc file using the desktop shortcut again if you closed it. We must now # out all the command lines in the torrc file to deactivate and to keep a record, this will also help you to setup masternodes later for other coins, so you don't conflict ports. do it like this and save :

 # HiddenServiceDir <LOCATION>\Tor Browser\node*1**
 # HiddenServiceVersion 2
 # HiddenServicePort <MN PORT> 127.0.0.1:9901

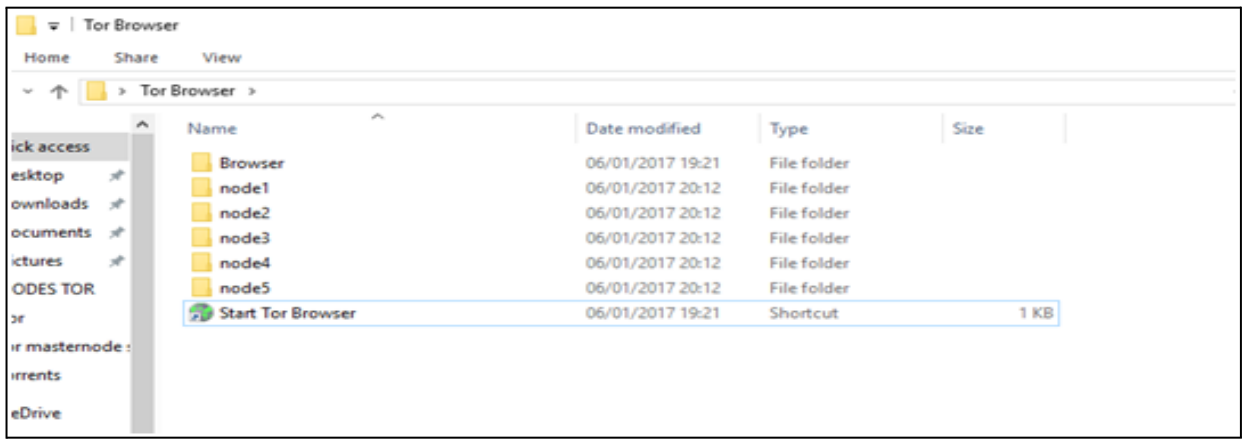
 # HiddenServiceDir <LOCATION>\Tor Browser\node*2**
 # HiddenServiceVersion 2
 # HiddenServicePort <MN PORT> 127.0.0.1:9902

 # HiddenServiceDir <LOCATION>\Tor Browser\node*3**
 # HiddenServiceVersion 2
 # HiddenServicePort <MN PORT> 127.0.0.1:9903

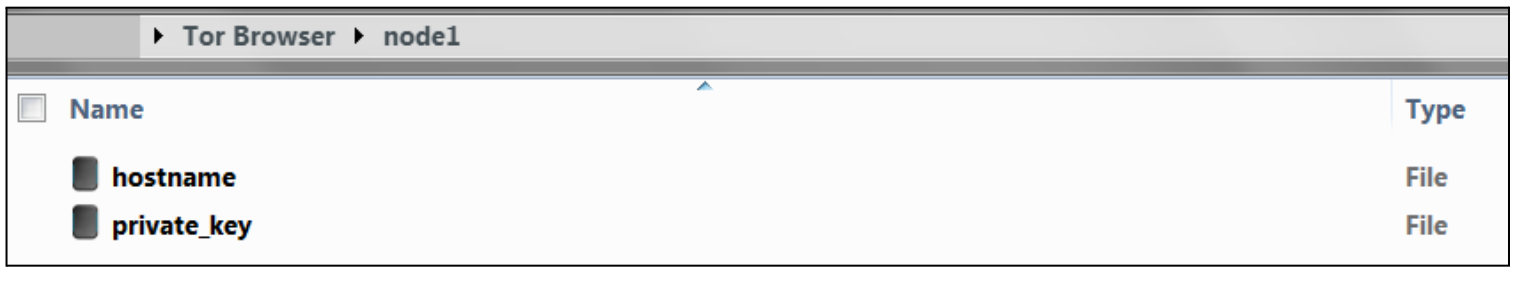
 # HiddenServiceDir <LOCATION>\Tor Browser\node*4**
 # HiddenServiceVersion 2
 # HiddenServicePort <MN PORT> 127.0.0.1:9904

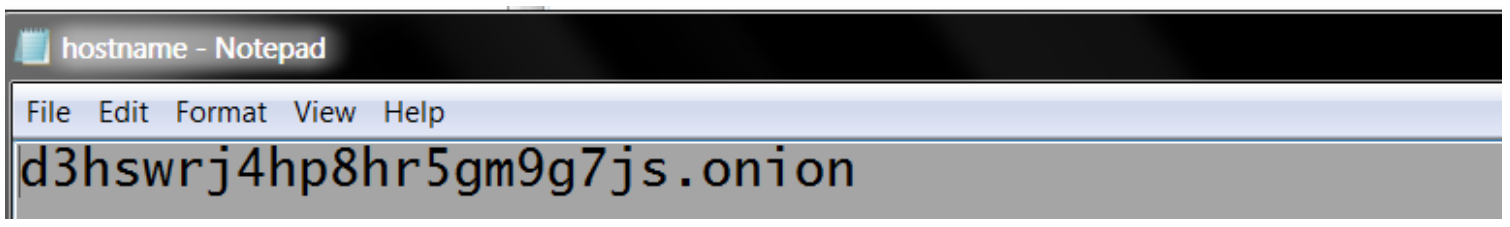
STEP 4 - GATHER THE INFORMATION

1. Go to the Tor Browser folder **<LOCATION>\Tor Browser** and you will see the node folders you specified in the torrc file. Example >



2. In each of these node folders you will find a file called hostname Open it with a text editor and it will show you the .onion address for each masternode>





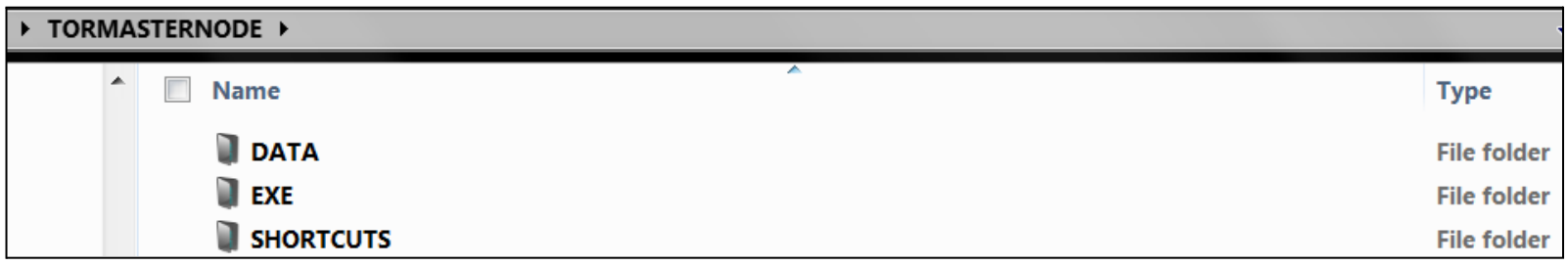
3. Copy each of the .onion addresses from node1, node2, folders ect.. to the info text document you saved earlier like this >

```
mn1     d3hswrj4hp8hr5gm9g7js.onion
mn2     kheg7eh7d57f5sv7x4z3x.onion
mn3     kjg7tyc5hf6hr54s7g6f5.onion
mn4     g67h73nhgsk3gtb3dvtru.onion
```

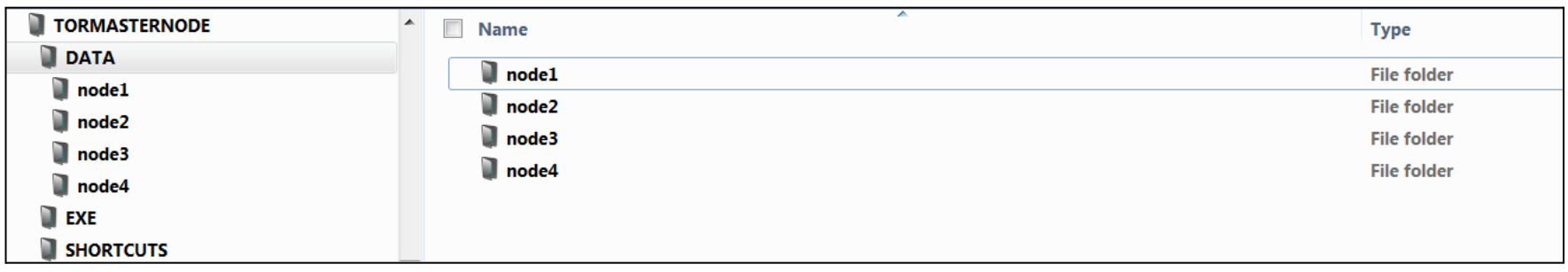
4. Save the info to the text document. You should now have all the details needed to setup the masternodes.

STEP 5 - SETUP THE WALLET FOLDERS

1. Now we need to setup the masternode wallet folders for node1, node2, node3…ect. Create a folder on a drive with enough GB's for all your masternodes called TORMASTERNODE, example ` C:\TORMASTERNODE ` then create 3 more folders inside TORMASTERNODE labeled DATA , EXE , SHORTCUT >

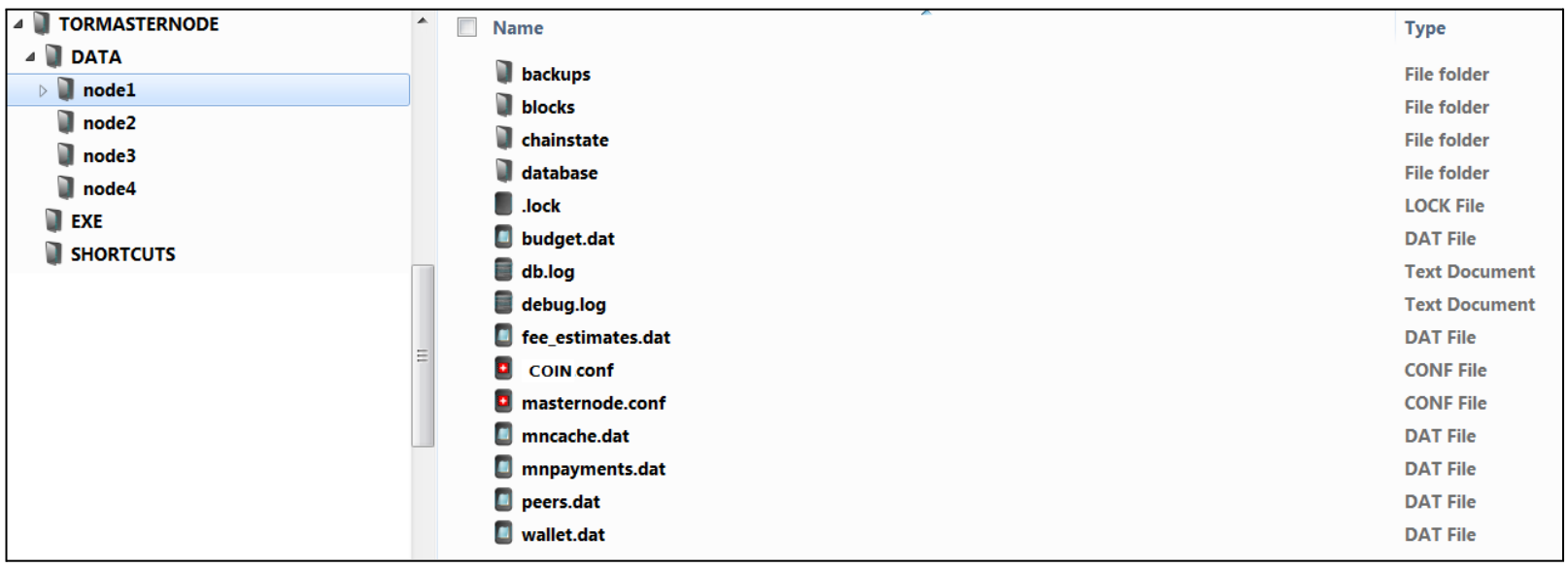


2. Next copy the folders created in **<LOCATION>\Tor Browser** node***1, node***2, node***3 ect.. to the DATA folder.

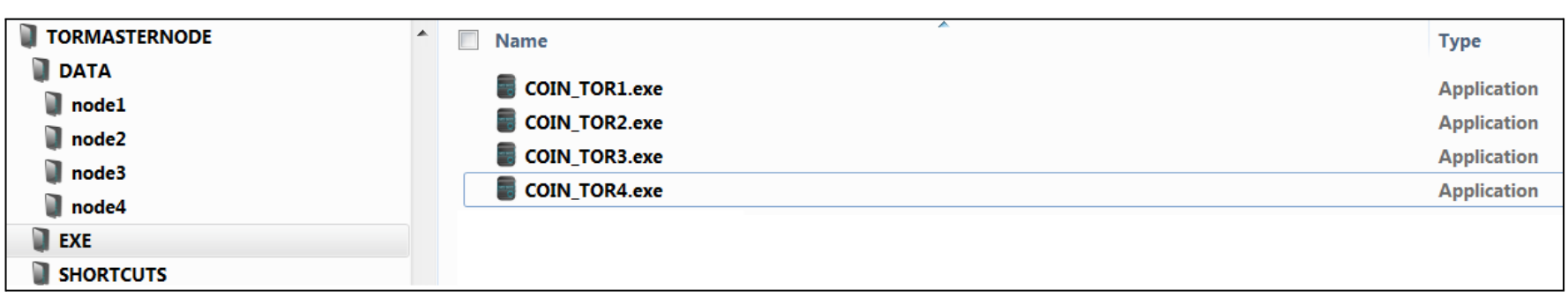


3. Now go to your main wallet coins blockchain C:\Users***\AppData\Roaming\MN COIN folder, you should see something like this >

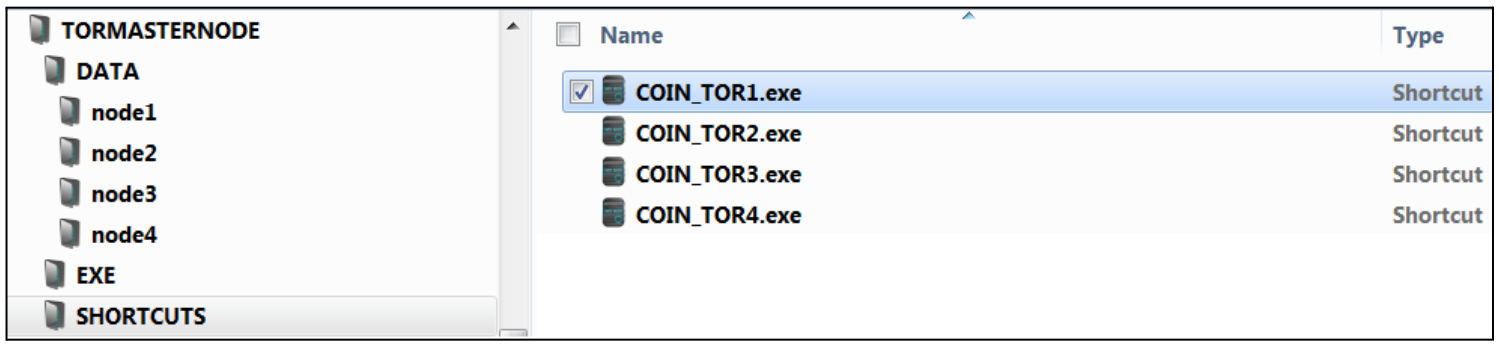
4. Copy all the files and folders from `\AppData\Roaming\MN COIN`to `\TORMASTERNODE\DATA\node***1, like this >



5. Then do the same for node***2, node***3.. Ect.
6. Next copy the wallet.exe file to EXE. You now need to make copies of the exe and name them <COIN>_TOR1.exe, <COIN>_TOR2.exe, <COIN>_TOR3.exe ect… (<COIN> = Coin name, ie. BTC_TOR1.exe) like this >

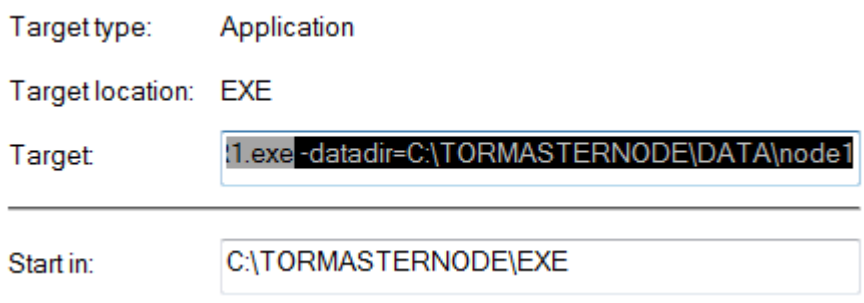


7. Now create a shortcut to each Coin wallet exe in the SHORTCUTS folder like this >



STEP 6 - SHORTCUTS & CONFIGS

1. Next we have to edit the shortcuts so the wallets find the blockchain in the DATA/node***# folders. Right click the first shortcut, click properties and add this line to the end of the target after 1 space> -datadir=C:\TORMASTERNODE\DATA\node***1



Make sure your location (drive letter) of the TORMASTERNODE is correct, above the example is located on C Drive.

2. Now edit the next shortcuts but change the node number so the other wallets can find their own blockchain folder like this >

   -datadir=C:\TORMASTERNODE\DATA\node***1

   -datadir=C:\TORMASTERNODE\DATA\node***2

   -datadir=C:\TORMASTERNODE\DATA\node***3 ...ect

   Once all your shortcuts are edited copy them to your desktop or create a shortcut to the shortcut folder.

3. We now need to open the info document saved earlier, it should look like this >

4. First edit the main control wallet coin.conf & masternode.conf, go to C:\Users***\AppData\Roaming\COIN folder and open both files. Some wallets let you use node***1 as the control wallet but others I have found dont like it, so it is best to try using the original first.
5. In the coin.conf add the following using your settings from your info document >

```
listen=1
server=1
daemon=1
staking=1
rpcuser=<user>
rpcpassword=<password>
rpcport=<COIN RPCPORT>
# port=<MN#COIN PORT>
# onion=127.0.0.1:<MN#COIN PORT>
rpcallowip=127.0.0.1
maxconnections=256
masternode=1
externalip=<MN1.ONION ADDRESS>
externalip=<MN2.ONION ADDRESS>
externalip=<MN3.ONION ADDRESS>
externalip=<MN4.ONION ADDRESS>
masternodeaddr=<MN1.ONION ADDRESS>:<MN PORT>
masternodeaddr=<MN2.ONION ADDRESS>:<MN PORT>
masternodeaddr=<MN3.ONION ADDRESS>:<MN PORT>
```

masternodeaddr=<MN4.ONION ADDRESS>:<MN PORT>
masternodeprivkey=<MN1 GENKEY>
masternodeprivkey=<MN2 GENKEY>
masternodeprivkey=<MN3 GENKEY>
masternodeprivkey=<MN4 GENKEY>

6. You need to add your coins rpc port, the user & password can be anything except special characters, the <MN#.ONION ADDRESS> is the .onion address and the <MN PORT> must be your coins default masternode port. <MN# GENKEY> is the genkey (private keys).
7. Next edit the masternode.conf and add the following lines >

   # Masternode config file
   # Format: alias IP:port masternodeprivkey collateral_output_txid collateral_output_index

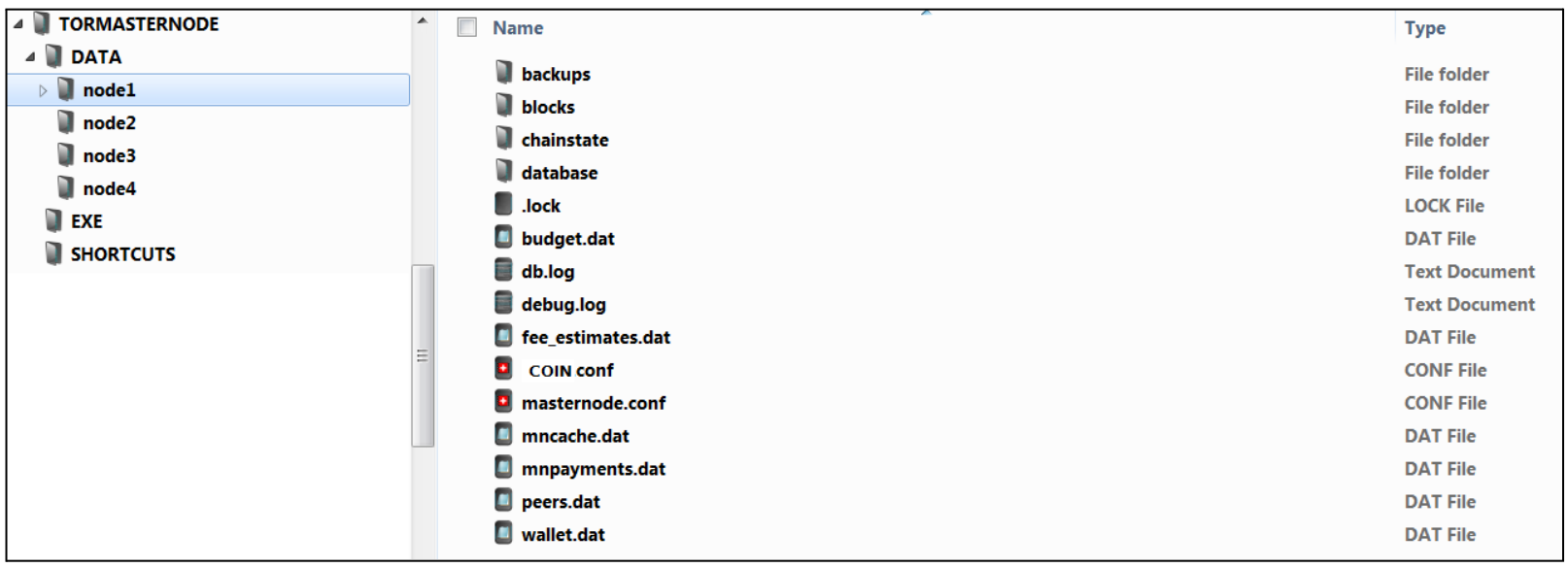
   mn1 <MN1.ONION ADDRESS>:<MN PORT><MN1 GENKEY><TXID MN1>
   mn2 <MN2.ONION ADDRESS>:<MN PORT><MN2 GENKEY><TXID MN2>
   mn3 <MN3.ONION ADDRESS>:<MN PORT><MN3 GENKEY><TXID MN3>
   mn4 <MN4.ONION ADDRESS>:<MN PORT><MN4 GENKEY><TXID MN4>

8. The <TXID MN#> is the masternode outputs like this > 7tu07hh8h68j99h9yh8dg6gffn5bd763fee5bbc9f1650c4479558f8e9ed6 1
   It should look like this example depending how many nodes you have>

```
# Masternode config file
# Format: alias IP:port masternodeprivkey collateral_output_txid collateral_output_index

mn1 d3hswrj4hp8hr5gm9g7js.onion:123456 k59g9hity6u67h8GHRDSJKXCNN5BDBbKHbj4a3NN4VM8nWU 7tu07hh8h68j99h9yh8dg6gffn5bd763fee5bbc9f1650c4479558f8e9ed6 1
mn2 kheg7eh7d57f5sv7x4z3x.onion:123456 j58jd4878HIUTGJ7h8GHRDSJKXCNN5BDBbKHbj4a3NN4VM8 hs8669cah9c7k0s7c6s789jc97s0c9f1650c4479558fs89a07sf6shh8s7f 0
mn3 kjg7tyc5hf6hr54s7g6f5.onion:123456 5uU7F5DFHL880344JHRDSJKXCNN5BDBbKHbj4a3NN4VM8nW 4whhgr77hwg7hllahgflbn8c6c59c7c97c9dbbc9f1650cduy9jkskje9fd6 0
```

9. Now we need to copy the COIN.conf & masternode.conf files from \AppData\Roaming\MN COIN to each \TORMASTERNODE\DATA\node# folder and overwrite the files there.



10. Make sure you copy to node1, node2 node3, ect… overwriting COIN.conf & masternode.conf
11. Once overwritten go to \TORMASTERNODE\DATA\node***1 and edit the COIN.conf with a text editor, remove lines that are for mn2, mn3, mn4, ect.. Change staking=0, rpcport=*****1, and port=9901. Then open and edit the masternode.conf and do the same, remove lines that are for mn2, mn3, mn4, ect…
12. Then go to \TORMASTERNODE\DATA\node***2 and edit the COIN.conf with a text editor, remove lines that are for mn1, mn3, mn4, ect.. change staking=0, rpcport=, and port=9902. Then open and edit the masternode.conf and do the same, remove lines that are for mn1, mn3, mn4, ect.
13. Repeat for mn3, mn4 ect… Make sure you change mn3 conf to staking=0, rpcport, port=9903 & mn4 conf to staking=0, rpcport, port=9904 ect…

listen=1
server=1
daemon=1
staking=0
rpcuser=username
rpcpassword=y4yfdfjdf6
rpcport=12345*
port=9902
onion=127.0.0.1:9902
rpcallowip=127.0.0.1
maxconnections=256
masternode=1
externalip=5jfj6uudjdjd64jddsku.onion
masternodeaddr=5jfj6uudjdjd64jddsku.onion:30500
masternodeprivkey=Gj3ts6uKre7d8JShfj75395kk38Efk7s6kUd6kjsSOk74j

14. Also for the masternode.conf remove every line except the node you are editing. Example : masternode 2

    mn2 5jfj6uudjdjd64jddsku.onion:30500 Gj3ts6uKre7d8JShfj75395kk38Efk7s6kUd6kjsSOk74j
    745611f776f0f5c476ae7s0e154bba45fdr6441c48f1064c3da849c251ye6eks5 0

STEP 7 - STARTING THE MASTERNODES

1. First run the main controller wallet, then from the C:\TORMASTERNODE\SHORTCUTS run the tor node shortcuts you created in STEP 6, let them all fully sync again.
2. Now go to info and check the block number with the coins explorer to see if they are correct.
3. Once verified they are all on the correct block number we need to unlock all wallets.
4. First go to the node1 wallet, go to the masternode tab and right click mn1 the click Start alias.
5. Then go to node2, node3 wallet ect and repeat Start alias mn2, mn3...
6. Now go to the control wallet and mn1, 2, 3 , 4 ect.. should say ENABLED or ACTIVE.
7. Once you have all your nodes ENABLED or ACTIVE then you just need to paste in the console or debug of the controller wallet `masternode start -all or startmasternode all true` .
8. To check each node is now running go in the console or debug and type `masternode status or getmasternodestatus` In the console or debug it should now say `"status": 4, "message": "Masternode successfully started"`

STEP 8 - PROBLEMS

You must have the wallets for nodes running 24/7 online, the control wallet only needs to be running 24/7 if you are staking your rewards but you can turn it off once all the nodes are running, You can also enable staking on node 1 wallet staking=1 in the .conf.

If you receive an error your.onion address is not recognised as a valid ip address then you must unhash the line **onion=127.0.0.1:port**, this should then show an icon tor enabled in the main wallet window depending on wallet. The extra line needs to be unhashed in the coin.conf file for tor .onion addresses to be recognised, you must do this in each node coin.conf to work, this mainly affects some Pivx 3+ wallet forks.

Example: If you set your **HiddenServicePort 00000 127.0.0.1:9501** for a node in the torrc file, then the line would be **onion=127.0.0.1:9501**
You can also use the masternode coin port on the control wallet, Example: **onion=127.0.0.1:00000.**

If you have an error running more than just the control wallet, (ie a node gives you an error wallet already running) then this can be a few things.

1. You have not set a different port for every node correctly in the coin.conf file.
2. You did not set the data location command in the wallet shortcut.
3. Sometimes you need to make sure your firewall isn't blocking a port.
4. Some wallets do not require the listen= to be 0, try setting it back to 1.
5. Change the rpcport= for each node. Ie : rpcport=123451, rpcport=123452, rpcport=123453…

STEP 9 - FINAL NOTES

I do not claim this will solve everyone's problems but this is the way I run nodes now, it saves me messing with linux and remote servers and I find this way running masternodes a lot easier. To my knowledge the Tor .onion address can never be traced to your ip, giving you some anonymity, also if you have a dynamic ip from your ISP this still means you can run masternodes at home. I haven't found any masternode coin that hasn't worked and are currently running around 22 masternodes on an I7 16GB pc without any problems.

I have found that all wallets are different, some require a control wallet to start nodes, others do not, you get some that can run each node as long as the port is different in each .conf and the listen=1 can be left alone. Also many do not need the onion=127.0.0.1:port enabled as they recognize the .onion address without it.

If you have any problems just DM in Discord if I'm in your coin channel or see me online, I'm happy to help as long as you appreciate rewarding me for writing this guide and helping you.

Discord : Bossteck tor_mn1#6262

If you would like to donate for my time taken making this tutorial then please send any amount of

BTC - 33ESdhZc5hVMknmQzdhFLDaPwWxz9EimiB

ETH - 0x0EAc565625754e3fFBa47315866594c93ea93171

LTC - MVBw4na9pfJpYbt4AyKkTtzCKXsy9botA1

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