Masternode Guide #1

Single masternode on Linux VPS
(Ubuntu) + control wallet on local PC
(Windows)

Prerequisites:

a - A remote server (Virtual Private Server, VPS) which will be our masternode wallet.

b - A local computer running under Windows 7, 8.1 or 10 which will be our control wallet.

c - PuTTY, which will be used to setup the server (install the dependencies, the wallet itself, and configure everything) after the initial configuration.

d - 1001 GBX as collateral (1000 GBX + 1 GBX to cover the transaction fees)

Plan of action:

1 - Update Windows 10.
2 - Buy VPS service and setup Ubuntu on it. You'll need to have one CPU and at least 1GB of RAM on it to be able to compile and run the wallet.

3 - Download PuTTY here http://www.putty.org/, install it, run it and connect to your server.
4 - Login as root, update Ubuntu and install all the dependencies.
5 - Compile and install the wallet from sources.

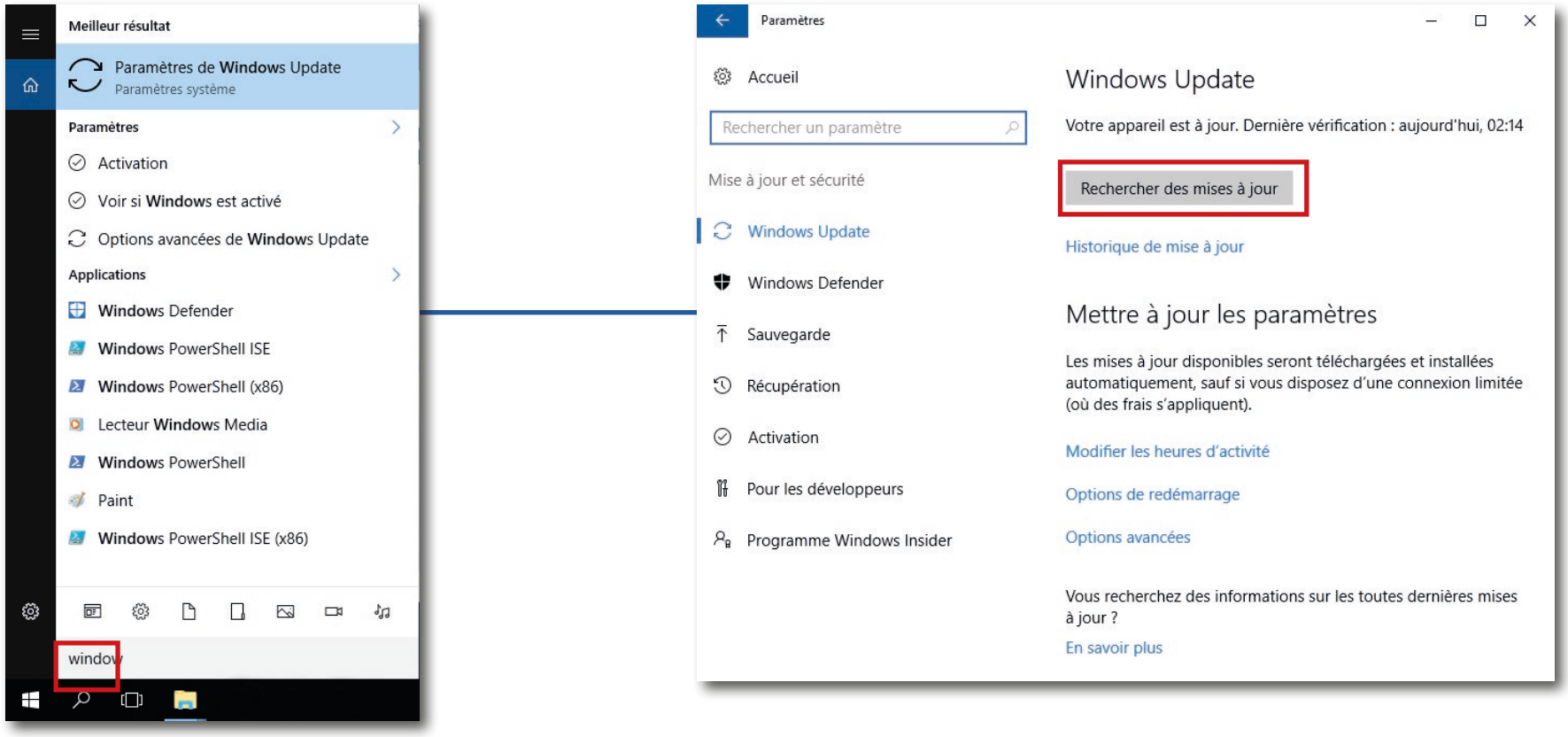
6 - Download GoByte Windows Wallet from http://gobyte.network/ and set up the installation.
7 - Setup our masternode and our control wallet :)

* Notes: This guide was written on testnet, a few links on the following screenshots are related to the testnet. The correct links and commands are always in text.

#1

For the purpose of this guide I have used Windows 10. Everything was installed and configured on Windows 10. Other different versions of Windows might require some adjustments which won't be covered in this guide.

First of all, we need to update our Windows installation to make sure we are running a secured system. Install all the available updates.

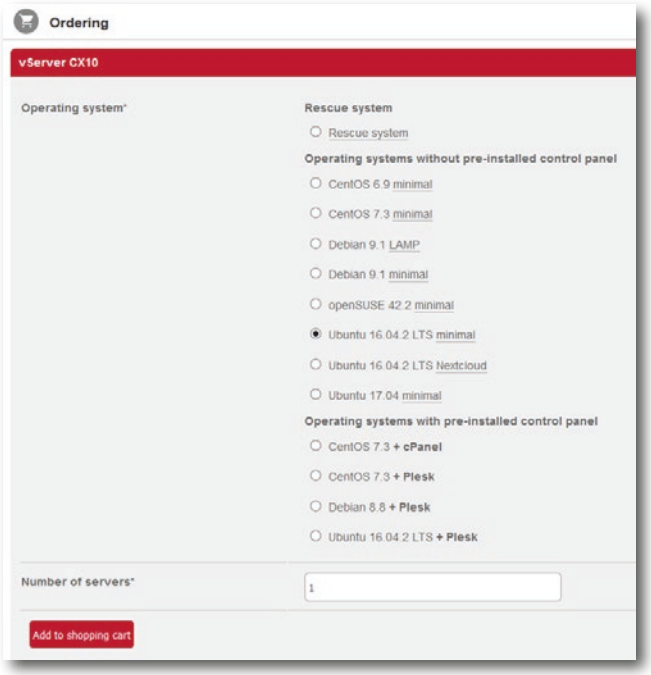


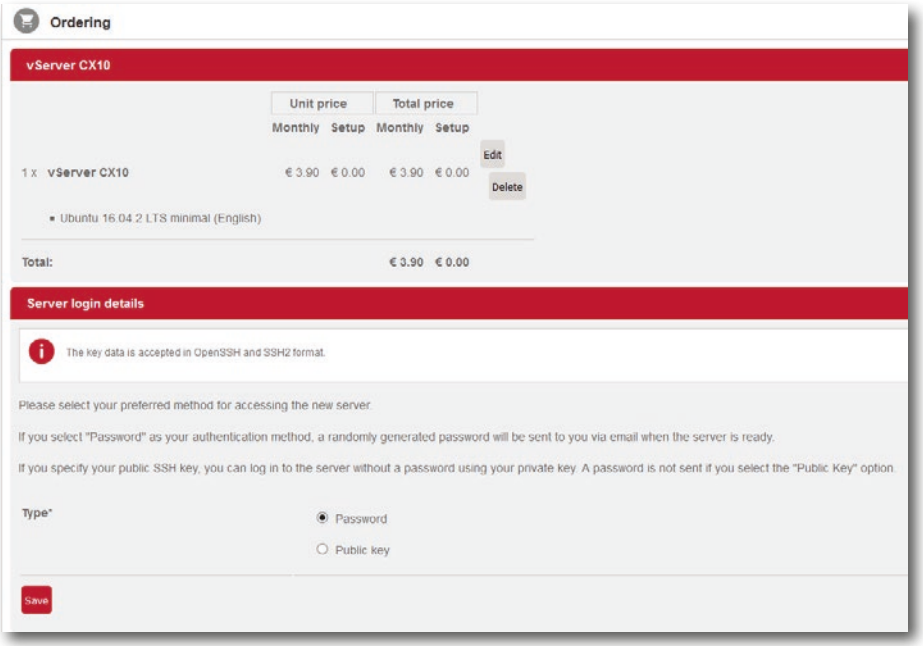
#2

For the purpose of this guide I have used a VPS provider HETZNER (https://www.hetzner.com/)

Linux distro under which the wallet was compiled and run is Ubuntu 16.04.
Other different versions of Linux might require some other commands or syntax which won't be covered in this guide.

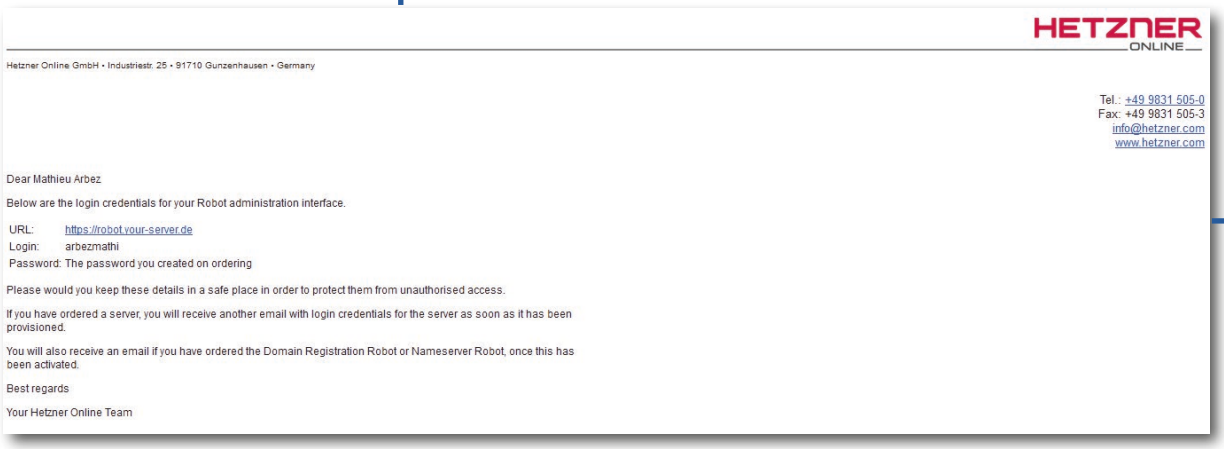
Important: The server configuration is bare minimum 1 CPU and 1 GB of RAM.
This is enough to run the wallet but might not be enough to compile it.
To compile the wallet you need 2GB of ram or if you have a 1GB RAM server you need to create a Swap file of 1GB.
Detailed instructions on how to do it are provided further on.





Choose the password option here

As soon as your order will be processed, Hetzner will send you an email with your login information along with the static IP of your server.



HETZNER ONLINE

Hetzner Online GmbH • Industriestr. 25 • 91710 Gunzenhausen • Germany

Tel.: +49 9831 505-0
Fax: +49 9831 505-3
info@hetzner.com
www.hetzner.com

Dear Mathieu Arbez

Below are the login credentials for your Robot administration interface.

URL: https://robot.your-server.de
Login: arbezmathi
Password: The password you created on ordering

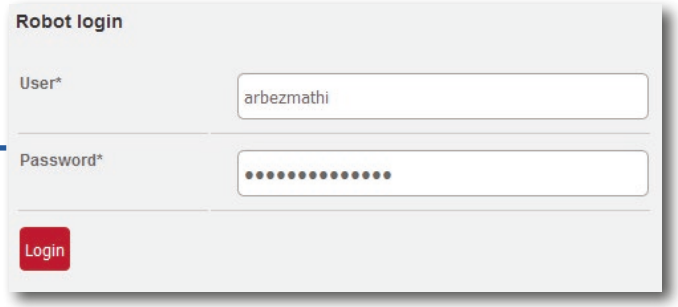
Please would you keep these details in a safe place in order to protect them from unauthorised access.

If you have ordered a server, you will receive another email with login credentials for the server as soon as it has been provisioned.

You will also receive an email if you have ordered the Domain Registration Robot or Nameserver Robot, once this has been activated.

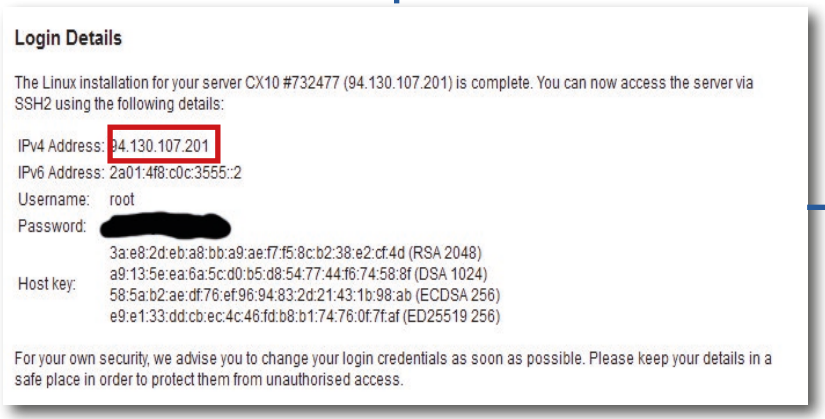
Best regards

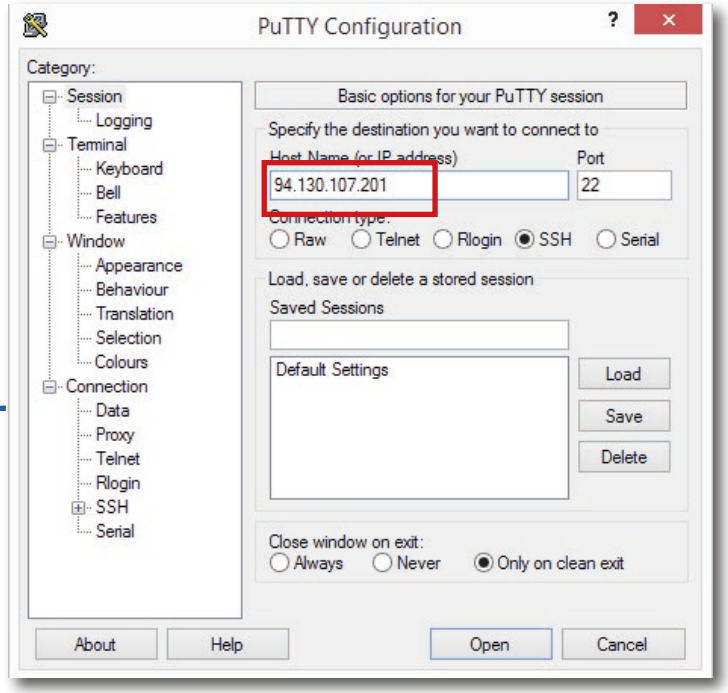
Your Hetzner Online Team



#3

Download PuTTY here http://www.putty.org/, install it then run it. Fill the *Host Name field* with your server's IP. Click on the *open* button to connect and access to the terminal. Use the default port (22). You don't need to change any option. An error message may appears, ignore it.



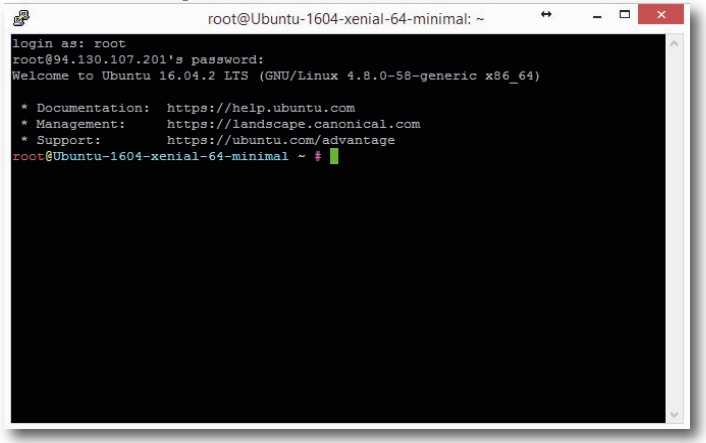


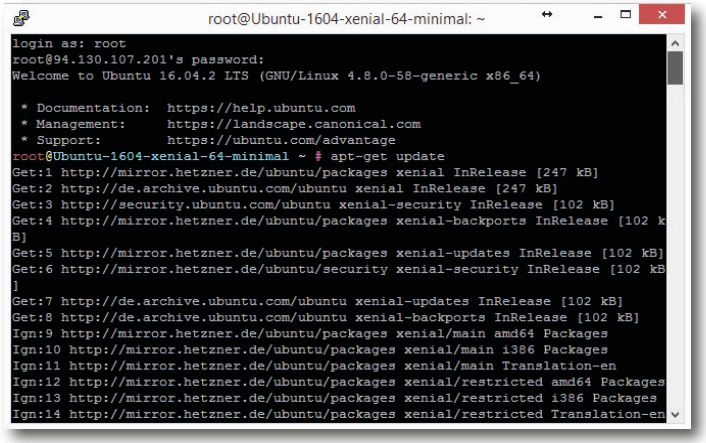
#4

Use login details from your VPS provider to access the server, update Ubuntu then install all necessary libraries to either be able to compile the wallet or run it.

Important: in Linux to copy a text we use buttons Ctrl+Insert and to paste Shift+Insert- [Ctrl+C/V won't work] please use these buttons from now on. Paste into the terminal window following commands and hit Enter to confirm. Commands are in blue font - copy and paste only these into your terminal window.

```
sudo apt-get update & sudo apt-get upgrade
sudo apt-get install build-essential libtool autotools-dev autoconf pkg-config libssl-dev
sudo apt-get install software-properties-common
sudo add-apt-repository ppa:bitcoin/bitcoin
sudo apt-get update
sudo apt-get install libdb4.8-dev libdb4.8++-dev
sudo apt-get install libboost-all-dev
sudo apt-get install libminiupnpc-dev
sudo apt-get install libevent-dev
```





These are necessary libraries to either be able to compile the wallet or run it [if you use a precompiled one]

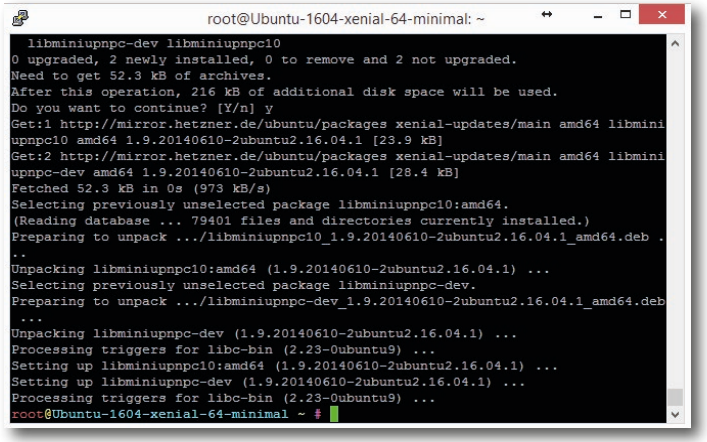
#5

Once we have all dependencies we can download and compile the wallet:

```
sudo apt-get install git
git clone https://github.com/gobytecoin/gobyte
cd gobyte
sudo apt-get install automake
./autogen.sh
./configure
make
```
(this can take awhile and some warning messages will be shown it's perfectly normal)

After compilation:

```
cd src
strip gobyte-tx
strip gobyte-cli
strip gobyted
mv gobyted gobyte-cli gobyte-tx ~/
cd ~/
rm-r gobyte
```



If you don't have more than 1GB of RAM on your VPS, please follow these instructions to enable a SWAP file for being compile

Create a Swap file:

When entering these commands you will get no feedback, just enter them one by one, the changes happen.

```
sudo fallocate-l 2G /swapfile
sudo chmod 600 /swapfile
sudo mkswap /swapfile
sudo swapon /swapfile
```

Making Swap file permanent (optional):

We have our swap file enabled, but when we reboot, the server will not automatically enable the file. We can change that by modifying the fstab file.

```
sudo nano /etc/fstab
```

At the bottom of the file, you need to add a line that will tell the operating system to automatically use the file you created:

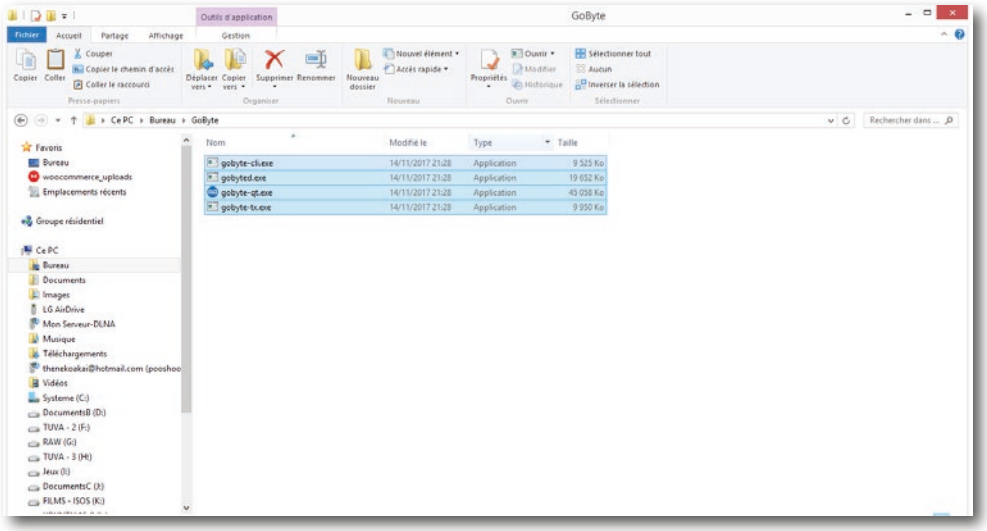
```
/swapfile none    swap    sw 0   0
```

Save and exit the text editor.
To exit NANO text editor press Ctrl+X and confirm changes.
(Optional) You might need to reboot the system if ./autogen.sh command fails to run. Type: reboot and your session will terminate. Reconnect and continue with the guide.

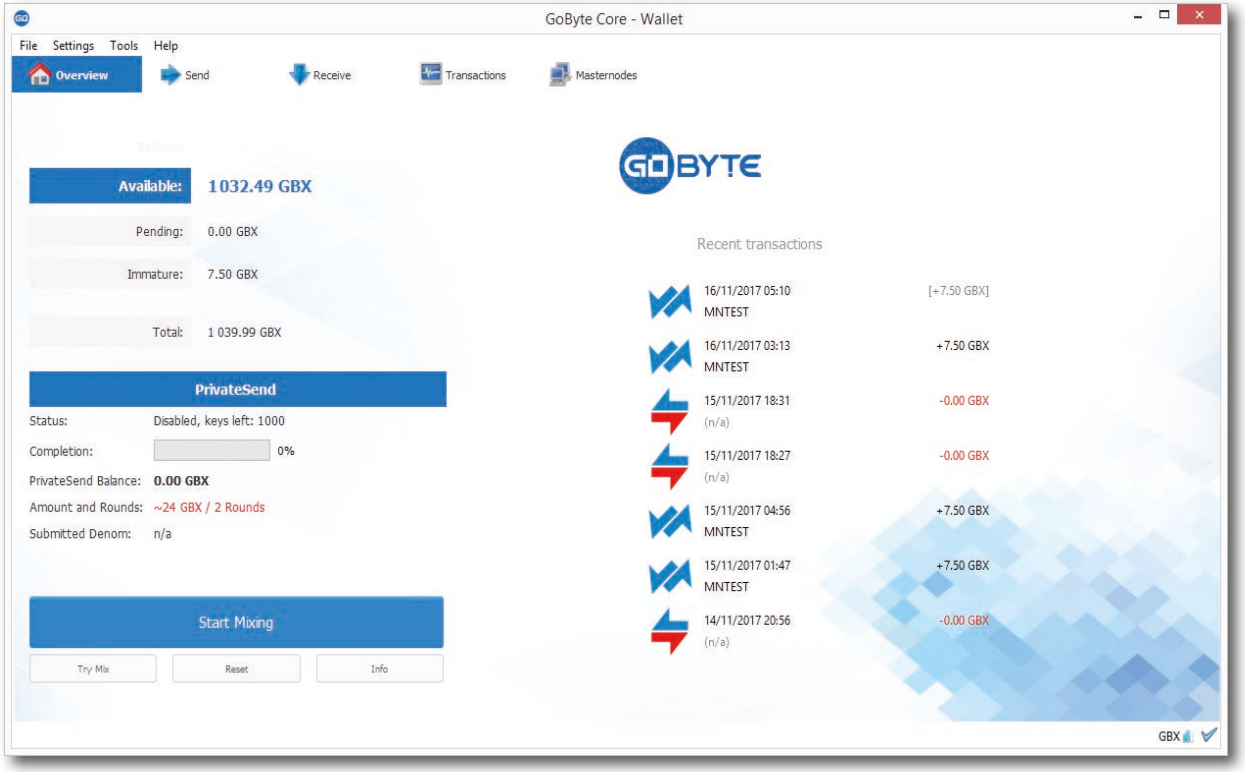
#6

Download GoByte Windows wallet from http://gobyte.network/

Create a folder on your windows desktop. Name it GoByte.
Copy gobyted-qt.exe, gobyte-cli.exe, gobyted.exe and gobyte-tx.exe in
C:\Users\your_username\Desktop\GoByte



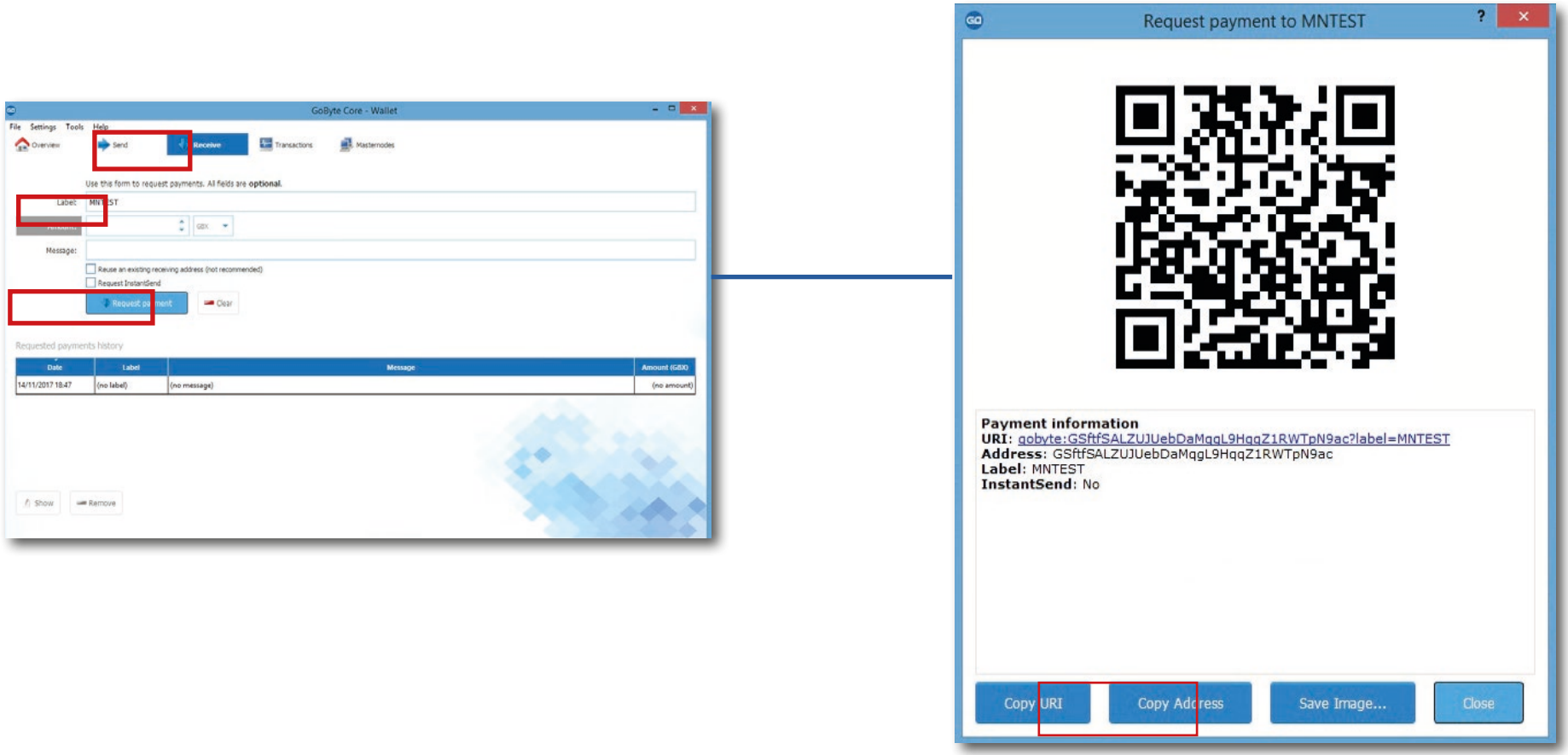
Run the control wallet. **Use gobyte-qt**.
It’ll ask for a data directory, use the default settings.
Allow connections through windows firewall when prompted.



This wallet will be our control wallet.

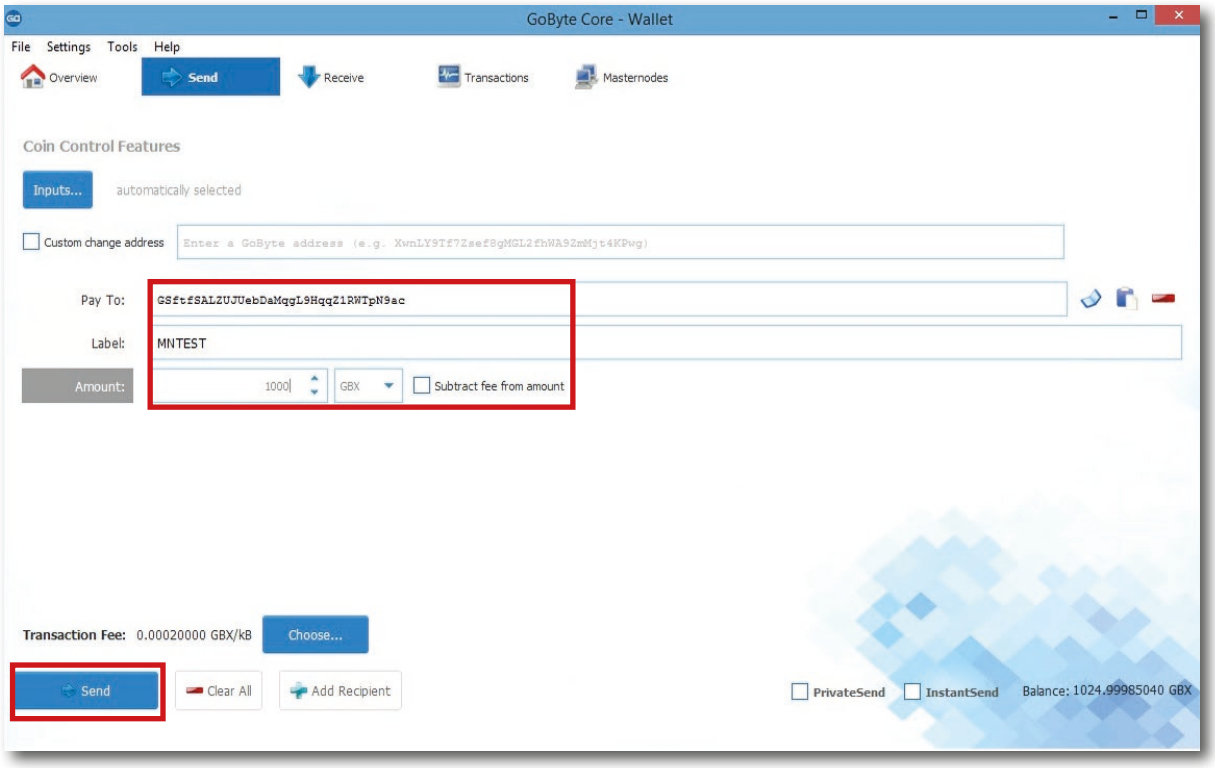
#7

Now we will use the coins we have to fill the control wallet and generate the genkey we need.
Go to the receive tab, enter MN1 as label and click on request payment.
Copy the address.



Go to the send tab, the address you copied, MN1 as label and 1000 GBX.

Click Send.



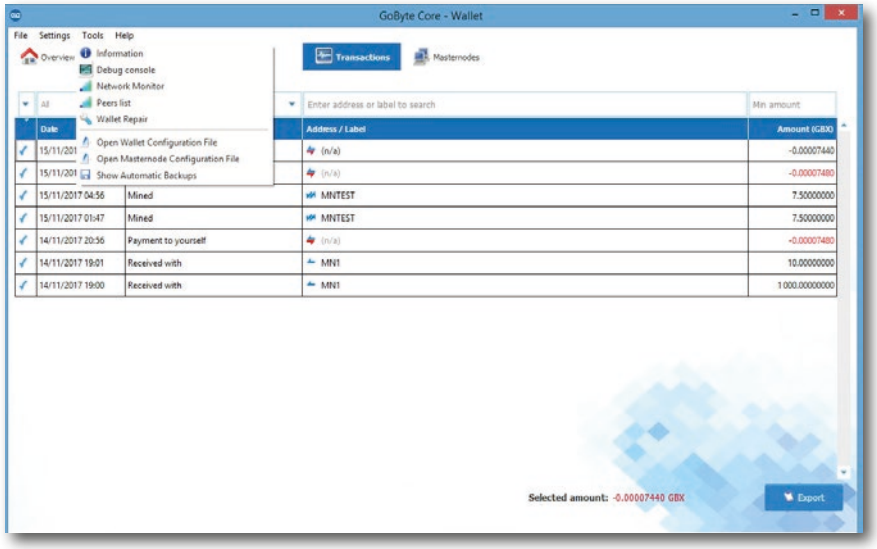
Open notepad and save a temporary .txt file we are going to use for storing the data we will need to configure our masternode. **Name it tempMN1.txt**

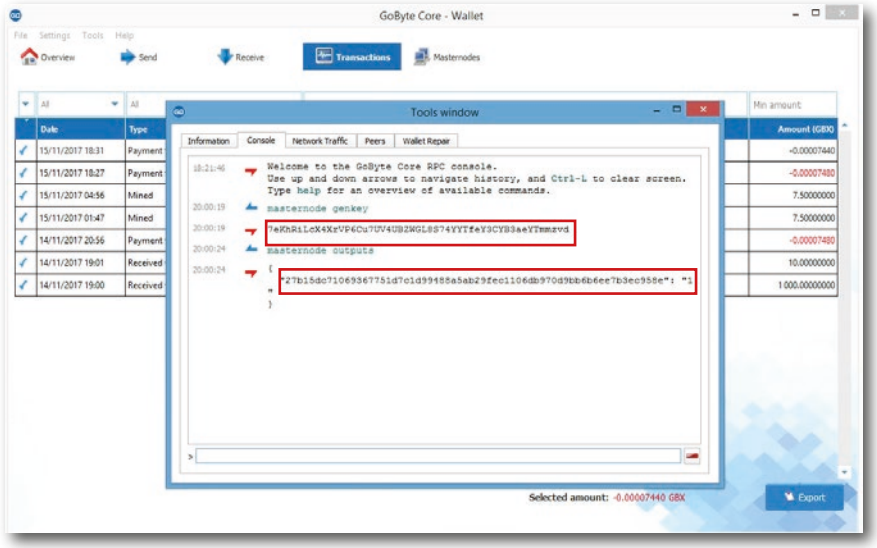
Go to the debug console and execute the commands:

masternode genkey

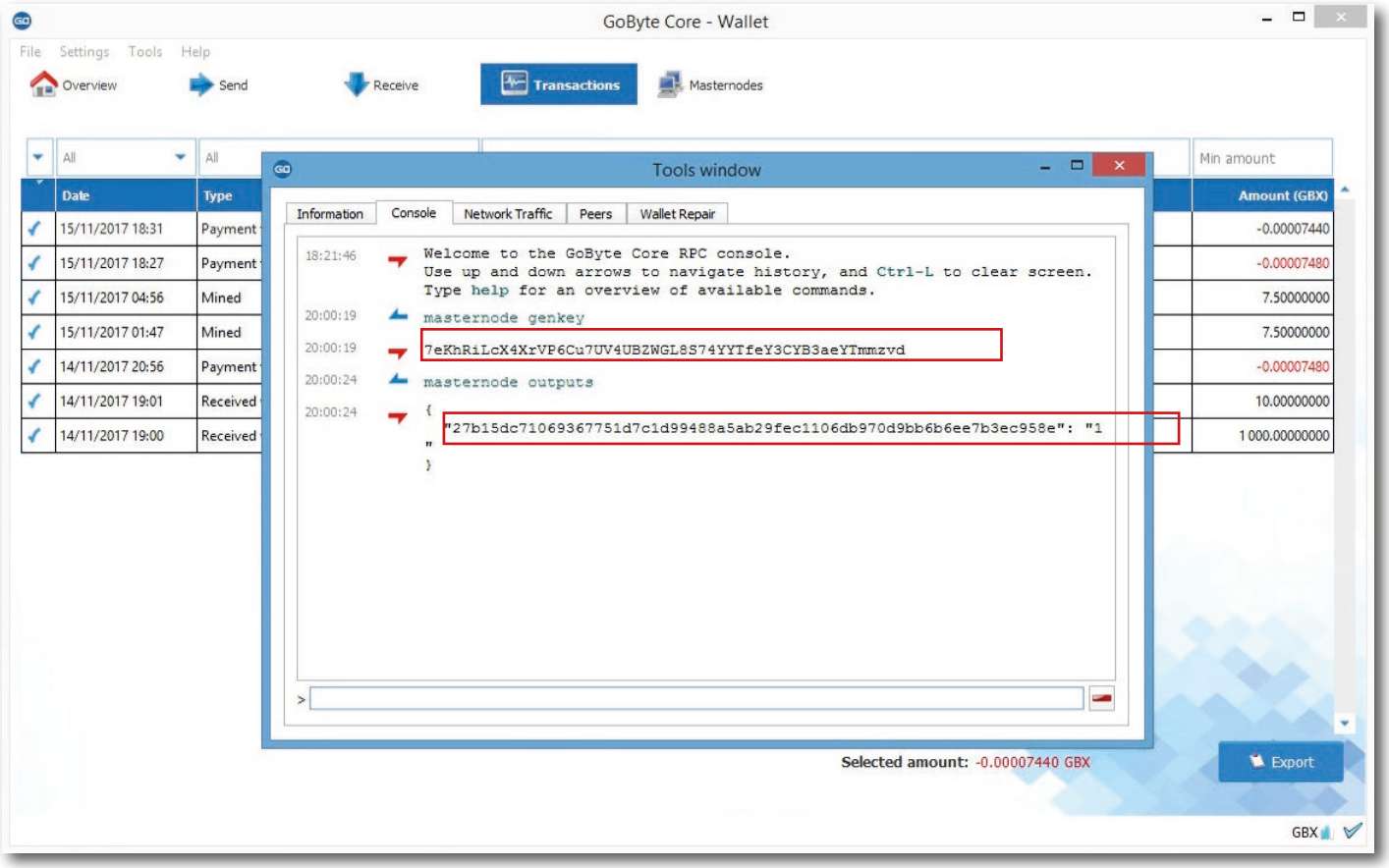
masternode outputs

Copy the private key and outputs in tempMN1.txt





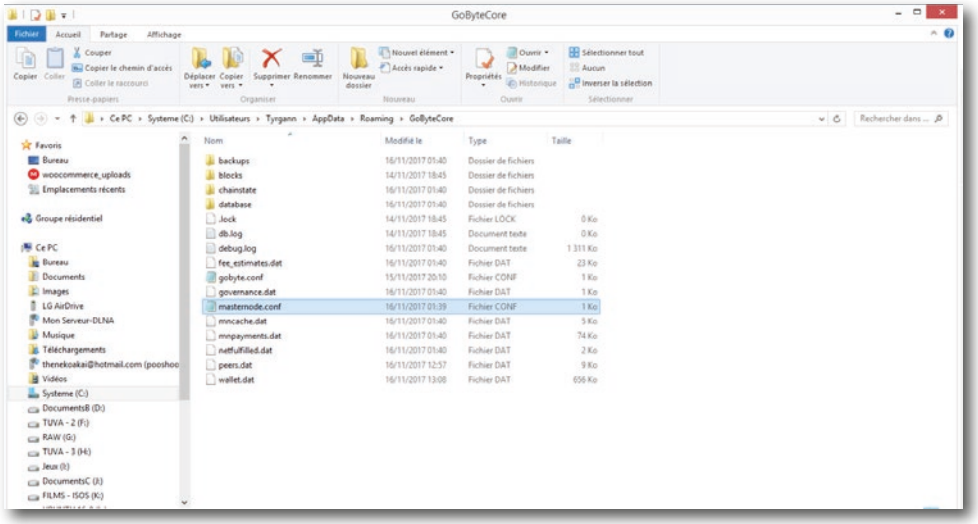
Important! Don’t copy paste everything and format your data into tempMN1.txt file like this:
<IP:PORT> <masternode genkey> <masternode output>



In this exemple, your tempMN1.txt file should look like this:

```
# Masternode config file
# Format: alias IP:port masternodeprivkey collateral_output_txid collateral_output_index
# Example: mn1 127.0.0.2:19999 93HaYBVUCYjEMeeH1Y4sBGLALQZE1Yc1K64xiqgX37tGBDQL8Xg 2bcd3c84c84f87eaa86e4e56834c92927a07f9e18718810b92e0d0324456a67c 0
MNTEST 82.223.18.239:12455 7eKhRiLcX4XrVP6Cu7UV4UBZWGL8S74YYTfeY3CYB3aeYTmmzvd 27b15dc71069367751d7c1d99488a5ab29fec1106db970d9bb6b6ee7b3ec958e 1
```

Go to C:\Users\your_username\appdata\Roaming\GoByteCore and open masternode.conf. This file is telling our control wallet how to communicate with our masternode. Copy the content of tempMN1.txt into this configuration file. Then save it and close it.



masternode.conf - Bloc-notes

Fichier Edition Format Affichage ?

```
# Masternode config file
# Format: alias IP:port masternodeprivkey collateral_output_txid collateral_output_index
# Example: mn1 127.0.0.2:19999 93HaYBVUCYjEMeeH1Y4sBGLALQZE1Yc1K64xiqgX37tGBDQL8Xg 2bcd3c84c84f87eaa86e4e56834c92927a07f9e18718810b92e0d0324456a67c 0
MNTEST 82.223.18.239:12455 7eKhRiLcX4XrVP6Cu7UV4UBZWGL8S74YYTfeY3CYB3aeYTmmzvd 27b15dc71069367751d7c1d99488a5ab29fec1106db970d9bb6b6ee7b3ec958e 1
```

Add MN1 before <VPS_IP_ADDRESS>:12455 <masternode genkey> <masternode output>
Save and close masternode.conf. Close the wallet.

Now we have all the data needed from our control wallet, we need to configure our masternode.

First, we will create a hidden .gobytecore folder and a gobyte.conf file on our VPS. We will need the private key we copied earlier in tempMN1.txt and masternode.conf:

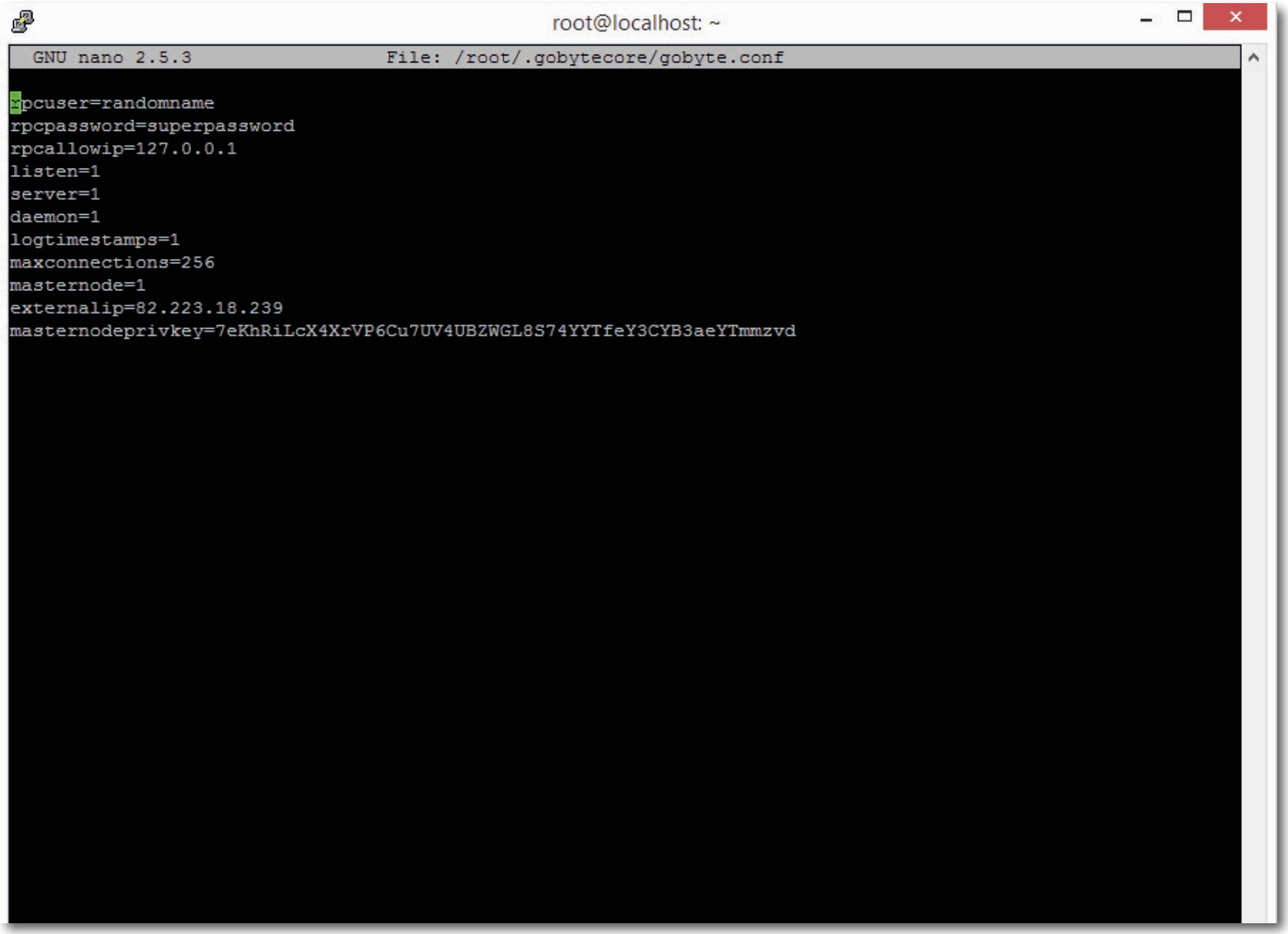
```
cd/root
mkdir ../root/.gobytecore
nano /root/.gobytecore/gobyte.conf
```

Simply copy and paste these, changing the appropriate fields then exit nano:

```
rpcuser=YOUR_LONG_AND_RANDOM_USERNAME
rpcpassword=YOUR_VERY_LONG_AND_RANDOM_PASSWORD
rpcallowip=127.0.0.1
listen=1
server=1
daemon=1
logtimestamps=1
maxconnections=256
masternode=1
externalip=YOUR_UNIQUE_VPS_IP_ADDRESS
masternodeprivkey=YOUR_UNIQUE_PRIVATE_KEY (genkey)
```

Exemple:

```
rpcuser=randomname
rpcpassword=superpassword
rpcallowip=127.0.0.1
listen=1
server=1
daemon=1
logtimestamps=1
maxconnections=256
masternode=1
externalip=82.223.18.239
masternodeprivkey=8KqvTqddyt3Mn6Nfysstx ...
```



Your configuration file must look like this.

To add more nodes, just edit the gobyte.conf file.

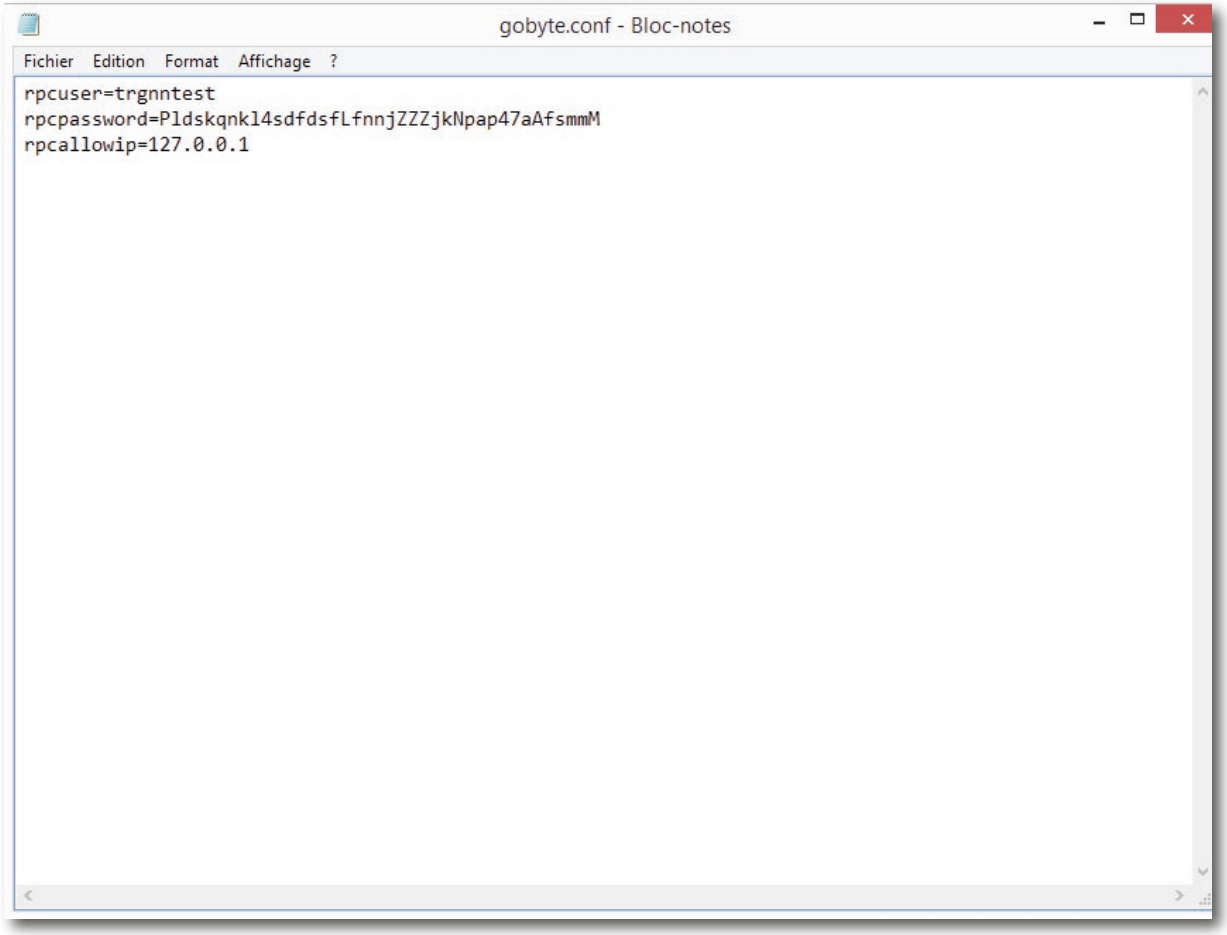
Now we will create our control wallet gobyte.conf for allowing it to talk with our masternode. Go to
%appdata%/roaming/GoByteCore

and create a gobyte.conf file. Edit it like this with notepad:

```
rpcuser=YOUR_LONG_AND_RANDOM_USERNAME
rpcpassword=YOUR_VERY_LONG_AND_RANDOM_PASSWORD
rpcallowip=127.0.0.1
```

Exemple:

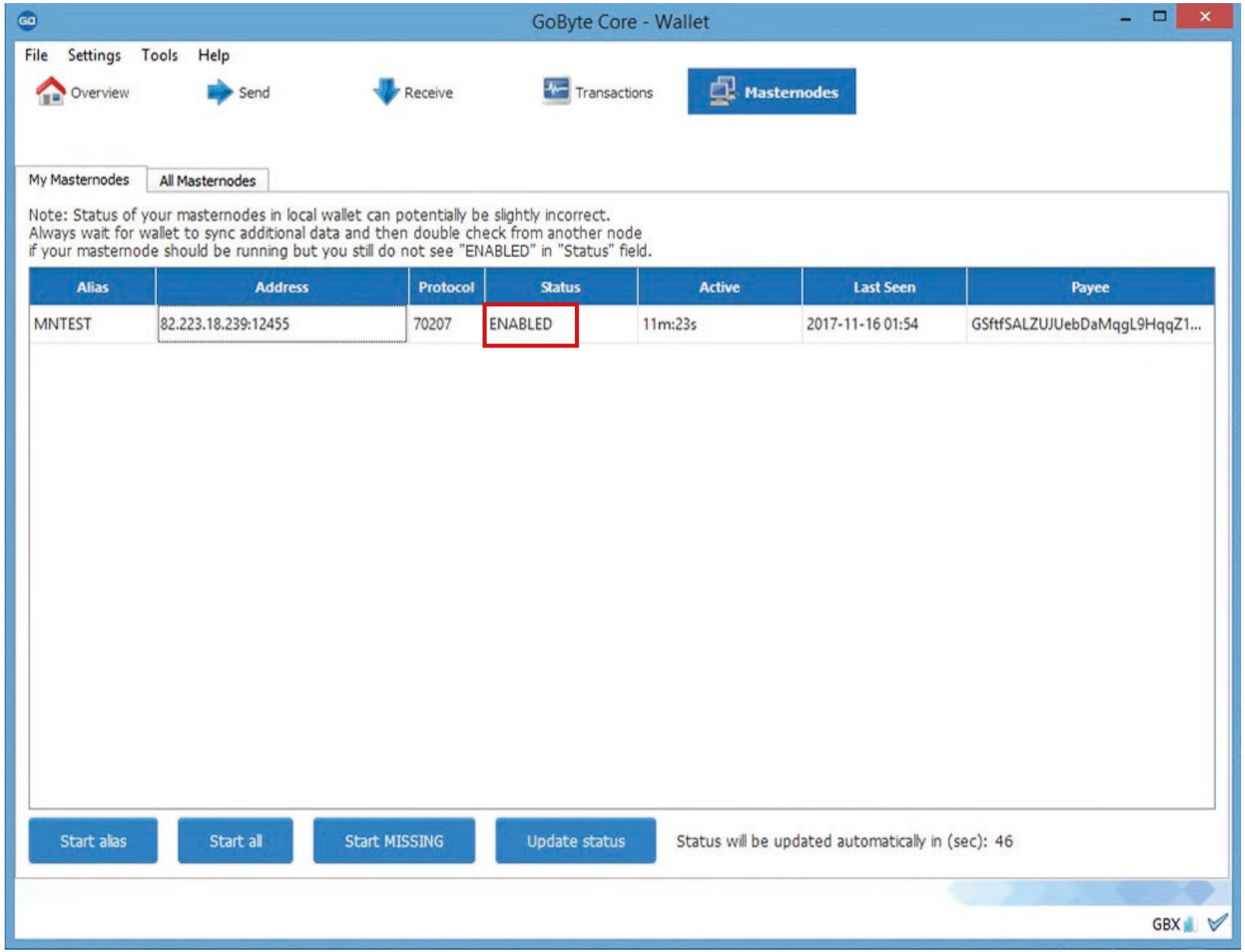
```
rpcuser=trgnntest
rpcpassword=Pldskqnkl4sdfdsfLfnnjZZZjkNpap47aAfsmmM
rpcallowip=127.0.0.1
```



Your configuration file must look like this.

To add more nodes, just edit the gobyte.conf file.

Close our control wallet then reopen it. Go to the masternode tab and click Start all to start our masternode :)



To get your default unlabelled wallet address just execute ./gobyte-cli getaccountaddress «»
To get a labelled wallet address just execute ./gobyte-cli getaccountaddress <label>
To see the list of addresses and their balances just execute ./gobyte-cli listaccounts
To send GBX to another wallet just execute ./gobyte-cli sendtoaddress <address> <amount of GBX>
To stop the wallet just execute ./gobyte-cli stop

Notes: If your masternode isn't reachable, you might need to open your 12455 port on your VPS.
Execute the following commands:
iptables-t nat-I OUTPUT-d <your_vps_ip>-p tcp--dport 12455-j REDIRECT--to-ports 12455
cd..
/etc/init.d/iptables restart

and/or start your masternode through the terminal on your VPS with:
masternode start-alias <alias name>

Enjoy your GBX :)