

TZC

WALLET + HEADLESS

WALLET ON LINUX

Local Wallet + PoS Headless Wallet on VPS (Ubuntu 16.04)

What you need:

- a - A local computer running under Ubuntu 16.04
- b - A remote server (Virtual Private Network, VPS) which will be our PoS wallet.
- c - PuTTY, which will be used to setup the server (install the dependencies, the wallet itself, and configure everything) after the initial configuration.

What we will do:

- 1 - Login, update Ubuntu and install all the dependencies on our local Ubuntu.
- 2 - Download, compile install and run the wallet from sources on our local Ubuntu.
- 3 - 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.
- 4 - Download PuTTY here <http://www.putty.org/>, install it, run it and connect to your server.
- 5 - Download, compile and install the wallet from sources on our VPS.
- 6 - A little bit of configuration.
- 7 - Enjoy your TZC and... Breath :)

1

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.

Update your Ubuntu

- > `sudo apt-get update`
- > `sudo apt-get upgrade`

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.

```
trgnn@ubuntu: ~  
gir1.2-webkit2-4.0 gvfs gvfs-backends gvfs-bin gvfs-common gvfs-daemons  
gvfs-fuse gvfs-libs libcups2 libcups2-cgi libcupsimage2 libcupsmime1  
libcupsppdc1 libfreerdp-cache1.1 libfreerdp-client1.1 libfreerdp-codec1.1  
libfreerdp-common1.1.0 libfreerdp-core1.1 libfreerdp-crypto1.1  
libfreerdp-gdi1.1 libfreerdp-locale1.1 libfreerdp-plugins-standard  
libfreerdp-primitives1.1 libfreerdp-utils1.1 libgail-common libgail18 libgd3  
libgraphite2-3 libgs9 libgs9-common libgtk2.0-0 libgtk2.0-bin  
libgtk2.0-common libjavascriptcoregtk-4.0-18 libllvm4.0 liblouis-data  
liblouis9 libpackagekit-glib2-16 libsmbclient libsnapd-glib1  
libsoup-gnome2.4-1 libsoup2.4-1 libwbclient0 libwebkit2gtk-4.0-37  
libwebkit2gtk-4.0-37-gtk2 libwinpr-crt0.1 libwinpr-dsparse0.1  
libwinpr-environment0.1 libwinpr-file0.1 libwinpr-handle0.1 libwinpr-heap0.1  
libwinpr-input0.1 libwinpr-interlocked0.1 libwinpr-library0.1  
libwinpr-path0.1 libwinpr-pool0.1 libwinpr-registry0.1 libwinpr-rpc0.1  
libwinpr-sspi0.1 libwinpr-synch0.1 libwinpr-sysinfo0.1 libwinpr-thread0.1  
libwinpr-utils0.1 libxfont1 linux-firmware linux-libc-dev logrotate  
python3-iwt python3-louis python3-update-manager samba-libs shotwell  
FloppyDisk common snapd snapd-login-service ubuntu-core-launcher  
ubuntu-drivers-common update-manager update-manager-core update-notifier  
update-notifier-common xul-ext-ubufox  
96 upgraded, 0 newly installed, 0 to remove and 3 not upgraded.  
Need to get 147 MB of archives.  
After this operation, 57.7 MB of additional disk space will be used.  
Do you want to continue? [Y/n]
```

```
trgnn@ubuntu: ~  
Setting up libfreerdp-gdi1.1:amd64 (1.1.0-git20140921.1.440916e+dfsg1-5ubuntu1.2  
) ...  
Setting up libfreerdp-plugins-standard:amd64 (1.1.0-git20140921.1.440916e+dfsg1-  
5ubuntu1.2) ...  
Setting up libgd3:amd64 (2.1.1-4ubuntu0.16.04.8) ...  
Setting up libgraphite2-3:amd64 (1.3.10-0ubuntu0.16.04.1) ...  
Setting up libllvm4.0:amd64 (1:4.0-1ubuntu1~16.04.2) ...  
Setting up libsnapd-glib1:amd64 (1.13-0ubuntu0.16.04.1) ...  
Setting up libxfont1:amd64 (1:1.5.1-1ubuntu0.16.04.2) ...  
Setting up linux-firmware (1.157.12) ...  
update-initramfs: Generating /boot/initrd.img-4.10.0-28-generic  
Setting up linux-libc-dev:amd64 (4.4.0-93.116) ...  
Setting up python3-jwt (1.3.0-1ubuntu0.1) ...  
Setting up shotwell-common (0.22.0+git20160108.r1.f2fb1f7-0ubuntu1.1) ...  
Setting up shotwell (0.22.0+git20160108.r1.f2fb1f7-0ubuntu1.1) ...  
Setting up snapd-login-service (1.13-0ubuntu0.16.04.1) ...  
Setting up xul-ext-ubufox (3.4-0ubuntu0.16.04.1) ...  
Setting up liblouis-data (2.6.4-2ubuntu0.1) ...  
Setting up liblouis9:amd64 (2.6.4-2ubuntu0.1) ...  
Setting up python3-louis (2.6.4-2ubuntu0.1) ...  
Setting up update-notifier (3.168.5) ...  
Setting up update-manager (1:16.04.9) ...  
Processing triggers for libc-bin (2.23-0ubuntu9) ...  
trgnn@ubuntu:~$ sudo apt-get install git
```

Install the prerequisites

```
> sudo apt-get install qt4-qmake libqt4-dev build-essential libboost-dev libboost-system-dev libboost-filesystem-dev libboost-program-options-dev libboost-thread-dev libssl-dev libdb++-dev libminiupnpc-dev
```

```
trgnn@ubuntu: ~  
trgnn@ubuntu:~$ git clone https://github.com/TrezarCoin/TrezarCoin.git  
Cloning into 'TrezarCoin'...  
remote: Counting objects: 19134, done.  
remote: Compressing objects: 100% (3/3), done.  
remote: Total 19134 (delta 0), reused 1 (delta 0), pack-reused 19131  
Receiving objects: 100% (19134/19134), 7.38 MiB | 1.95 MiB/s, done.  
Resolving deltas: 100% (14570/14570), done.  
Checking connectivity... done.  
trgnn@ubuntu:~$ sudo apt-get install qt4-qmake libqt4-dev build-essential libboost-dev libboost-system-dev libboost-filesystem-dev libboost-program-options-dev libboost-thread-dev libssl-dev libdb++-dev libminiupnpc-dev  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
build-essential is already the newest version (12.1ubuntu2).  
The following additional packages will be installed:  
  libboost-atomic1.58-dev libboost-atomic1.58.0 libboost-chrono1.58-dev  
  libboost-chrono1.58.0 libboost-date-time1.58-dev libboost-filesystem1.58-dev  
  libboost-program-options1.58-dev libboost-program-options1.58.0  
  libboost-serialization1.58-dev libboost-serialization1.58.0  
  libboost-system1.58-dev libboost-thread1.58-dev libboost-thread1.58.0  
  libboost1.58-dev libdb5.3++ libdb5.3++-dev libdb5.3-dev libdrm-dev  
  libgl1-mesa-dev libglu1-mesa-dev libpthread-stubs0-dev libqt4-designer  
  libqt4-dev-bin libqt4-help libqt4-opengl libqt4-opengl-dev libqt4-qt3support
```

2

Download, install and build the wallet from sources

- > sudo apt-get install git
- > git clone https://github.com/TrezarCoin/TrezarCoin.git
- > cd TrezarCoin
- > qmake «USE_UPNP=1»
- > make
- > cd
- > mkdir .trezarcoin
- > cd .trezarcoin

```
trgnn@ubuntu: ~/TrezarCoin
Project MESSAGE: Building with the IPv6 support
Project MESSAGE: Building with the Qt v4 support
Project MESSAGE: Building with the UPnP support
Project MESSAGE: Building with the IPv6 support
trgnn@ubuntu:~/TrezarCoin$ make
cd /home/trgnn/TrezarCoin/src/leveldb && CC=gcc CXX=g++ make OPT="-m64 -pipe -O2" libleveldb.a libmemenv.a
make[1]: Entering directory '/home/trgnn/TrezarCoin/src/leveldb'
g++ -I. -I./include -std=c++0x -fno-builtin-memcmp -pthread -DOS_LINUX -DLEVELDB_PLATFORM_POSIX -DLEVELDB_ATOMIC_PRESENT -m64 -pipe -O2 -c db/builder.cc -o db/builder.o
g++ -I. -I./include -std=c++0x -fno-builtin-memcmp -pthread -DOS_LINUX -DLEVELDB_PLATFORM_POSIX -DLEVELDB_ATOMIC_PRESENT -m64 -pipe -O2 -c db/c.cc -o db/c.o
g++ -I. -I./include -std=c++0x -fno-builtin-memcmp -pthread -DOS_LINUX -DLEVELDB_PLATFORM_POSIX -DLEVELDB_ATOMIC_PRESENT -m64 -pipe -O2 -c db/dbformat.cc -o db/dbformat.o
g++ -I. -I./include -std=c++0x -fno-builtin-memcmp -pthread -DOS_LINUX -DLEVELDB_PLATFORM_POSIX -DLEVELDB_ATOMIC_PRESENT -m64 -pipe -O2 -c db/db_impl.cc -o db/db_impl.o
g++ -I. -I./include -std=c++0x -fno-builtin-memcmp -pthread -DOS_LINUX -DLEVELDB_PLATFORM_POSIX -DLEVELDB_ATOMIC_PRESENT -m64 -pipe -O2 -c db/db_iter.cc -o db/db_iter.o
```

The build process will create a `.trezarcoin` hidden folder in your home directory. The wallet, the wallet configuration and the blockchain data will be stored here.

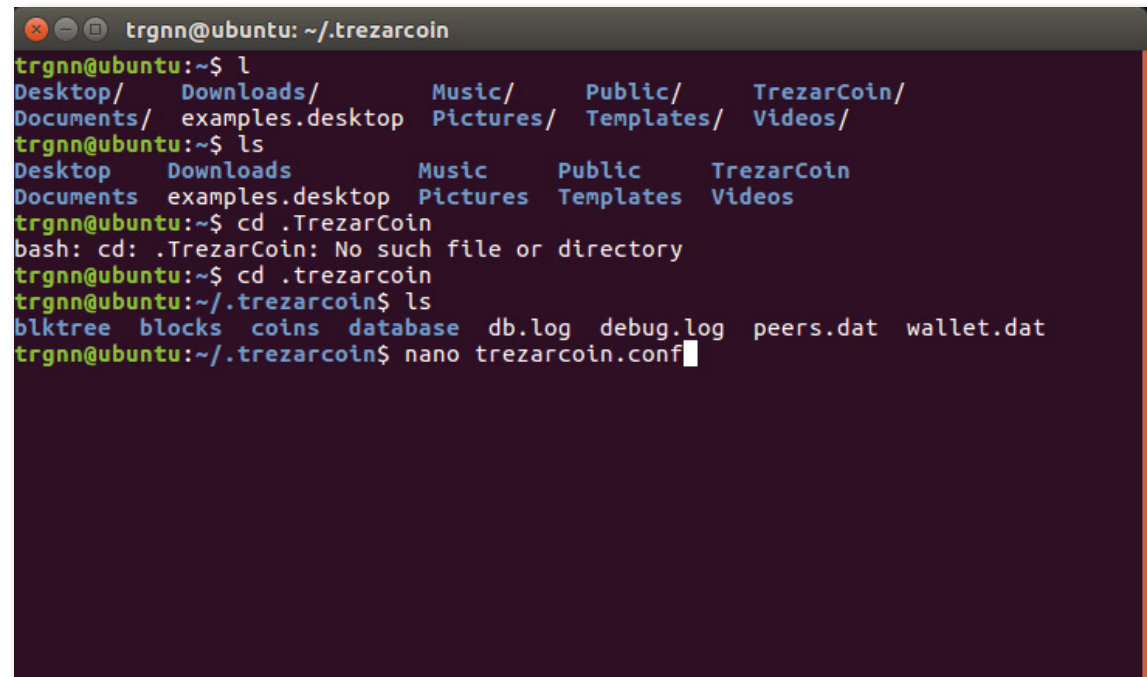
```
trgnn@ubuntu: ~/TrezarCoin
wpage.o build/csvmodelwriter.o build/crypter.o build/sendcoinsentry.o build/qvalidatedlineedit.o build/bitcoinunits.o build/qvaluecombobox.o build/askpassphrasedialog.o build/protocol.o build/notificator.o build/qtipcserver.o build/rpconsole.o build/blockexplorer.o build/noui.o build/kernel.o build/neoscript.o build/neoscript_asm.o build/scrypt-arm.o build/scrypt-x86.o build/scrypt-x86_64.o build/scrypt.o build/pbkdf2.o build/moc_bitcoingui.o build/moc_transactiontablemodel.o build/moc_adresstablemodel.o build/moc_optionsdialog.o build/moc_coincontroldialog.o build/moc_coincontroltreewidget.o build/moc_sendcoinsdialog.o build/moc_addressbookpage.o build/moc_signverifymessagedialog.o build/moc_aboutdialog.o build/moc_editaddressdialog.o build/moc_bitcoinaddressvalidator.o build/moc_clientmodel.o build/moc_guiutil.o build/moc_optionsmodel.o build/moc_monitoreddatamapper.o build/moc_trafficgraphwidget.o build/moc_transactiondesc.o build/mo_transactiondescdialog.o build/moc_bitcoinamountfield.o build/moc_transactionfilterproxy.o build/moc_transactionview.o build/moc_walletmodel.o build/moc_overviewpage.o build/moc_csvmodelwriter.o build/moc_sendcoinsentry.o build/moc_qvalidatedlineedit.o build/moc_qvaluecombobox.o build/moc_askpassphrasedialog.o build/moc_notificator.o build/moc_rpcconsole.o build/moc_blockexplorer.o build/qrc_bitcoin.o -L/usr/lib/x86_64-linux-gnu -lminiupnpc -Lsrc/leveldb -lleveldb -lmemenv -lrt -lssl -lcrypto -ldb_cxx -lboost_system -lboost_filesystem -lboost_program_options -lboost_thread -lpthread -lQtGui -lQtNetwork -lQtCore
trgnn@ubuntu:~/TrezarCoin$ ls
build  doc      Makefile      README      share  trezarcoin-qt
contrib LICENCE  qrc_bitcoin.cpp README.md  src      trezarcoin-qt.pro
trgnn@ubuntu:~/TrezarCoin$
```

A bit of configuration..

> `nano trezarcoin.conf` (this will open a text editor where we'll paste needed commands)

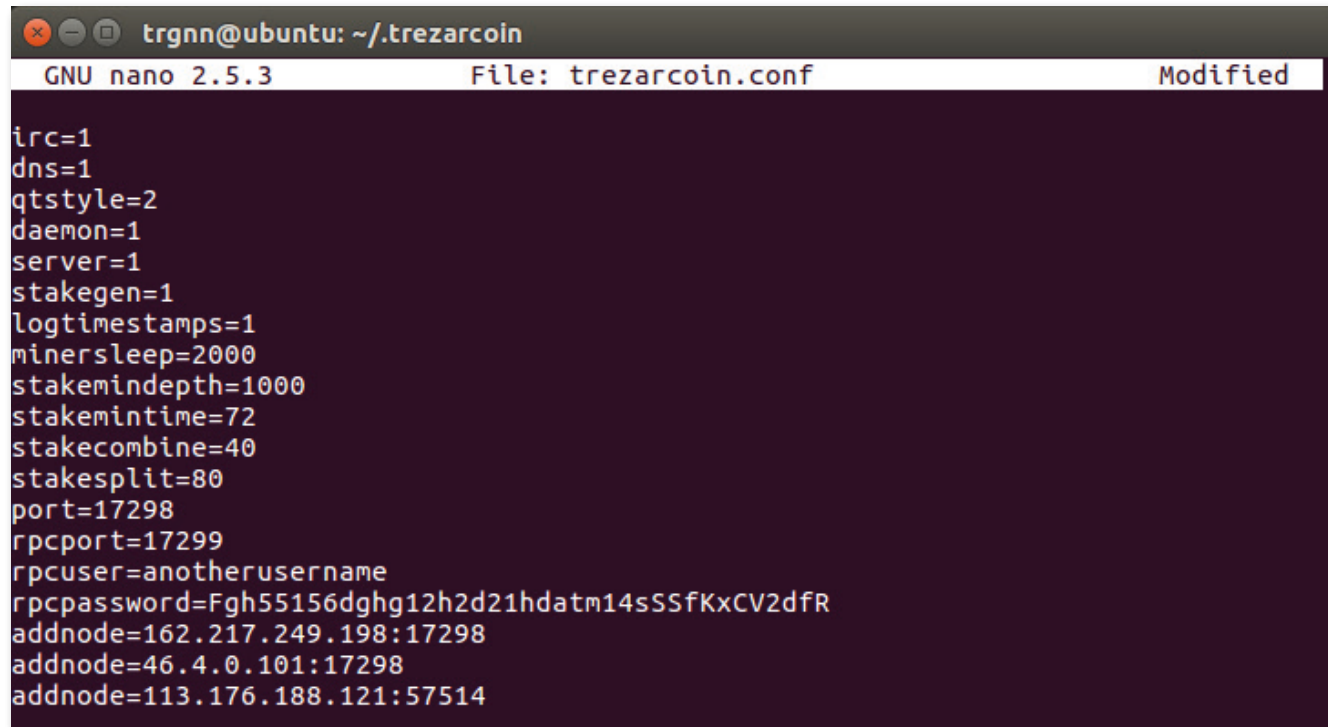
Copy and paste these, changing appropriate fields:

```
irc=1
dns=1
qtstyle=1
daemon=1
server=1
stakegen=1
logtimestamps=1
minersleep=2000
stakemindepth=1000
stakemintime=72
stakecombine=40
stakesplit=80
port=17298
rpcport=17299
rpcuser=YOUR_USERNAME
rpcpassword=YOUR_STRONG_PASSWORD
addnode=162.217.249.198:17298
addnode=46.4.0.101:17298
addnode=113.176.188.121:57514
```



```
trgnn@ubuntu: ~/.trezarcoin
trgnn@ubuntu:~$ l
Desktop/  Downloads/  Music/  Public/  TrezarCoin/
Documents/ examples.desktop Pictures/ Templates/ Videos/
trgnn@ubuntu:~$ ls
Desktop  Downloads  Music  Public  TrezarCoin
Documents examples.desktop Pictures Templates Videos
trgnn@ubuntu:~$ cd .TrezarCoin
bash: cd: .TrezarCoin: No such file or directory
trgnn@ubuntu:~$ cd .trezarcoin
trgnn@ubuntu:~/.trezarcoin$ ls
blktree  blocks  coins  database  db.log  debug.log  peers.dat  wallet.dat
trgnn@ubuntu:~/.trezarcoin$ nano trezarcoin.conf
```

To exit NANO text editor and save changes press `Ctrl+X` and confirm changes.



```
trggn@ubuntu: ~/.trezarcoin
GNU nano 2.5.3 File: trezarcoin.conf Modified
irc=1
dns=1
qtstyle=2
daemon=1
server=1
stakegen=1
logtimestamps=1
minerssleep=2000
stakeinddepth=1000
stakemintime=72
stakecombine=40
stakesplit=80
port=17298
rpcport=17299
rpcuser=anotherusername
rpcpassword=Fgh55156dghg12h2d21hdatm14sSSfKxCV2dfR
addnode=162.217.249.198:17298
addnode=46.4.0.101:17298
addnode=113.176.188.121:57514
```

Your configuration file must look like this.

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

* Here's a list of nodes you might want to add to your trezarcoin.conf file to improve your wallet connectivity to the network:

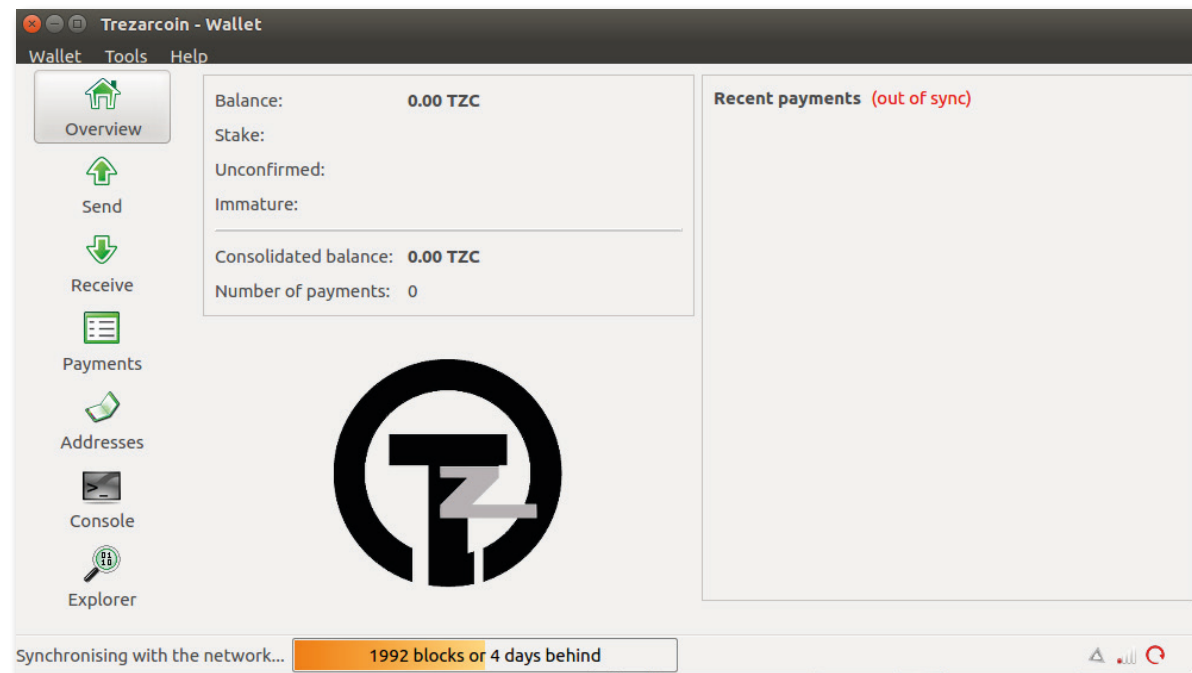
```
addnode=185.213.210.221:53740
addnode=73.237.102.32:59777
addnode=47.208.105.74:11315
addnode=5.240.11.137:64425
addnode=176.159.112.85:59237
addnode=188.242.118.114:37285
addnode=5.44.169.46:49291
addnode=162.217.249.198:55383
addnode=116.100.160.65:64046
addnode=14.226.75.73:53267
addnode=80.110.114.112:7677
addnode=68.111.254.128:17298
addnode=93.115.61.74:50791
addnode=212.143.244.194:57699
addnode=91.202.46.63:57345
addnode=78.180.172.159:57469
addnode=178.165.68.219:17298
addnode=212.112.153.139:51318
addnode=213.27.32.68:61600
addnode=185.39.74.210:59297
addnode=109.232.227.133:63397
addnode=116.105.206.34:57699
addnode=188.243.232.224:62745
addnode=37.219.18.171:14620
addnode=178.188.184.241:60025
addnode=185.137.97.14:56448
addnode=90.20.156.87:63982
addnode=188.19.232.127:50003
addnode=75.109.71.168:50915
addnode=89.141.164.216:61425
addnode=201.1.80.41:49578
addnode=87.105.139.164:63662
```

```
addnode=180.211.175.181:17298
addnode=109.189.50.14:57087
addnode=64.199.25.9:54382
addnode=103.73.92.65:63184
addnode=171.6.242.22:64538
addnode=176.100.61.37:52541
addnode=110.20.75.83:58339
addnode=37.187.146.34:17298
addnode=178.203.233.245:1276
addnode=83.30.223.115:17298
addnode=85.93.59.50:2218
addnode=2.37.162.168:17298
addnode=178.251.219.166:63567
addnode=91.126.237.243:17298
addnode=84.234.52.190:42892
addnode=213.149.51.206:4081
addnode=217.129.212.100:50084
addnode=93.34.239.151:64047
addnode=94.54.4.218:4872
addnode=49.35.21.78:52955
addnode=85.140.113.81:64903
addnode=109.64.60.7:53070
addnode=ec2-35-182-231-94.ca-central-1.compute.amazonaws.com:17298
addnode=ec2-107-20-130-221.compute-1.amazonaws.com:17298
addnode=ec2-34-213-225-118.us-west-2.compute.amazonaws.com:17298
addnode=ec2-52-59-255-239.eu-central-1.compute.amazonaws.com:17298
addnode=ec2-54-252-216-76.ap-southeast-2.compute.amazonaws.com:17298
```

Launch the wallet once to check your installation.

```
> cd TrezarCoin  
> ./trezarcoin-qt
```

That's it! :) Your local Ubuntu is ready, this wallet will be used to send and receive coins. Now we'll set up our VPS PoS wallet. **To be able to stake, our PoS wallet should never send coins.**



The wallet should synchronize with the network. It may take a few minutes.

3

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.

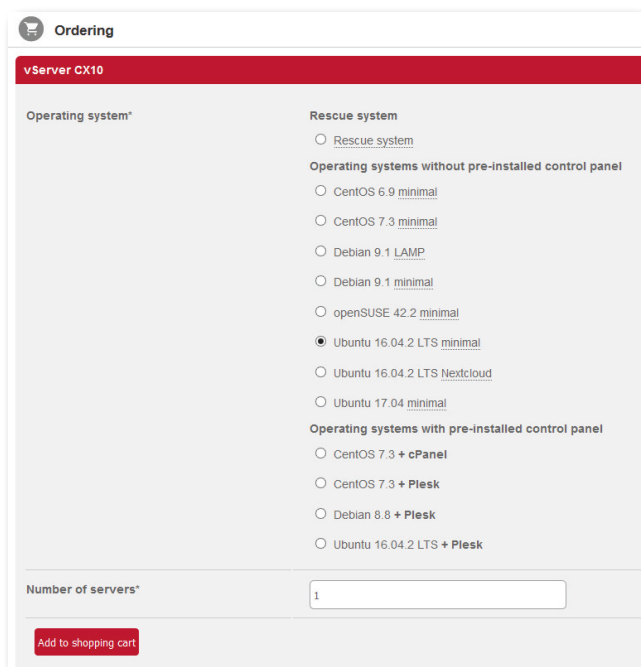
Other different versions of Linux might require some other commands or syntax which won't be covered in this guide.

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.

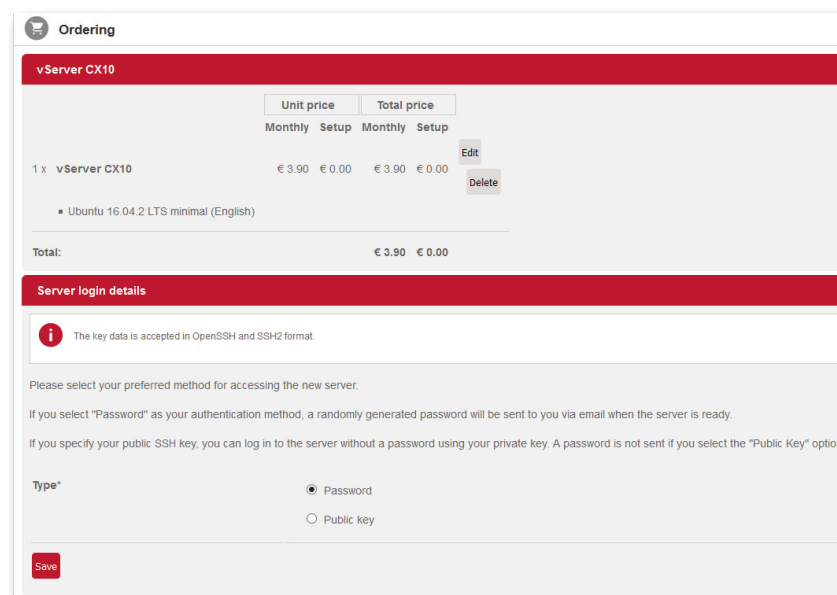
To compile the wallet you need 2GB of ram or if you have a 1GB RAM server you need to create a Swap file of 1GB.

Detailed instructions on how to do it are provided further on.



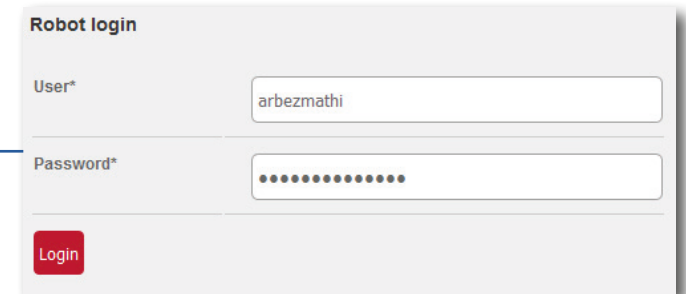
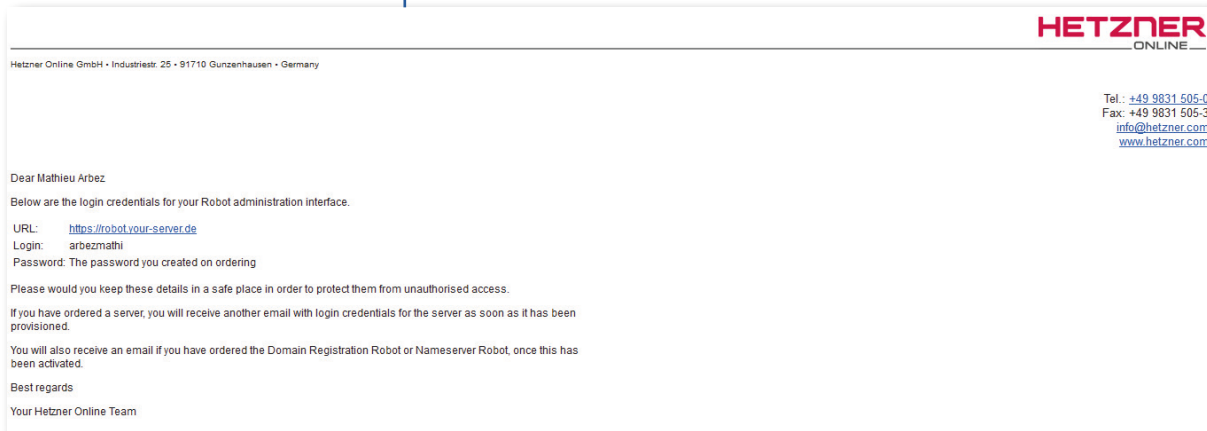
The screenshot shows the 'Ordering' page for a 'vServer CX10'. Under the 'Operating system*' section, there are two main categories: 'Rescue system' and 'Operating systems without pre-installed control panel'. The 'Rescue system' option is 'Rescue system'. The 'Operating systems without pre-installed control panel' section lists several options, with 'Ubuntu 16.04.2 LTS minimal' selected. Below this, there is a section for 'Operating systems with pre-installed control panel' including 'CentOS 7.3 + cPanel', 'CentOS 7.3 + Plesk', 'Debian 8.8 + Plesk', and 'Ubuntu 16.04.2 LTS + Plesk'. At the bottom, there is a 'Number of servers*' field set to '1' and an 'Add to shopping cart' button.

Choose the password option here



The screenshot shows the 'Server login details' section of the ordering page. It includes a table with columns for 'Unit price' and 'Total price', each with sub-columns for 'Monthly' and 'Setup'. The table shows '1 x vServer CX10' with a unit price of € 3.90 and a total price of € 3.90. Below the table, there is a 'Total:' row showing € 3.90. The 'Server login details' section has an information icon and text: 'The key data is accepted in OpenSSH and SSH2 format.' It asks the user to select their preferred method for accessing the new server. It states: 'Please select your preferred method for accessing the new server. If you select "Password" as your authentication method, a randomly generated password will be sent to you via email when the server is ready. If you specify your public SSH key, you can log in to the server without a password using your private key. A password is not sent if you select the "Public Key" option.' The 'Type*' section has two radio buttons: 'Password' (selected) and 'Public key'. There is a 'Save' button at the bottom.

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



4

Download PuTTY here <http://www.putty.org/> and extract the .tar file in your home directory.

Install PuTTY with:

```
> cd
> sudo apt-get install libgtk-3-dev
> cd putty
> make
> sudo make install
```

Type <putty> to run it, the guy will appear. 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.

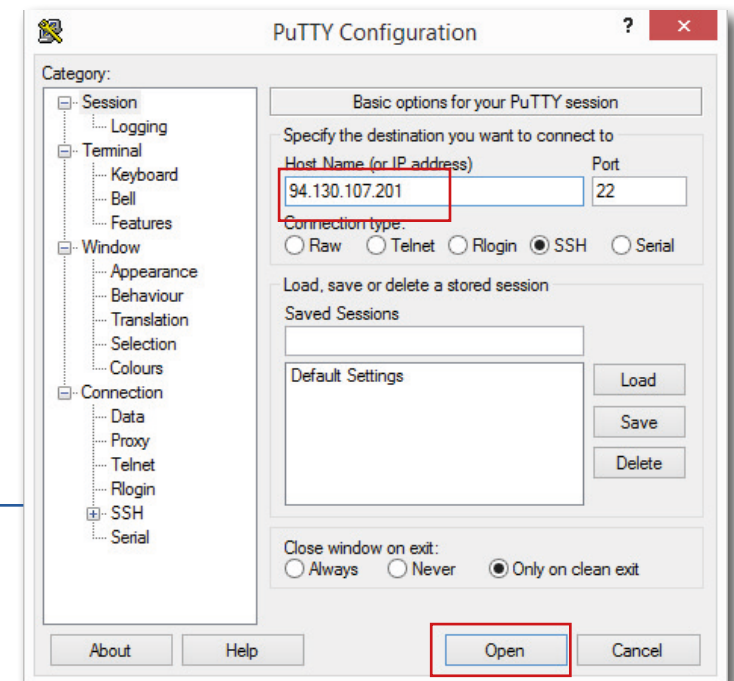
Login Details

The Linux installation for your server CX10 #732477 (94.130.107.201) is complete. You can now access the server via SSH2 using the following details:

IPv4 Address: 94.130.107.201
IPv6 Address: 2a01:4f8:c0c:3555::2
Username: root
Password: ██████████

Host key:
3a:e8:2d:eb:a8:bb:a9:ae:f7:f5:8c:b2:38:e2:cf:4d (RSA 2048)
a9:13:5e:ea:6a:5c:d0:b5:d8:54:77:44:f6:74:58:8f (DSA 1024)
58:5a:b2:ae:df:76:ef:96:94:83:2d:21:43:1b:98:ab (ECDSA 256)
e9:e1:33:dd:cb:ec:4c:46:fd:b8:b1:74:76:0f:7f:af (ED25519 256)

For your own security, we advise you to change your login credentials as soon as possible. Please keep your details in a safe place in order to protect them from unauthorised access.



5

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.

Login Details

The Linux installation for your server CX10 #732477 (94.130.107.201) is complete. You can now access the server via SSH2 using the following details:

IPv4 Address: 94.130.107.201

IPv6 Address: 2a01:4f8:c0c:3555::2

Username: root

Password: XXXXXXXXXX

Host key:
3a:e8:2d:eb:a8:bb:a9:ae:f7:f5:8c:b2:38:e2:cf:4d (RSA 2048)
a9:13:5e:ea:6a:5c:d0:b5:d8:54:77:44:f6:74:58:8f (DSA 1024)
58:5a:b2:ae:df:76:ef:96:94:83:2d:21:43:1b:98:ab (ECDSA 256)
e9:e1:33:dd:cc:ec:4c:46:fd:b8:b1:74:76:0f:7f:af (ED25519 256)

For your own security, we advise you to change your login credentials as soon as possible. Please keep your details in a safe place in order to protect them from unauthorised access.

```
> apt-get install qt4-qmake libqt4-qmake build-essential libboost-dev libboost-system-dev libboost-filesystem-dev libboost-program-options-dev libboost-thread-dev libssl-dev libdb++-dev libminiupnpc-dev
```

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

```
> sudo apt-get install git
> git clone https://github.com/TrezarCoin/TrezarCoin.git
> cd TrezarCoin/src
> make -f makefile.unix
> mv trezarcoind ~/
> cd
> rm -rf TrezarCoin
> mkdir .trezarcoin
> cd .trezarcoin
```

```
root@Ubuntu-1604-xenial-64-minimal:~# login as root
root@94.130.107.201's password:
Welcome to Ubuntu 16.04.3 LTS (GNU/Linux 4.10.0-33-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage
last login: Thu Sep 7 09:47:04 2017 from 77.196.111.82
root@ubuntu:~# sudo apt-get install git
```

```
root@Ubuntu-1604-xenial-64-minimal:~# login as root
root@94.130.107.201's password:
Welcome to Ubuntu 16.04.3 LTS (GNU/Linux 4.10.0-33-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage
last login: Thu Sep 7 09:47:24 2017 from 77.196.111.82
root@ubuntu:~# sudo apt-get install qt4-qmake libqt4-qmake build-essential libboost-dev libboost-system-dev libboost-filesystem-dev libboost-program-options-dev libboost-thread-dev libssl-dev libdb++-dev libminiupnpc-dev
Reading package lists... Done
Building dependency tree
Reading state information... Done
build-essential is already the newest version (12.0ubuntu2).
libboost-dev is already the newest version (1.58.0.ubuntu1).
libboost-program-options-dev is already the newest version (1.58.0.ubuntu1).
libqt4-qmake is already the newest version (4:4.8.4ubuntu2).
qt4-qmake is already the newest version (4:4.8.4ubuntu2).
libboost-system-dev is already the newest version (1.58.0.ubuntu1).
libboost-filesystem-dev is already the newest version (1.58.0.ubuntu1).
libboost-program-options-dev is already the newest version (1.58.0.ubuntu1).
libboost-thread-dev is already the newest version (1.58.0.ubuntu1).
libssl-dev is already the newest version (1.0.2g-1ubuntu3).
libdb++-dev is already the newest version (1.0.2g-1ubuntu3).
libminiupnpc-dev is already the newest version (1.0.2g-1ubuntu3).
The following packages were automatically installed and are no longer required:
libbz2-dev libbz2-1.0
Use 'apt autoremove' to remove them.
The following additional packages will be installed:
libbz2-dev libbz2-1.0
Suggested packages:
bzr-3.0
The following packages will be REMOVED:
libbz2-dev libbz2-1.0
libbz2+dev libbz2-dev
The following NEW packages will be installed:
libbz2-dev libbz2-1.0
0 upgraded, 2 newly installed, 2 to remove and 0 not upgraded.
Need to get 0 B of archives.
After this operation, 1.57 kB disk space will be freed.
Do you want to continue? [Y/n]
```

```
root@Ubuntu-1604-xenial-64-minimal:~/TrezarCoin/src#
git --help
git clone https://github.com/TrezarCoin/TrezarCoin.git
cd TrezarCoin/src
make -f makefile.unix
mv trezarcoind ~/
cd
rm -rf TrezarCoin
mkdir .trezarcoin
cd .trezarcoin
```

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

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 1G /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

A bit of configuration..

> nano trezarcoin.conf (this will open a text editor where we'll paste needed commands)

Copy and paste these, changing appropriate fields:

```
irc=1
dns=1
daemon=1
server=1
stakegen=1
logtimestamps=1
minersleep=2000
stakegen=1
stakemindepth=1000
stakemintime=72
stakecombine=40
stakesplit=80
port=17298
rpcport=17299
rpcuser=YOUR_USERNAME
rpcpassword=YOUR_STRONG_PASSWORD
addnode=162.217.249.198:17298
addnode=46.4.0.101:17298
```

```
root@Ubuntu-1604-xenial-64-minimal: ~/trezarcoin
root@Ubuntu-1604-xenial-64-minimal: # cd trezarcoin
root@Ubuntu-1604-xenial-64-minimal: # ./trezarcoin # ls
libtree_b libtree_coin database_db_log debug_log peers.dat trezarcoin.conf wallet.dat
root@Ubuntu-1604-xenial-64-minimal: # nano trezarcoin.conf
GNU nano 2.5.3 File: trezarcoin.conf
addnode=97.105.133.164:17298
addnode=150.117.101.117:17298
addnode=169.159.24.142:17298
addnode=64.185.25.215:17298
addnode=162.217.249.198:17298
addnode=171.6.242.22:17298
addnode=173.100.216.27:17298
addnode=110.206.75.82:17298
addnode=97.101.146.24:17298
addnode=170.203.233.245:17298
addnode=83.30.223.143:17298
addnode=83.39.50:17298
addnode=27.180.168:17298
addnode=176.255.138.65:17298
addnode=91.125.237.243:17298
addnode=94.234.82.189:17298
addnode=213.143.51.202:17298
addnode=217.122.142.180:17298
addnode=83.34.233.151:17298
addnode=94.54.4.218:17298
addnode=83.35.21.70:17298
addnode=89.140.113.81:17298
addnode=169.144.99.175:17298
addnode=2.39.182.231-94.ca-central-1.compute.amazonaws.com:17298
addnode=2.32.259.239.eu-central-1.compute.amazonaws.com:17298
```

```
root@Ubuntu-1604-xenial-64-minimal: # ./trezarcoin
libtree_b libtree_coin database_db_log debug_log peers.dat trezarcoin.conf wallet.dat
root@Ubuntu-1604-xenial-64-minimal: # ./trezarcoin
trezarcoin: rpcuser=YOUR_USERNAME
trezarcoin: rpcpassword=YOUR_STRONG_PASSWORD
trezarcoin: Failed to listen on any port. Use '-listen0' if you want this.
root@Ubuntu-1604-xenial-64-minimal: # ./trezarcoin stop
trezarcoin server stopping
root@Ubuntu-1604-xenial-64-minimal: # ./trezarcoin
root@Ubuntu-1604-xenial-64-minimal: # ./trezarcoin listaccounts
root@Ubuntu-1604-xenial-64-minimal: # ./trezarcoin getaccountaddress ""
root@Ubuntu-1604-xenial-64-minimal: # ./trezarcoin getaccountaddress ""
root@Ubuntu-1604-xenial-64-minimal: # ./trezarcoin getaccountaddress ""
root@Ubuntu-1604-xenial-64-minimal: # ./trezarcoin listaccounts
root@Ubuntu-1604-xenial-64-minimal: # ./trezarcoin getaccountaddress "stake"
root@Ubuntu-1604-xenial-64-minimal: # ./trezarcoin listaccounts
root@Ubuntu-1604-xenial-64-minimal: # ./trezarcoin
root@Ubuntu-1604-xenial-64-minimal: # ./trezarcoin
```

To exit NANO text editor and save changes press Ctrl+X and confirm changes.

List of nodes you can add to improve your connectivity to the network:

addnode=185.213.210.221:53740
addnode=73.237.102.32:59777
addnode=47.208.105.74:11315
addnode=5.240.11.137:64425
addnode=176.159.112.85:59237
addnode=188.242.118.114:37285
addnode=5.44.169.46:49291
addnode=162.217.249.198:55383
addnode=116.100.160.65:64046
addnode=14.226.75.73:53267
addnode=80.110.114.112:7677
addnode=68.111.254.128:17298
addnode=93.115.61.74:50791
addnode=212.143.244.194:57699
addnode=91.202.46.63:57345
addnode=78.180.172.159:57469
addnode=178.165.68.219:17298
addnode=212.112.153.139:51318
addnode=213.27.32.68:61600
addnode=185.39.74.210:59297
addnode=109.232.227.133:63397
addnode=116.105.206.34:57699
addnode=188.243.232.224:62745
addnode=37.219.18.171:14620
addnode=178.188.184.241:60025
addnode=185.137.97.14:56448
addnode=90.20.156.87:63982
addnode=188.19.232.127:50003
addnode=75.109.71.168:50915
addnode=89.141.164.216:61425
addnode=201.1.80.41:49578
addnode=87.105.139.164:63662

addnode=180.211.175.181:17298
addnode=109.189.50.14:57087
addnode=64.199.25.9:54382
addnode=103.73.92.65:63184
addnode=171.6.242.22:64538
addnode=176.100.61.37:52541
addnode=110.20.75.83:58339
addnode=37.187.146.34:17298
addnode=178.203.233.245:1276
addnode=83.30.223.115:17298
addnode=85.93.59.50:2218
addnode=2.37.162.168:17298
addnode=178.251.219.166:63567
addnode=91.126.237.243:17298
addnode=84.234.52.190:42892
addnode=213.149.51.206:4081
addnode=217.129.212.100:50084
addnode=93.34.239.151:64047
addnode=94.54.4.218:4872
addnode=49.35.21.78:52955
addnode=85.140.113.81:64903
addnode=109.64.60.7:53070
addnode=ec2-35-182-231-94.ca-central-1.compute.amazonaws.com:17298
addnode=ec2-107-20-130-221.compute-1.amazonaws.com:17298
addnode=ec2-34-213-225-118.us-west-2.compute.amazonaws.com:17298
addnode=ec2-52-59-255-239.eu-central-1.compute.amazonaws.com:17298
addnode=ec2-54-252-216-76.ap-southeast-2.compute.amazonaws.com:17298

7

```
root@Ubuntu-1604-xenial-64-minimal: ~
bitcoinnpc.cpp db.h keystore.cpp makefile.osx net.cpp rpcblockchain.cpp script.cpp txdb.h wallet.h
bitcoinnpc.h init.cpp keystore.h makefile.unix net.h rpcdump.cpp script.h ui_interface.h
checkpoints.cpp init.h leveldb miner.cpp noui.cpp rpoing.cpp script-x86_64.S uint256.h
root@Ubuntu-1604-xenial-64-minimal ~/TrezarCoin/src # cd
root@Ubuntu-1604-xenial-64-minimal # ls
diamond-cli diamond.conf diamondd diamond-tx tap TrezarCoin trezarcoind unomp
root@Ubuntu-1604-xenial-64-minimal # ./trezarcoind
^C
root@Ubuntu-1604-xenial-64-minimal #
root@Ubuntu-1604-xenial-64-minimal # cd ./trezarcoind
root@Ubuntu-1604-xenial-64-minimal ~/./trezarcoind # ls
blktree blocks coins database db.log debug.log peers.dat trezarcoin.conf wallet.dat
root@Ubuntu-1604-xenial-64-minimal ~/./trezarcoind # nano trezarcoin.conf
root@Ubuntu-1604-xenial-64-minimal ~/./trezarcoind # cd
root@Ubuntu-1604-xenial-64-minimal # cd TrezarCoin
root@Ubuntu-1604-xenial-64-minimal ~/TrezarCoin # cd
root@Ubuntu-1604-xenial-64-minimal # ls
diamond-cli diamond.conf diamondd diamond-tx tap TrezarCoin trezarcoind unomp
root@Ubuntu-1604-xenial-64-minimal # ./trezarcoind
root@Ubuntu-1604-xenial-64-minimal # ./trezarcoind
Trezarcoin: Unable to bind to 0.0.0.0:17298 on this computer. Trezarcoin is probably already running.
Trezarcoin: Failed to listen on any port. Use -listen=0 if you want this.
root@Ubuntu-1604-xenial-64-minimal # ./trezarcoind stop
Trezarcoin server stopping
root@Ubuntu-1604-xenial-64-minimal # ./trezarcoind
root@Ubuntu-1604-xenial-64-minimal # ./trezarcoind listaccounts
{
  "" : 0.00000000
}
root@Ubuntu-1604-xenial-64-minimal # ./trezarcoind getaccountaddress ""
TqMZH14S9k3YHdH4Z2Ecv54zN2frFJale0
root@Ubuntu-1604-xenial-64-minimal # ./trezarcoind getaccountaddress ""
TqMZH14S9k3YHdH4Z2Ecv54zN2frFJale0
root@Ubuntu-1604-xenial-64-minimal # ./trezarcoind listaccounts
{
  "" : 0.00000000
}
root@Ubuntu-1604-xenial-64-minimal # ./trezarcoind getaccountaddress "stake"
Tpxr1KkMhrNeskT7HZvXNUJat0QzozsD8
root@Ubuntu-1604-xenial-64-minimal # ./trezarcoind listaccounts
{
  "" : 0.00000000,
  "stake" : 0.00000000
}
root@Ubuntu-1604-xenial-64-minimal # rm -rf TrezarCoin
root@Ubuntu-1604-xenial-64-minimal # ls
diamond-cli diamond.conf diamondd diamond-tx tap trezarcoind unomp
root@Ubuntu-1604-xenial-64-minimal # ./trezarcoind listaccounts
{
  "" : 0.00000000,
  "stake" : 0.00000000
}
```

We can now start the PoS wallet on a remote server by executing this command:

> ./trezarcoind

To get your default unlabelled wallet address just execute > ./trezarcoind getaccountaddress «»

To get a labelled wallet address just execute > ./trezarcoind getaccountaddress <label>

To see the list of addresses and their balances just execute > ./trezarcoind listaccounts

To stop the wallet just execute > ./trezarcoind stop

Happy staking :)