VITAE
Hot & Cold Masternode Guide
AUGUST 2ND 2018
Overview

While it is possible to set up a "hot node" in which the masternode stores the 20,000 VITAE collateral, it is more secure and safer to set up a "cold node" in which the masternode runs on a VPS (Virtual Private Server) and the coins stay local in your Windows/Linux wallet. In this way, the IP address associated with the Masternode (which is clearly visible by anyone) is not the IP address where the coins are kept, making a more secure set-up. This type of set-up also allows for the controller (local) wallet to be shut down without affecting the masternode.

Prerequisites

1. VPS: A Virtual Private Server with a dedicated IP address is required. These usually cost around $5 USD per month for a Linux VPS, and around $20-30 per month for a Windows VPS. This guide will only cover how to set up a Linux VPS. You can rent a VPS from one of these companies or another of your choose:

● Vultr

● Time4VPS

● Hetzner

● Digital Ocean

2. 20001 VITAE Collateral: The collateral requirement to set up a VITAE masternode is 20000 coins, but there will also be a small network transaction fee when sending the coins, so it is recommended to have one extra coin to cover that fee. Caution: Be sure zVit Autominting is disabled in settings (enablezeromint=0 in vitae.conf) before transferring tokens to your wallet! You may also want to temporarily disable staking so it does not interfere with the set-up process (staking=0 in vitae.conf).

3. A local wallet: This wallet can be mac, windows or linux, and this is where your 20000 VITAE will be kept. Please be sure to disable z-Vit auto-minting in your settings before depositing tokens. Your Notepad (Windows) or TextEdit (Mac) application should be open and ready for keeping notes to copy and paste from.

4. An SSH client to access your VPS: Putty is a popular choice for windows (link), Terminal application for Mac or using the "View Console" command on Vultr's website.

https://the.earth.li/~sgtatham/putty/latest/w64/putty-64bit-0.70-installer.msil

1. Desktop Wallet Installation and Configuration

This is the wallet where the MasterNode collateral of 20000 VITAE coins will have to be transferred and stored. After the setup is complete, this wallet doesn't have to run 24/7 and will be receiving the rewards via the blockchain.

a) Download the latest VITAE Desktop wallet for your platform at http://vitaetoken.io/wallet/

b) Install the wallet to the default location.

You may receive a developer warning, this is normal. Windows users click OK. Mac users will need to follow the directions and open the System Preferences: Security panel to allow it to open.

c) Open the newly installed Vitae wallet and let it run.

Before transferring tokens to your wallet, there are a few things that need to be done first: Go to Tools -> Open Wallet Configuration File and disable zVit Autominting and temporarily disable Staking so it does not interfere with the setup process.

• Enter the following commands into the Configuration file:

enablezeromint=0

staking=0

d) Encrypt your wallet:

• Go to Settings: Encrypt Wallet. Choose a passphrase (recommended no less than 8 words). Copy this passphrase on paper to a safe place.

• Windows users: the wallet will quit after encryption, re-open the wallet. Mac users: Quit the wallet and restart. Then Allow the wallet to fully Sync to the blockchain (This could take several minutes depending on your connection speed).

e) Create a new address for your master node wallet:

• Go to Tools: Debug Console and type the following commands:

getnewaddress alias

Change alias to any name of your choice…like MN01.

f) Create a masternode private key

masternode genkey

(copy this output to your Notepad or TextEdit)

Caution: Do not share this private key with anyone you do not trust!

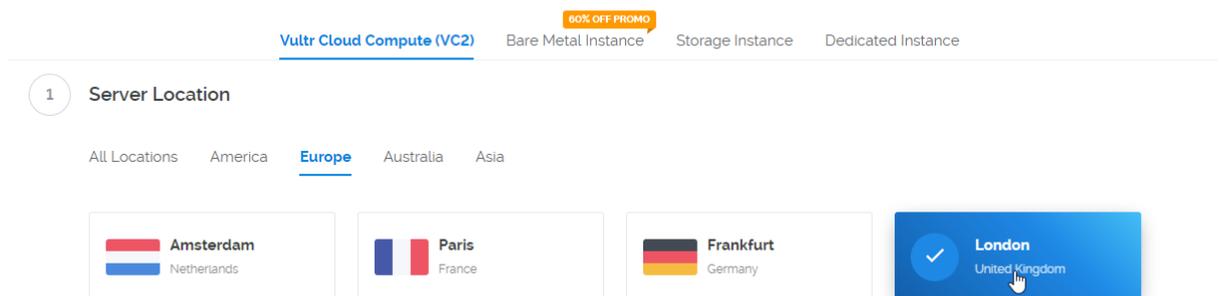**g) Send masternode collateral to the newly generated address**

Send exactly 20000 VITAE to the MN01 address. Ensure the transaction is fully confirmed on the blockchain before proceeding to the next step by checking the 'Transactions History' for a green check mark.

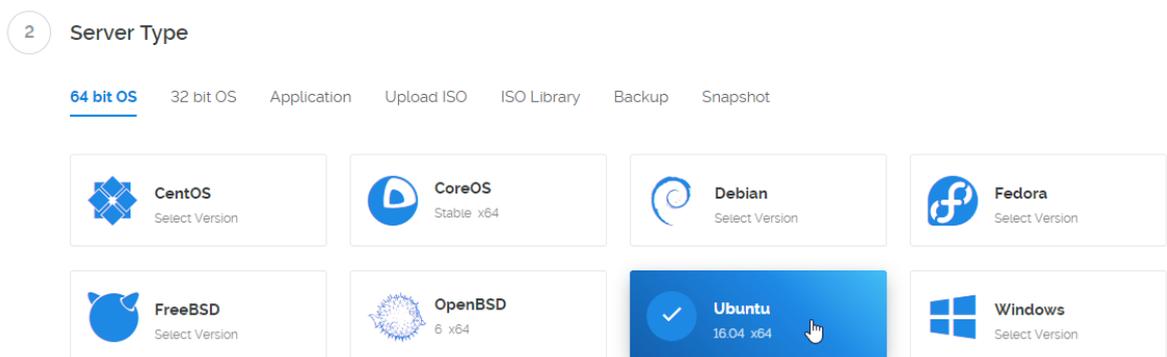# 2. How to Deploy the VPS server

a) Register at https://www.vultr.com/ Or https://www.vultr.com/?ref=7462840 (Sobogunkenny's referral link, thanks).

➢ You need to add some funds to start with. At least 10$ or more

➢ Press "Servers" and then press "+"

➢ Please not that Vultr has a default limit of 5 servers which can be upgraded for free with the Vultr support team.

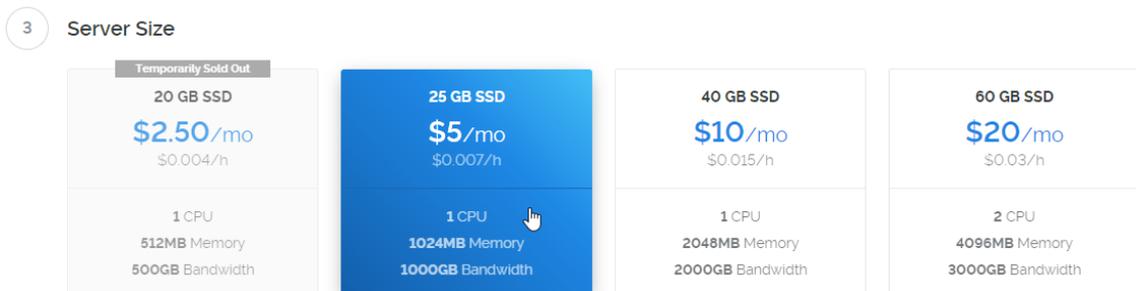➢ Pick a server location (preferably nearest location to you)

Deploy New Instance

Vultr Cloud Compute (VC2)	Bare Metal Instance	Storage Instance	Dedicated Instance

1 Server Location

All Locations   America   **Europe**   Australia   Asia

Amsterdam Netherlands	Paris France	Frankfurt Germany	✓ London United Kingdom

➢ Next select ''Server type'': Choose Ubuntu 16.04 x64

2 Server Type

64 bit OS   32 bit OS   Application   Upload ISO   ISO Library   Backup   Snapshot

CentOS Select Version	CoreOS Stable x64	Debian Select Version	Fedora Select Version
FreeBSD Select Version	OpenBSD 6 x64	✓ Ubuntu 16.04 x64	Windows Select Version

➢ Select Server Size: 25 GB SSD 5$/mo 1cpu 1024mb 1000gb (will be more than enough)

3 Server Size

| 20 GB SSD $2.50/mo $0.004/h *Temporarily Sold Out* 1 CPU 512MB Memory 500GB Bandwidth	25 GB SSD $5/mo $0.007/h 1 CPU 1024MB Memory 1000GB Bandwidth	40 GB SSD $10/mo $0.015/h 1 CPU 2048MB Memory 2000GB Bandwidth	60 GB SSD $20/mo $0.03/h 2 CPU 4096MB Memory 3000GB Bandwidth

➢ Enable IPv6,

➢ Auto Backups and Private networking not needed

➢ Enable DDOS Protection or not is your decision (if DDOS attack occurs your server will continue work while others are down. It means you will get more profit because other masternodes are down)
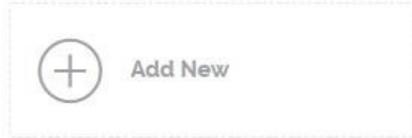
➢ Startup Script and SSH Keys don't touch
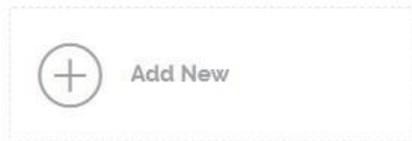
➢ Server hostname & label: Give name to your server (ex: VitaeMN01)

➢ Press ''Deploy Now"
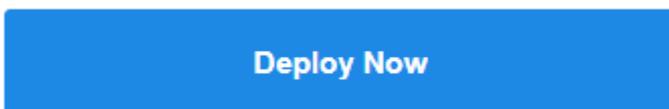
b) Once install done you'll get confirmation email. It'll take up to 5 mins.

c) Press your server name. You'll see your IP, username and password*

*to see your password press "EYE" icon

d) Copy IP in a notepad to be use later for masternode.conf file.

3. Configuring the VPS Server

a) Copy your VPS IP and open PUTTY, (Terminal or Vultr console on Mac)

b) Paste IP to PUTTY "Host name"

● If you want to save this IP address to Putty, give it a name in the" Saved Sessions"
Box and click "Save".
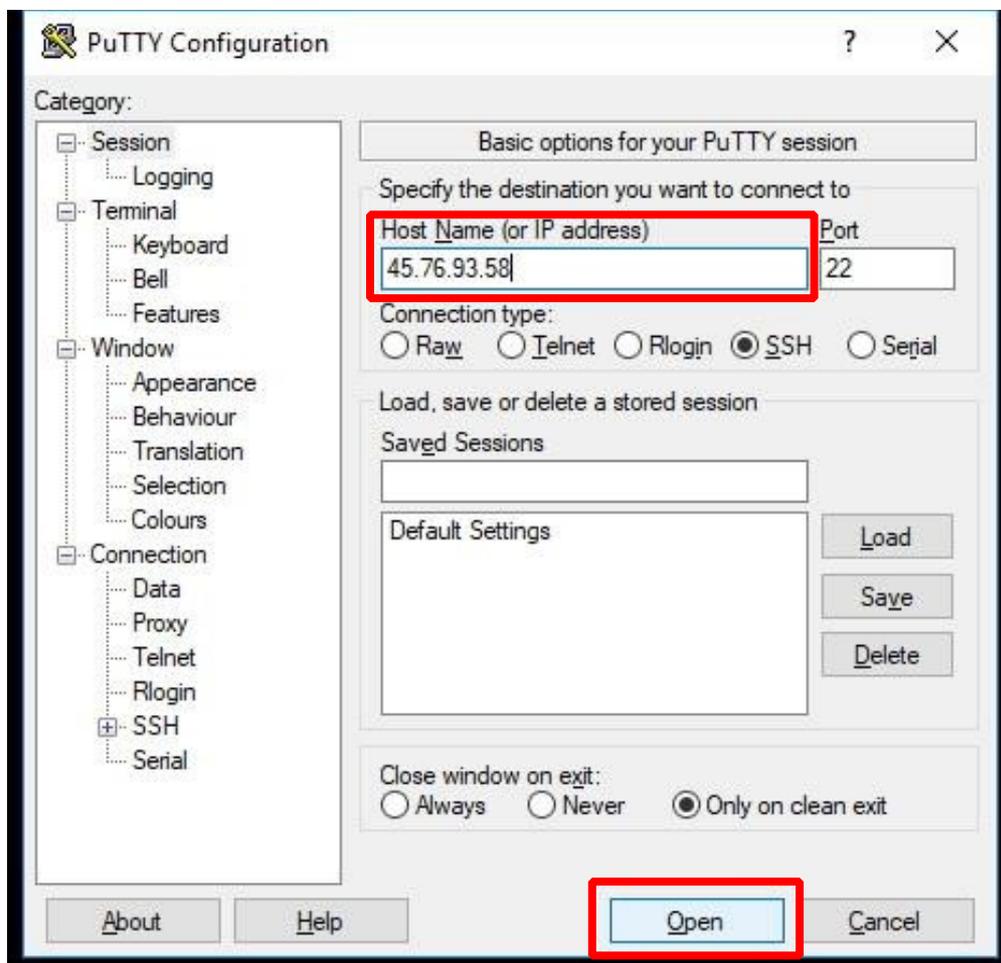
Then press OPEN and answer "Yes" to the message that pops up.

• Login as: root

• Password: (copy from vultr server screen in browser)

• To paste your password just click right mouse button, you will not see anything - it's normal, press ENTER.

• It is absolutely normal that password is invisible. Cursor will not move.

• Always use right button click for paste text in PUTTY from WINDOWS

c) Install required Dependencies

Now that we are logged in to the root command prompt, copy and paste the following highlighted commands one after another and whenever prompted for a Y/N or enter to continue, Click 'Y' and enter to continue the installation.

sudo apt-get update

(prompt answers Done)

sudo apt-get upgrade

(prompt, answer Y then enter)

sudo apt-get install wget nano unrar unzip libboost-all-dev libevent-dev software-properties-common

(prompt, answer Y then enter)

sudo add-apt-repository ppa:bitcoin/bitcoin

(prompt, hit enter)

sudo apt-get update

(prompt answers Done)

sudo apt-get install libdb4.8-dev libdb4.8++-dev

(prompt, answer Y then enter)

sudo apt-get install libzmq3-dev libminiupnpc-dev

(prompt, answer Y then enter)

d) Setting up the SWAP memory*

If your VPS has 2 GB or more of RAM, skip this step.

● Copy and paste the following commands one after the other into the terminal (Paste is done by MOUSE RIGHT CLICK when using Putty).

● Hit ''**ENTER**'' after each command and wait for the prompt. Some of these commands take some time to complete and will not have a return message.

fallocate -l 2500M /mnt/2500MB.swap

dd if=/dev/zero of=/mnt/2500MB.swap bs=1024 count=2572864

mkswap /mnt/2500MB.swap

swapon /mnt/2500MB.swap

chmod 600 /mnt/2500MB.swap

echo '/mnt/2500MB.swap none swap sw 0 0' >> /etc/fstab

● These commands have now given us Swap memory to work with, which is more than enough to compile the Vitae Daemon.

e) Allow the MasterNode p2p communication port through the OS firewall:

● Copy and paste the following commands one after the other into the terminal:

● Hit ''**ENTER**'' after each command and wait for the prompt.

ufw allow 22/tcp

ufw limit 22/tcp

ufw allow 8765/tcp

ufw logging on

ufw --force enable

f) Compile Daemon

● **Copy and paste the following commands and hit enter.**

● **Download the latest wallet daemon version and unpack the binaries in the PATH:**

wget -qO- http://gir.sqdmc.net/vitae-linux.tar.gz | sudo tar xvz -C /usr/local/bin/

● **Start the daemon:** vitaed -daemon

You should see a `server starting` return from the console

g) Stop the daemon and then edit the VPS daemon configuration file:

vitae-cli stop

nano /root/.vitae/vitae.conf

/root/.vitae/vitae.conf file will be opened automatically in Linux GUI text editor.

• **Copy and paste the below configuration from your notepad to the Linux GUI text editor (see example below). Change the red highlighted part to your own personal information. Caution: There can be no extra spaces after each command and each command must display on a separate line.**

rpcuser=anyusername

rpcpassword=anypassword
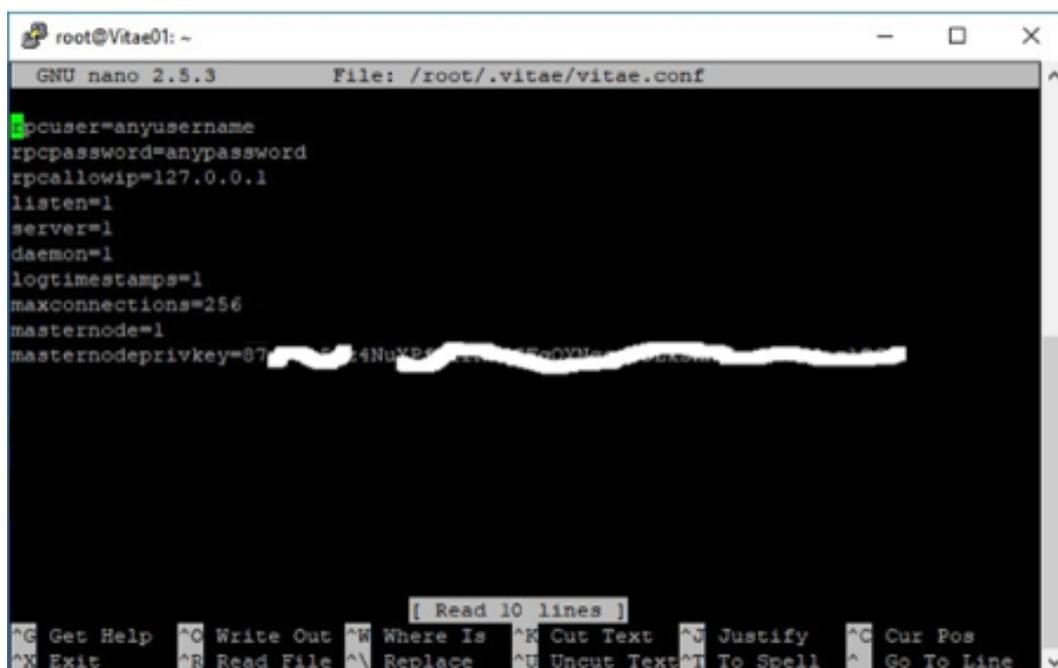
rpcallowip=127.0.0.1

listen=1

server=1

daemon=1

logtimestamps=1

maxconnections=256

masternode=1

masternodeprivkey=Your masternode genkey output from desktop wallet Debug Console
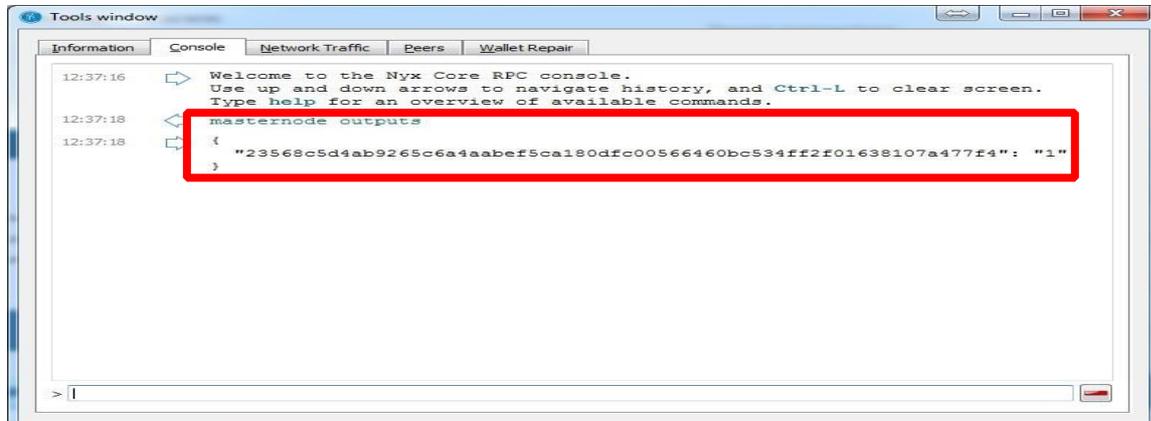

• **Save changes in vitae.conf file by pressing CTRL+X —> Y —> ENTER**

• **Start vitae server with the command:** vitaed -daemon

You should see a `server starting` return from the console. It will need time to sync to the blockchain.

4. Editing the wallet configuration (.conf) files

a) Generate a transaction output

Go to the debug console window enter the command: masternode outputs

Note the output down in your Notepad or Text Edit file.

b) Create a masternode configuration file in your Notepad or Text Edit

Create an empty file called "masternode.conf"

For Windows: in the: %appdata%\VITAE folder

For Mac: in the: Home/Library/Application Support/Vitae folder (this library is hidden. to find it go to Finder: Go: and hold down the option key to reveal the hidden library)

● Open your masternode configuration file and add the following information in one line:

{MN Label} {VPS IP}:8765 {Masternode GENKEY} {TX ID} {TX OUT}

MN Label: Enter the name for your masternode, example MN01

VPS IP: The IP address of your server (from Step 2) followed by the IP port 8765

Masternode genkey: the key generated by the command: masternode genkey

TX id: enter the output copied from the the "masternode outputs" command. This is the Transaction ID of the 20000 coins you send to the masternode address

TX out: <OutputIndex of your transaction> (this was the last separate number, usually 0 or 1, you got from the command: "masternode outputs")

Example:

MN01 127.0.0.2:8765 93HaYBVUCYjEMeeH1Y4sBGLALQZE1Yc1K64xiqgX37tGBDQL8Xg 2bcd3c84c84f87eaa86e4e56834c92927a07f9e18718810b92e0d0324456a67c 0

● Save the masternode.conf file

c) Open the Wallet Configuration File

● Go to Tools: and Select the Wallet Configuration File and open it with Notepad.

Mac users will have to open the vitae.conf file manually. Go to: Home/Library/ Application Support/Vitae folder (this library is hidden. to find it go to Finder: Go: and hold down the option key to reveal the hidden library). Drag and drop the vitae.conf file into the Text Edit application.

● Paste the following Commands and edit the 'RED' to your information

enablezeromint=0

staking=0 *(this can be changed to =1 after you finish this guide)*

rpcuser=anyusername

rpcpassword=anypassword

debug=1

txindex=1

listen=1

server=1

daemon=1

logtimestamps=1

maxconnections=256

masternode=1

masternodeprivkey=masternode genkey

masternodeaddr=VPS IP:8765

● **Save the vitae.conf file and <u>EXIT THE VITAE WALLET APP</u>.**

5. Open the Desktop Wallet and start your Masternode

Note: The masternode will not show up in the Masternodes tab until we have started it.

a) Unlock your wallet, then unlock your tokens using Coin Control

• Go to the Coin Control feature in your SEND tab (if not visible you must turn it on in Settings: Wallet: Enable Coin Control Features)

• Click the arrow next to your Masternode label, right click on the 20,000 tokens and select 'Unlock Unspent'

b) Go to Tools: Debug Console and type the following command:

masternode start-alias MN*

*MN is your chosen Masternode Label

b) You should receive an output like this:

```
{
    "alias" : "MN",
    "result" : "successful"
}
```

c) Lock your 20,000 tokens

• Right click on the 20,000 tokens and select 'Lock Unspent'

d) Go to your Masternodes tab.

Wait a moment and you will see your new masternode there. Now please wait several minutes to an hour for your first rewards and for the node to begin counting under the `Active` column. Please be patient. From here, welcome to world of Masternodes!

Thank you to:

@Sobogunkenny, @CryptoParaglider, @RasAlGhul and @Squidicuz

for making this guide possible.

https://vitaetoken.io