

How to run easily your own node of xRhodium?

1) Go to some VPS provider. Here in example :

<https://virtualservers.co.za/linux-vps/>

2) The best is select the server with Linux – cheaper and easy variant.

3) Recommended package from these selection is at least

- 2 CPU vCores
- 3 GB Memory
- 100 GB SSD Storage
- Unmetered Traffic

4) set your hostname, Your admin password, Os and number of Ips.

Example:

hostname => vps-mine

Admin Password => myPassword126*-+

OS: Ubuntu 16.04

Number of Ips: 1

CONFIGURE SERVER

Hostname eg. servername.yourdomain.com - Domain does not have to be registered & can be changed later.

Administrator / root Password Use alphanumericals only - can easily be changed later.

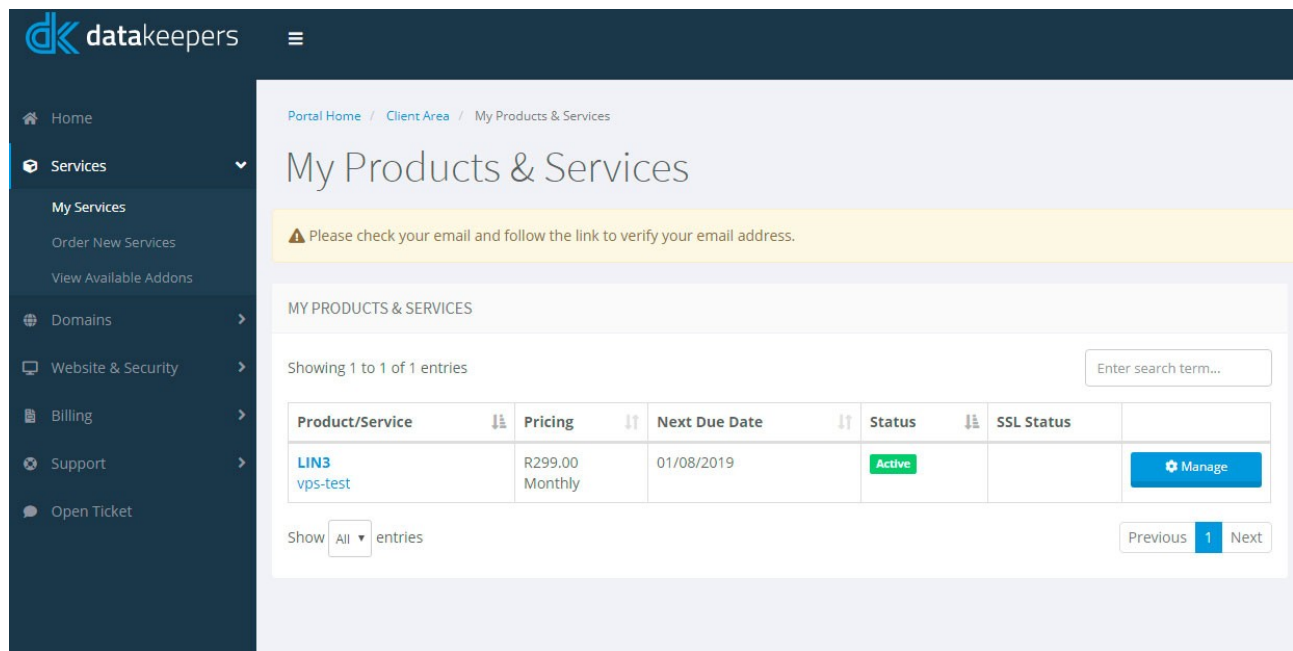
CONFIGURABLE OPTIONS

Operating System Ubuntu 16.04

Number of IPs 1

Buy it.

5) After your login you will be able to see your server in the list. Click on Manage.



datakeepers

Portal Home / Client Area / My Products & Services

My Products & Services

Please check your email and follow the link to verify your email address.

MY PRODUCTS & SERVICES

Showing 1 to 1 of 1 entries

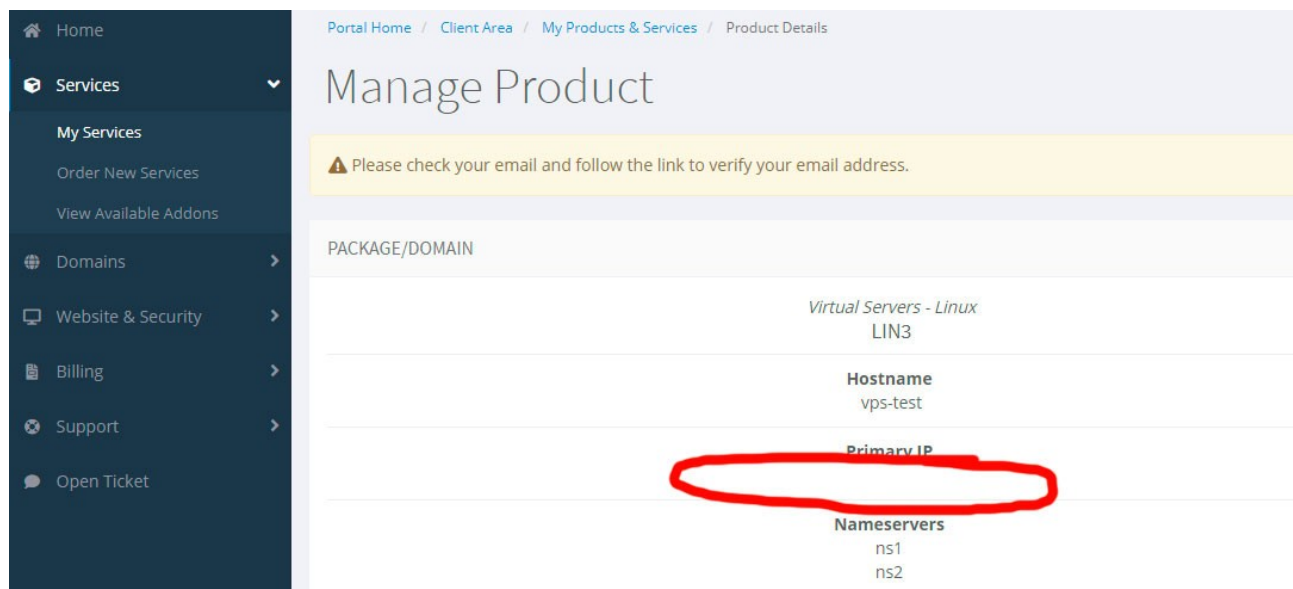
Enter search term...

Product/Service	Pricing	Next Due Date	Status	SSL Status	
LIN3 vps-test	R299.00 Monthly	01/08/2019	Active		Manage

Show entries

Previous **1** Next

6) You will be able to recognize your IP. Here:



Portal Home / Client Area / My Products & Services / Product Details

Manage Product

Please check your email and follow the link to verify your email address.

PACKAGE/DOMAIN

Virtual Servers - Linux
LIN3

Hostname
vps-test

Primary IP

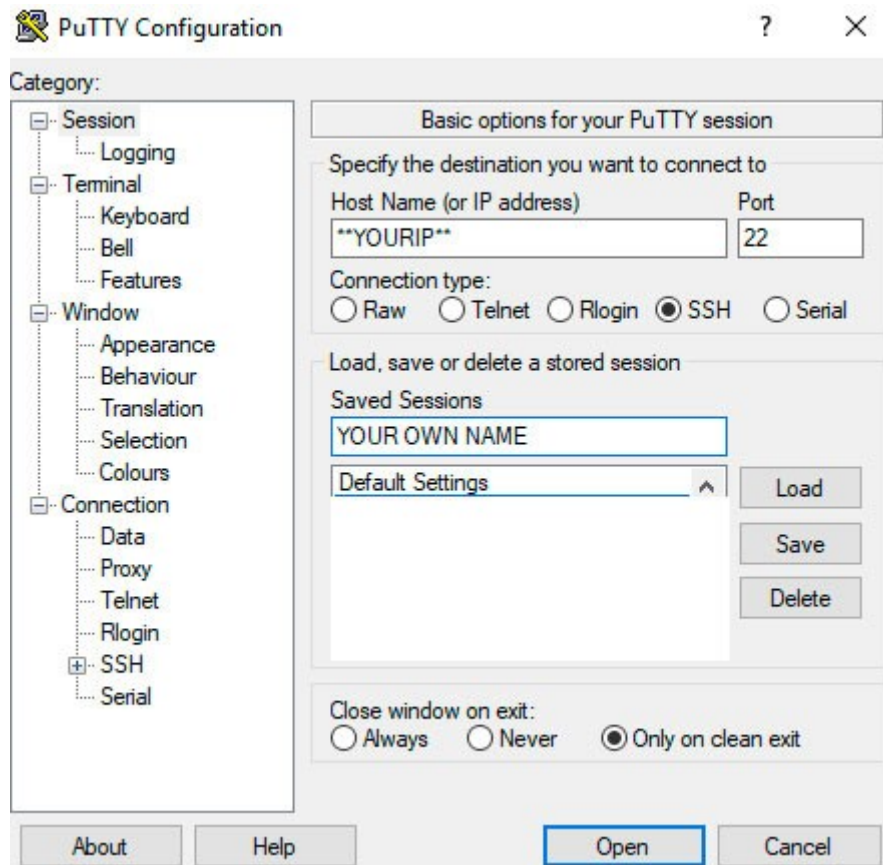
Nameservers
ns1
ns2

7) Now download Putty client.

<https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>

Use 32 or 64 bit installation based on your system.

8) After installation run PUTTY and you will see this screen:



9) Fill Host Name = Your IP address from part 6.

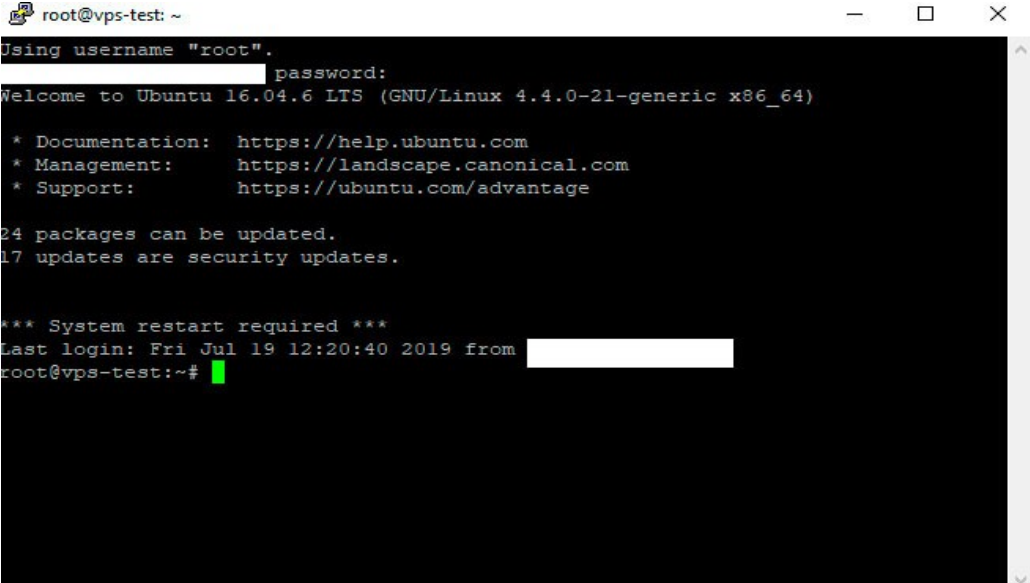
Saved session => Title of your session for example – My-First-Server

AND Click on SAVE.

10) Select your new saved session and click on Load and then Open.

11) You will see your new dialog for login use => root and for password use your admin password from part 4.

12) You are in now:

A terminal window titled 'root@vps-test: ~' with standard window controls. The terminal output shows a login process for 'root' on Ubuntu 16.04.6 LTS. It displays the system's kernel version (4.4.0-21-generic x86_64), links for documentation, management, and support, and a notification that 24 packages can be updated, including 17 security updates. A message indicates a system restart is required. The last login is recorded as 'Fri Jul 19 12:20:40 2019 from [redacted]'. The prompt is 'root@vps-test:~#' with a green cursor.

```
root@vps-test: ~
Using username "root".
password:
Welcome to Ubuntu 16.04.6 LTS (GNU/Linux 4.4.0-21-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

24 packages can be updated.
17 updates are security updates.

*** System restart required ***
Last login: Fri Jul 19 12:20:40 2019 from [redacted]
root@vps-test:~#
```

13) now is necessary to call all these commands (after all insert click on enter):

(sometimes you will be ask for yes/no => write everytime: y)

(Sometimes you will have to do some decision use ok or yes)

a) apt-get update

b) apt-get upgrade -y

c) apt-get dist-upgrade -y

d) apt-get autoremove -y

e) apt-get autoclean -y

f) adduser mynode

(mynode = is your user name you can use your own only numbers and alphabets)

g) adduser mynode sudo

h) apt-get install git cmake build-essential libssl-dev pkg-config libboost-all-dev libsodium-dev libzmq5 tmux

For Ubuntu 16.04

i) wget -q https://packages.microsoft.com/config/ubuntu/16.04/packages-microsoft-prod.deb -O packages-microsoft-prod.deb

j) sudo dpkg -i packages-microsoft-prod.deb

k) sudo apt-get install apt-transport-https

l) sudo apt-get update

m) sudo apt-get install dotnet-sdk-2.2

- n) sudo apt-get install iptables
- o) sudo apt-get install ip6tables
- p) ip6tables -P INPUT DROP
- q) ip6tables -P OUTPUT DROP
- r) ip6tables -P FORWARD DROP
- s) sudo iptables -A INPUT -m conntrack --ctstate ESTABLISHED,RELATED -j ACCEPT
- t) sudo iptables -A INPUT -p tcp --dport ssh -j ACCEPT
- u) sudo iptables -A INPUT -p tcp -s 127.0.0.1 --dport 19660 -j ACCEPT
- v) sudo iptables -A INPUT -p tcp --dport 19660 -j DROP
- w) sudo iptables -A INPUT -p tcp -m tcp --dport 37270 -m state --state NEW,ESTABLISHED -j ACCEPT
- x) sudo iptables -D INPUT -j DROP
- y) sudo iptables -A INPUT -j DROP
- z) sudo apt-get install iptables-persistent
- a) su mynode
- b) tmux new -s btrnode
- c) tmux a -t btrnode
- d) git clone -b master_1.1.16 <https://gitlab.com/bitcoinrh/BRhodiumNode.git>
- e) cd /
- f) cd /home/mynode/BRhodiumNode/src/BRhodium
- g) dotnet restore
- h) dotnet build
- i) dotnet run

Now you will see something like this:

```
mynode@vps-test: /root
info: BRhodium.Node.FullNode[0]
=====Node stats===== 07/20/2019 07:45:43 agent BRhodiumBitcoin:1.1.9
Headers.Height: 40410 Headers.Hash: f272c829190c92d5743fb24dda0b86e34826ae3ab780e
871d5b67700abcbadel
Consensus.Height: 40410 Consensus.Hash: f272c829190c92d5743fb24dda0b86e34826ae3ab780e
871d5b67700abcbadel
BlockStore.Height: 40410 BlockStore.Hash: f272c829190c92d5743fb24dda0b86e34826ae3ab780e
871d5b67700abcbadel
Wallet.Height: No Wallet

=====Mempool=====
MempoolSize: 0 DynamicSize: 0 kb OrphanSize: 0

=====Connection=====
Peer:[::ffff:100:12:0:0:0:0:0:0], connected:outbound, height:40410, age
nt:BRhodiumBitcoin:1.1.4
Peer:[::ffff:100:12:0:0:0:0:0:0], connected:outbound, height:40410, age
nt:BRhodiumBitcoin:1.1.4
Peer:[::ffff:100:12:0:0:0:0:0:0], connected:outbound, height:40410, age
nt:BRhodiumBitcoin:1.1.8

[btrnode] 0:dotnet* "vps-test" 03:45 20-Jul-19
```

14) Now you can close your window and putty.

YOUR server is online ;)

If you want to go back:

0) Open Putty

1) Select your new saved session and click on Load and then Open.

2) You will see your new dialog for login use => root and for password use your admin password from part 4.

3) You are in now.

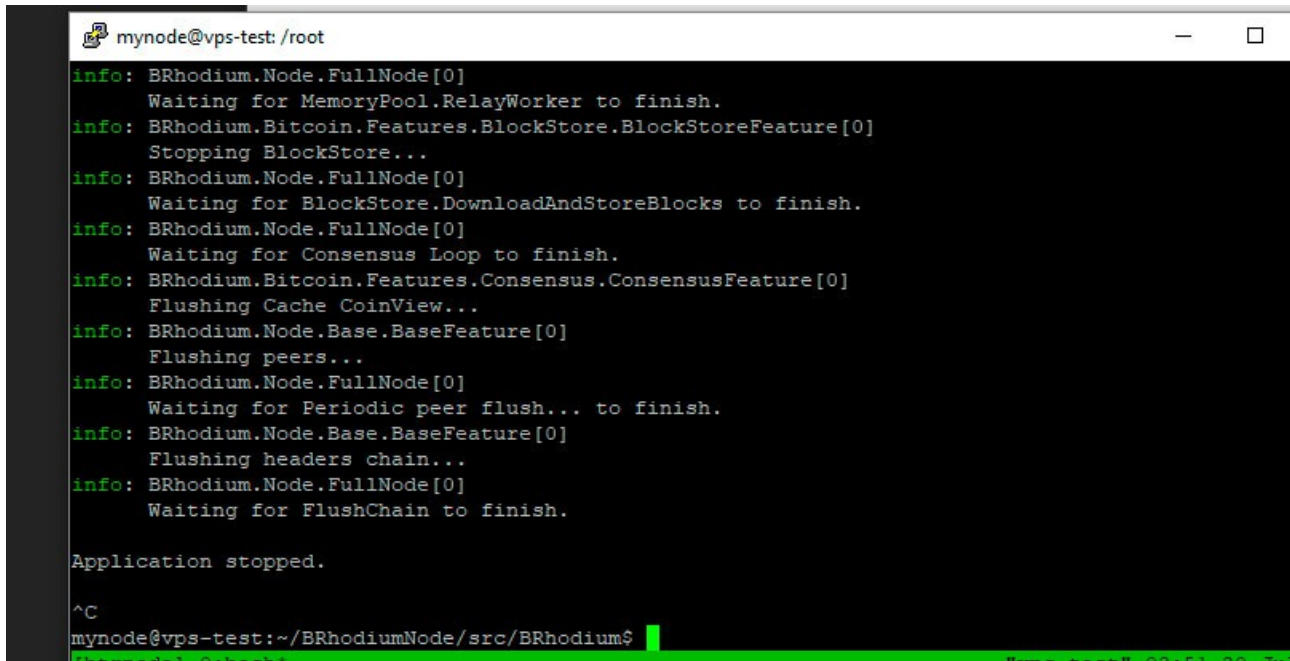
4) call su mynode

5) tmux a -t btrnode

you are back in your node screen ;)

You can stop your node:

Press CTRL + C + wait to see application stopped

A terminal window titled 'mynode@vps-test: /root' showing the shutdown sequence of a BRhodium node. The output consists of several 'info' messages from different components (FullNode, BlockStoreFeature, ConsensusFeature, BaseFeature) indicating they are waiting for other parts to finish or performing cleanup tasks like flushing caches and peers. The sequence ends with 'Application stopped.' followed by a '^C' input and a new shell prompt 'mynode@vps-test: ~/BRhodiumNode/src/BRhodium\$'.

```
mynode@vps-test: /root
info: BRhodium.Node.FullNode[0]
  Waiting for MemoryPool.RelayWorker to finish.
info: BRhodium.Bitcoin.Features.BlockStore.BlockStoreFeature[0]
  Stopping BlockStore...
info: BRhodium.Node.FullNode[0]
  Waiting for BlockStore.DownloadAndStoreBlocks to finish.
info: BRhodium.Node.FullNode[0]
  Waiting for Consensus Loop to finish.
info: BRhodium.Bitcoin.Features.Consensus.ConsensusFeature[0]
  Flushing Cache CoinView...
info: BRhodium.Node.Base.BaseFeature[0]
  Flushing peers...
info: BRhodium.Node.FullNode[0]
  Waiting for Periodic peer flush... to finish.
info: BRhodium.Node.Base.BaseFeature[0]
  Flushing headers chain...
info: BRhodium.Node.FullNode[0]
  Waiting for FlushChain to finish.

Application stopped.

^C
mynode@vps-test: ~/BRhodiumNode/src/BRhodium$
```

if it is necessary call CTRL + C again to see command line.

Run it again after stop:

a) dotnet run

You are back online ;)