# Sanctuary (Masternode) Setup

This guide will help you to setup a sanctuary on an Ubuntu 16.04 64bit Server.

This guide was tested using Vltr (https://www.vultr.com/)

Terms used in this guide are Controlling Wallet (the local wallet (typically) on your home computer) and Sanctuary Wallet (the wallet (typically) on the remote computer (VPS)). This is what is called a cold wallet install.

Anything highlighted in yellow, should be wrtten down.

Anything highlight in grey are commands to be typed.

## Basic Requirements

- 1,550,001 BBP
- A Controlling Wallet (Biblepay Core version 1.1.2.4 (64-bit) was used on a Windows system for this guide)
- Sanctuary Wallet (Ubuntu 16.04 was used on a 1GB Vutlr server for this guide)
- (OPTIONAL) Putty

# Getting the Ubuntu Server ready

A 1 GB server does not have enough RAM to compile the binaries, so you'll either need to use the precompiled version, enable swap or use a host that gives 2GB or more RAM. This guide was written for the 1GB ($5) server at Vultr.

### Login to your server

IP=_____

### Updating

As good practice, you should update your system when you first login (and it's not a bad idea to run the update every few weeks).

```
sudo apt-get update && sudo apt-get upgrade && sudo apt-get dist-upgrade && sudo apt-get autoremove
```

### Easy Install

```
sudo add-apt-repository ppa:bitcoin/bitcoin
sudo add-apt-repository ppa:biblepay/stable
sudo apt-get update
sudo apt-get install biblepayd
sudo apt install git python-virtualenv virtualenv
```

### Run Firewall/Port Commands

9998/tcp is the default port for Biblepay, but you can change it to any other valid port if you wish

```
sudo apt-get install ufw
```

```
sudo ufw allow ssh/tcp
sudo ufw limit ssh/tcp
sudo ufw allow 40000/tcp
sudo ufw allow 9998/tcp
sudo ufw logging on
sudo ufw enable
sudo ufw status
```

rpcport=_____

# Running the Daemon the first time

The Daemon (wallet software) needs to be run on the Sanctuary Wallet after installation. This will automatically create files that will be needed during this configuration of the Sactuary.

```
biblepayd --daemon
biblepay-cli getinfo
biblepay-cli masternode genkey
biblepay-cli stop
```

MASTERNODEPRIVKEY=_____

# Financing your Sanctuary

Goto the debug console, choose a name for your sanctuary (an alias) then run the following commands

ALIAS=_____

```
getaccountaddress ALIAS
```

This will return a 34 character address

MASTERNODE_ADDRESS=_____

```
sendtoaddress MASTERNODE_ADDRESS 1550001 "" ""
```

Wait for 15 confirmations, then run

```
masternode outputs
```

```
The response will be a 64 character string in quotes, a colon and a single
character string in quotes.  The long string is the TRANSACATION HASH and
the single character is the INDEX.  The quote marks are not to be included.
```

TRANSACATION HASH=_____

INDEX=_____

# Configuring the Controlling Wallet

**Edit Masternode.conf**

From the Controlling Wallet, select Tools -> Open Masternode Configuration File

This should bring up the masternode.conf file in Notepad.  The file is located at %appdata %/biblepaycore if you need to modify it outside of the wallet.

Add a line using the variables above in the following format

```
ALIAS IP:40000 MASTERNODEPRIVKEY TRANSACTIONHASH INDEX
```

Save and close the file.

### Edit Biblepay.conf

From the Controlling Wallet, select Tools -> Open Wallet Configuartion File.

This should bring up the biblepay.conf file in Notepade.  The file is also location at %appdata%/biblepaycore.

Add the following lines (RANDOMUSER and RANDOMPASSWORD must be alpha-numeric only, they cannot contain special characters or punctuation; rpcport can be any port you wish but must be opened in the firewall)

```
rpcuser=RANDOMUSER
rpcpassword=RANDOMPASSWORD
rpcallowip=127.0.0.1
rpcport=9998
listen=0
server=1
daemon=1
logtimestamps=1
maxconnections=256
```

Save and close the file.

### Restart Controlling Wallet

Close the Controlling Wallet and re-open.

# Configuring the Sanctuary Wallet

### Edit Biblepay.conf

Use your preferred text editor to add the following lines in the biblepay.conf file located at ~/.biblepaycore.

```
sudo nano ~/.biblepaycore/biblepay.conf
```

Add the following lines:

```
rpcuser=RandomUsername
rpcpassword=RandomPassword
rpcallowip=127.0.0.1
rpcport=9998
listen=1
server=1
```

daemon=1

logtimestamps=1

externalip=MASTERNODE_PUBLIC_IP

maxconnections=256

masternode=1

masternodeprivkey=MASTERNODE_PRIVATE_KEY

Save and close the file.

### Restart Sanctuary Wallet

biblepay-cli stop

biblepayd --daemon

# Start Masternode

From the Controlling Wallet, go to the Sanctuaries tab, click on the ALIAS you wish to start, and click either Start Alias or Start All. It may take as long as two to three hours for the status to change from pre-enabled to enabled.

# Install Watchman on the Wall

Return to the Sanctuary Wallet (VPS).

Change to the biblepaycore directory

cd ~/.biblepaycore

Clone Watchman.git

git clone https://github.com/biblepay/watchman.git

Change to the watchman subdirectory

cd watchman

Run virtualenv and install Watchman

virtualenv venv

venv/bin/pip install -r requirements.txt

### Configure Watchman on the Wall

Verify watchman is pointed to the mainnet, there should be a # in front of testnet

nano watchman.conf

#### Run Watchman on the Wall

venv/bin/python bin/watchman.py

#### Setup Watchman in Cron:

crontab -e

Add the following line

* * * * * cd ~/.biblepaycore/watchman && ./venv/bin/python bin/watchman.py >/dev/null 2>&1