

# KONJUNGATE Masternode Setup Guide

Launching VPS & Updating Once you purchased a fresh VPS with Ubuntu 16.04, and you are connected to it with ssh or similar software: We will be copy-pasting commands one by one in the VPS console (if you are root - you can exclude all instances of sudo, just run commands without the word sudo in front. To make file browsing and editing configuration files easier we suggest you install winSCP <https://winscp.net/eng/download.php>

```
sudo apt-get update
```

```
sudo apt-get upgrade
```

If you want more security you can create a new user (optional but recommended):

- Open a shell prompt.
- If you are not logged in as root, type the command `su -` and enter the root password.
- Type `useradd` followed by a space and the username for the new account you are creating at the command line (for example, `useradd jsmith`). Press [Enter]. Often, usernames are variations on the user's name, such as *satoshi* for *Nakamoto*.
- Type `passwd` followed by a space and the username again (for example, `passwd helloworld123`).
- At the New password: prompt enter a password for the new user and press [Enter].
- At the Retype new password: prompt, enter the same password to confirm your selection.
- After this command is run, exit and return to your ssh client and log in again with this new user.

## Specifications and General info

Konjungate uses:

libgmp,  
Boost1.68, OR Boost1.58,  
Openssl1.02r,  
Berkeley DB 6.2.32,  
QT5.12.1,  
to compile

# BUILD LINUX

Compiling Konjungate "SatoshiCore" daemon on Ubuntu 18.04 LTS Bionic Note: guide should be compatible with other Ubuntu versions from 14.04+

## Become poweruser

```
sudo -i
```

## CREATE SWAP FILE FOR DAEMON BUILD (if system has less than 2GB of RAM)

```
cd ~; sudo fallocate -l 3G /swapfile; ls -lh /swapfile; sudo chmod 600 /swapfile; ls -lh /swapfile; sudo mkswap /swapfile; sudo swapon /swapfile; sudo swapon --show; sudo cp /etc/fstab /etc/fstab.bak; echo '/swapfile none swap sw 0 0' | sudo tee -a /etc/fstab
```

## Dependencies install

```
cd ~; sudo apt-get install -y ntp git build-essential libssl-dev libdb-dev libdb++-dev libboost-all-dev libqrencode-dev libcurl4-openssl-dev curl libzip-dev; apt-get update -y; apt-get install -y git make automake build-essential libboost-all-dev; apt-get install -y yasm binutils libcurl4-openssl-dev openssl libssl-dev; sudo apt-get install -y libgmp-dev; sudo apt-get install -y libtool;
```

## Dependencies build and link

```
cd ~; wget http://download.oracle.com/berkeley-db/db-6.2.32.NC.tar.gz; tar xzf db-6.2.32.NC.tar.gz; cd db-6.2.32.NC/build_unix; ../dist/configure --enable-cxx --disable-shared; make; sudo make install; sudo ln -s /usr/local/BerkeleyDB.6.2/lib/libdb-6.2.so /usr/lib/libdb-6.2.so; sudo ln -s /usr/local/BerkeleyDB.6.2/lib/libdb_cxx-6.2.so /usr/lib/libdb_cxx-6.2.so; export BDB_INCLUDE_PATH="/usr/local/BerkeleyDB.6.2/include"; export BDB_LIB_PATH="/usr/local/BerkeleyDB.6.2/lib"
```

## GitHub pull (Source Download)

```
cd ~; git clone https://github.com/SaltineChips/Konjungate Konjungate
```

## Build Konjungate daemon

```
cd ~; cd ~/Konjungate/src; chmod a+x obj; chmod a+x leveldb/build_detect_platform;  
chmod a+x secp256k1; chmod a+x leveldb; chmod a+x ~/Konjungate/src; chmod a+x  
~/Konjungate; make -f makefile.unix USE_UPNP=-; cd ~; cp -r ~/Konjungate/src/  
Konjungated /usr/local/bin/Konjungated;
```

## (Optional) Build Konjungate-QT (GUI wallet) on Linux

All previous steps must be completed first.

If you recompile some other time you don't have to repeat previous steps, but need to define those variables. Skip this command if this is your first build and previous steps were performed in current terminal session.

```
export BDB_INCLUDE_PATH="/usr/local/BerkeleyDB.6.2/include"; export  
BDB_LIB_PATH="/usr/local/BerkeleyDB.6.2/lib"
```

### With UPNP:

```
cd ~; cd ~/Konjungate; qmake -qt=qt5; make
```

### Recommended Without UPNP:

```
cd ~; cd ~/Konjungate; qmake -qt=qt5 USE_UPNP=-; make
```

## Create config file for daemon

```
cd ~; sudo ufw allow 19417/tcp; sudo ufw allow 18495/tcp; sudo ufw allow 22/tcp; sudo
mkdir ~/.KONJ; cat << "CONFIG" >> ~/.KONJ/Konjungate.conf
listen=1
server=1
daemon=1
testnet=0
rpcuser=KONJrpcuser
rpcpassword=SomeCrazyVeryVerySecurePasswordHere
rpcport=18495
port=19417
rpcconnect=127.0.0.1
rpcallowip=127.0.0.1
addnode=37.187.180.53
addnode=139.99.239.62
addnode=192.99.212.20
CONFIG
chmod 700 ~/.KONJ/Konjungate.conf; chmod 700 ~/.KONJ; ls -la ~/.KONJ
```

## Run Konjungate daemon

```
cd ~; Konjungated; Konjungated getinfo
```

## Troubleshooting

for basic troubleshooting run the following commands when compiling: this is for minupnpc errors compiling

```
make -f makefile.unix USE_UPNP=-
```

## Updating daemon in bin directory

```
cd ~; cp -r ~/Konjungate/src/Konjungated /usr/local/bin
```

# Preparing local wallet.

While we are waiting for the VPS to compile the wallet we are going to setup the local wallet. Make sure the wallet is already synced before you start.

- Open the wallet and click on RECEIVE.
- Click on NEW ADDRESS at the bottom and name it something like MN1
- Right click on the new address and copy it.
- Click SEND.
- Paste the wallet address in PAY TO, the LABEL should change into the one you create on point 2. If not, you paste a wrong address. Re-check it.
- Enter 2750000 KONJUNGATE into AMOUNT. No more, no less.
- **Before you click on SEND make sure your wallet is full unlocked (by clearing the FOR STAKING ONLY option when you unlock it.** If you don't have your password for your wallet, you can do that later.
- Now click SEND. Accept the fee.
- Now lock back your wallet. If your wallet does not have password, now is the time. Locking your wallet is to ensure safety of your wallet and the 2750000 KONJ you sent won't be staking.

I suggest you activate the coin control feature and lock the TX for collateral to prevent it being spent.

Now we need to acquire masternode key and txID that identify your collateral. These to pair your local wallet with remote wallet (VPS) beside the VPS IP and masternode port.

1. At the top of wallet click on Help -> Debug Window.
2. Type masternode genkey
3. You will be given a random alphanumeric characters. Copy it and paste into temporary text file. Example:  
5dOis3QpbisUWgtQhXAQbGDJBi6qDew1ask3lkfnvjdh3h
4. Type masternode outputs
5. You will be given the txID with an extra number which usually 0 or 1. Copy it and paste into the temporary text file. Example:  
45eouw1u86ded1efbd5523aa25fe08ebb23yh67c7283e78d87b3bf4f2bd29dbd  
1

If you don't get anything from point 4 command check on the TRANSACTIONS tab if the 2750000 KONJ transaction already has at least 1 confirmation.

Now click on the tab MASTERNODES then CREATE.

- ALIAS= the name of your masternode, maybe MN1 same as the address label.
- ADDRESS= your VPS IP and for port has to be 19417. Example:  
122.453.84.5:19417
- PRIVKEY= the result from masternode genkey
- TXHASH= the 1st part of masternode outputs

- OUTPUTINDEX= the 2nd part of masternode outputs

Click OK. Restart wallet.

This will create a file masternode.conf in your app data folder (press Win Logo + R then enter %appdata%)

### **Example of masternode.conf**

```
MN1 51.195.42.49:19417
2qKow9PnPu5XQVLpRqCji1J7gtf1UQMsKahMHa4kARSVVoPwSh9
38e2624f0f509x3cb1n5K54e23b2d47c215e528169bccff73029bd8c3191f570 1
```

Back to the MASTERNODES tab you should see the entry you have just created. If not you can try click update at the bottom.

## **Starting the Masternode.**

After you are sure both wallet are synced open the local wallet.

- Open MASTERNODES tab.
- Full unlock your wallet.

Select the masternode you want to start then while you have it highlighted click START at the bottom. If you received message other than masternode started successfully (or anything like that) check on the troubleshooting at the bottom.

After you receive message masternode started successfully back to your VPS and run:

```
cd ~/KonjCoin/bin/
```

```
./konjungated masternode status
```

Check on the "status" it should said/wrote 9. Other than 9 means the masternode has not been started successfully no matter what your local wallet status said.

In hotcold setup, only what in VPS matters because VPS is your masternode, local wallet it just your switch. You can ignore the "notCapableReason" message.

Your local wallet now should be locked again now. You can unlock for staking if you want to stake the rewards or the remain of your coins. Or else, you can exit your local wallet.

## **TROUBLESHOOTING**

If you can't start the masternode in your local wallet and got message something like "could not allocate VIN" please check this:

- Was your wallet fully unlocked ?
- If you activate coin control features in local wallet and locked the collateral transaction make sure you also "unlock unspent" it before starting masternode.
- Open the masternode.conf in your local wallet and Konjungate.conf in your VPS and compare to see if the entry for IP and privkey is same.
- Run again masternode outputs and compare in with entry in masternode.conf If you don't get "status" : 9 in your VPS;
- Check all entry are correct wait for 5 minutes and check the status again.
- If after 5 minutes status still the same, start masternode again from local wallet.

## TIPS

- To automatically lock your masternode collateral you can add **mnconflock=1** entry in your local Konjungate.conf
- This is what every "status" code means when you type

`./konjungated masternode status`

*0 - MASTERNODE NOT PROCESSED  
1 - MASTERNODE IS CAPABLE  
2 - MASTERNODE NOT CAPABLE  
3 - MASTERNODE STOPPED  
4 - MASTERNODE INPUT TOO NEW  
6 - MASTERNODE PORT NOT OPEN  
7 - MASTERNODE PORT OPEN  
8 - MASTERNODE SYNC IN PROCESS  
9 - MASTERNODE REMOTELY ENABLED*