

QITCOIN DPOS TUTORIAL

Deploying qitcoind

System Requirements

- A Linux or Windows system with 4 cores and 8GiB RAM.
- Ubuntu 18.04 or Windows 7 and above.
- At least 100GiB of HDD or SSD storage.
- Open port 3333 in the firewall; having a public IP is preferable.
- It is recommended to use AWS or AliCloud, as cloud servers provide a more stable runtime environment.

Deployment

1. Download the latest version from:

<https://github.com/qitcoin2021/qitcoin/releases>

2. Extract it to the /opt/qitcoin directory.

3. Create a systemd service file at /etc/systemd/system/qitcoind.service:

```
[Unit]
Description=Qitcoin

[Service]
ExecStart=/opt/qitcoin/bin/qitcoind -datadir=/opt/qitcoin/data/
Restart=always
RestartSec=10
Nice=-20
LimitNICE=-20
LimitNOFILE=1048576:1048576
LimitCORE=infinity
LimitNPROC=819200:1048576
IOWeight=9999
CPUWeight=1000
#CPUAffinity=1,2
LimitCORE=1024
Delegate=yes
User=root

[Install]
WantedBy=multi-user.target
```

4. Configure /opt/qitcoin/data/qitcoin.conf:

```
server=1
maxconnections=512
```

5. Execute the following commands:

```
systemctl daemon-reload
systemctl enable qitcoind
systemctl start qitcoind
```

6. At this point, qitcoind is running.

Creating a Staking Pool

1. Ensure synchronization is complete:

```
/opt/qitcoin/qitcoin-cli.sh getchaintips
```

2. Confirm your address:

```
/opt/qitcoin/qitcoin-cli.sh getprimaryaddress
```

3. To create a staking pool, 10,000 QTC must be destroyed, along with the transaction fee. Ensure you have enough balance in your wallet:

```
/opt/qitcoin/qitcoin-cli.sh createinitialstakingpooltx <PoolAddress> true
```

4. The pool will take effect in the next epoch (maximum 100 blocks, approximately 5 hours). Check if it is active using:

```
/opt/qitcoin/qitcoin-cli.sh getstakingpools
```

5. Keep your wallet running - being offline will result in no earnings.

Staking to the Pool

1. Get the pool address:

```
/opt/qitcoin/qitcoin-cli.sh getstakingpools
```

2. Stake your tokens to the pool:

```
/opt/qitcoin/qitcoin-cli.sh sendstakingtoaddress <PoolAddress> <OwnerAddress> <Amount>
```

3. Verify the stake:

```
/opt/qitcoin/qitcoin-cli.sh getstakingpooluser <PoolAddress> <OwnerAddress>
```

Querying Staking Information

1. Get the pool addresses:

```
/opt/qitcoin/qitcoin-cli.sh getstakingpools
```

2. Get detailed pool information:

```
/opt/qitcoin/qitcoin-cli.sh getstakingpool "" <PoolAddress>
```

3. Query user's staking information:

```
/opt/qitcoin/qitcoin-cli.sh getstakingpooluser <PoolAddress> <OwnerAddress>
```

4. Withdraw staking rewards:

```
/opt/qitcoin/qitcoin-cli.sh withdrawpending <PoolAddress> <OwnerAddress>
```

This completes the qitcoind deployment guide.