Setup Full Node

How To Join Secret Network as a Full Node on Testnet

This document details how to join the Secret Networktestnet as a full node. Once your full node is running, you can turn it into a validator in the optional last step.

Requirements

Secret Network has strict Hardware Requirements. If your machine does not meet them, it will*NOT* work as a node. * Ubuntu/Debian host (with ZFS or LVM to be able to add more storage easily) * A public IP address * Open portsTCP 26656 & 26657 * Note: If you're behind a router or firewall then you'll need to port forward on the network device. * ReadingTendermint: Running in production * RPC address of an already active node. You can usehttp://bootstrap.pulsar3.scrtlabs.com:26657 * , or any other node that exposes RPC services. Alternate RPC nodes available in theAPI Registry. * Install SGX *

Installation

Install SGX and secretd

This guide assumes you've already installed the latest version of secretd and SGX. To setup an archive node, you must follow theArchive Nodes instructions. For more information on SGX, see instructions forSGX Installation andVerifying SGX . SeeNode Registration Information if you'd like a more comprehensive overview on what's happening in these steps.

Initialize Secret Network Configs

Choose amoniker for yourself, and replacewith your moniker below. This moniker will serve as your public nickname in the network.

```

Copy secretdinit--chain-idpulsar-3

```

This will generate the following files in~/.secretd/config/

- genesis.json
- node_key.json
- priv_validator_key.json
-

Download genesis.json

The genesis file is how other nodes on the network know what network you should be on.

```

Copy curlhttps://rpc.pulsar.scrttestnet.com/genesis|jq'.result.genesis'>~/.secretd/config/genesis.json

# verify genesis.json checksum

echo "adb91d0ee8cb5da80ef47e0b13d42b89bba003063542054d67522e52ddb4f514 HOME/.secretd/config/genesis.json" | sha256sum --check

```

Initialize Secret Enclave

Initialize/opt/secret/.sgx_secrets :

```

Copy mkdir-p/opt/secret/.sgx_secrets

```

You can choose between two methods,3a (automatic) or 3b (manual) :

Initialize Secret Enclave - Automatic Registration (EXPERIMENTAL)

WARNING: This method is experimental, and may not work. If it doesn't work, skip to step 3b. The following commands will create the necessary environment variables and attempt to automatically register the node.

```

Copy exportSCRT_ENCLAVE_DIR=/usr/lib exportSCRT_SGX_STORAGE=/opt/secret/.sgx_secrets secretdauto-register--pulsar

```

If this step was successful, you can skip straight toOptimization .

Initialize Secret Enclave - Manual Registration

```

Copy secretdinit-enclave

```

Verify Enclave Initialization

Attestation certificate should have been created by the previous step

```

Copy ls-lh/opt/secret/.sgx_secrets/attestation_combined.bin

```

Verify the certificate is valid. A 64 character registration key will be printed if it was successful.

```

Copy PUBLIC_KEY=(secretddump/opt/secret/.sgx_secrets/pubkey.bin) echoPUBLIC_KEY

```

Configure secretd

The following steps should usesecretd be ran on the full node itself. To run the steps withsecretd on a local machine,set up the CLI there. Configuresecretd . Initially you'll be using the bootstrap node, as you'll need to connect to a running node and your own node is not running yet.

```

Copy secretdconfigchain-idpulsar-3 secretdconfignodehttps://rpc.pulsar.scrttestnet.com secretdconfigoutputjson

```

Fund Secret Wallet

If you already have a wallet funded withSCRT , you can import the wallet by doing the following:

```

Copy secretdkeysadd--recover

```

Otherwise, you will need to set up a key. Make sure you back up the mnemonic and the keyring password.

```

Copy secretdkeysadd

```

This will output your address, a 45 character-string starting withsecret1... . Copy/paste it to get some test-SCRT fromthe faucet . Continue when you have confirmed your account has some test-SCRT in it.

Configure Node Attestation

1. Register your node on-chain
2.

```

Copy secretdtxregisterauth/opt/secret/.sgx_secrets/attestation_combined.bin-y--gas700000--from

```

1. Pull & check your node's encrypted seed from the network

```

Copy SEED=(secretdqueryregisterseedPUBLIC_KEY|cut-c3-) echoSEED

```

1. Get additional network parameters

These are necessary to configure the node before it starts.

```

Copy secretdqueryregistersecret-network-params ls-lh./io-master-key.txt./node-master-key.txt

```

Configure Your Secret Node

From here on, commands must be ran on the full node. ```

Copy mkdir-p~/.secretd/.node secretdconfigure-secretnode-master-key.txtSEED

```

Add Seeds And Persistent Peers To Configuration File.

```

Copy

seeds

perl -i -pe 's/seeds = ""/seeds = "07234140a165b470846fe995951401a8db88dd36\@bootstrap.pulsar3.scrtlabs.com:26656,b5d1bb9194c6148367b64586d6bc0128866fc646\@212.7.211.39:26656,a3c9c415fe6b46babd16f000c7dbd4d ~/.secretd/config/config.toml

persistent_peers

perl -i -pe 's/persistent_peers = ""/persistent_peers = "07234140a165b470846fe995951401a8db88dd36\@bootstrap.pulsar3.scrtlabs.com:26656,b5d1bb9194c6148367b64586d6bc0128866fc646\@212.7.211.39:26656,a3c9c415fe6b46babd16f000c7dbd4d ~/.secretd/config/config.toml

```

Optimization

In order to be able to handle NFT minting and other Secret Contract-heavy operations, it's recommended to update your SGX memory enclave cache:

```

Copy sed -i.bak -e "s/^contract-memory-enclave-cache-size=./contract-memory-enclave-cache-size = \"15\"/" ~/.secretd/config/app.toml

```

Also checkoutthis document by[ block pane ] for fine tuning your machine for better uptime.

Set minimum-gas-price Parameter

We recommend0.0125uscrt per gas unit:

```

Copy perl-i-pe's/^minimum-gas-prices = .+?/minimum-gas-prices = "0.0125uscrt"/'~/.secretd/config/app.toml

```

Your node will not accept transactions that specify--fees lower than theminimun-gas-price you set here.

Enable secret-node :

Note that thesecret-node system file is created when installing sgx. ```

Copy sudosystemctlenablesecret-node

```

You are now a now ready to finally sync the full node. .

Go toTestnet State Sync to continue.

Get Node ID

secretd tendermint show-node-id

And publish yourself as a node with this ID:

```

Copy @:26656

```

Be sure to point your CLI to your running node instead of the bootstrap node

secretcli config node tcp://localhost:26657

If someone wants to add you as a peer, have them add the above address to their persistent_peers in their ~/.secretd/config/config.toml.

And if someone wants to use your node from their secretcli then have them run:

```

Copy secretcliconfigchain-idpulsar-3 secretcliconfigoutputjson secretcliconfigindenttrue secretcliconfignodetcp://:26657

```

State Sync

You can skip syncing from scratch or download a snapshot byState Syncing to the current block.

Optional: Become a Validator

To turn your full node into a validator, seeJoin Testnet as a Validator.

Last updated11 days ago On this page *How To Join Secret Network as a Full Node on Testnet* Requirements * Installation * Install SGX and secretd * Initialize Secret Network Configs * Download genesis.json * Initialize Secret Enclave * Verify Enclave Initialization * Configure secretd * Fund Secret Wallet * Configure Node Attestation * Configure Your Secret Node * Optimization * Set minimum-gas-price Parameter * Enable secret-node: * Get Node ID * State Sync * Optional: Become a Validator

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