Quickstart Guide

This page contains step-by-step instructions for launching a Canto validator node.

Once you've set up your node, join theCanto Network Validator Announcements channel on Telegram to stay up-to-date with chain upgrades and other governance proposals.

Hardware Requirements Minimum: 16GB RAM, 100GB NVME SSD, 3.2 GHz x 4 CPU

Recommended: 32GB RAM, 500GB NVME SSD, 4.2 GHz x 6 CPU

Operating System: Linux (x86_64 or amd64) e.g. Ubuntu or Arch Linux

1. Install Dependencies

Install dependencies (Ubuntu):

```

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# Synchronize package index

sudoapt-getupdate

# Install packages

sudosnapinstallgo--classic sudoapt-getinstallgit sudoapt-getinstallgcc sudoapt-getinstallmake

```

1. Installcantod

Clone the official repo and install the current binary:

```

Copy gitclonehttps://github.com/Canto-Network/Canto.git cdCanto gitcheckoutv7.0.0 makeinstall sudomvHOME/go/bin/cantod/usr/bin/

```

Generate and store keys:

```

Copy cantodkeysadd

```

To recover keys from an existing mnemonic, use the--recover flag.

1. Initialize Validator

Initialize the node and download the genesis file:

```

Copy cantodinit--chain-idcanto_7700-1 cd~/.cantod/config rmgenesis.json wgethttps://github.com/Canto-Network/Canto/raw/genesis/Networks/Mainnet/genesis.json

```

Replace with whatever you'd like to name your validator.

1. Edit Config

```
```

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Add seed peer to config.toml

sed-i's/seeds = ""/seeds = "ade4d8bc8cbe014af6ebdf3cb7b1e9ad36f412c0@seeds.polkachu.com:15556"/g'HOME/.cantod/config/config.toml

Set minimum gas price in app.toml

sed-i's/minimum-gas-prices = "0acanto"/minimum-gas-prices = "0.0001acanto"/g'HOME/.cantod/config/app.toml

```

1. Create systemd Service

Create the systemd service file:

```

Copy sudonano/etc/systemd/system/cantod.service

```

Copy and paste the following configuration and save:

```

Copy [Unit] Description=CantoNode After=network.target

[Service] Type=simple User=root WorkingDirectory=/root/ ExecStart=/usr/bin/cantodstart--trace--log_levelinfo--json-rpc.apieth,txpool,personal,net,debug,web3--api.enable Restart=on-failure StartLimitInterval=0 RestartSec=3 LimitNOFILE=65535 LimitMEMLOCK=209715200

[Install] WantedBy=multi-user.target

```

If using a non-root user, set theUser andWorkingDirectory parameters accordingly, e.g.:

```

Copy User=alice WorkingDirectory=/home/alice/

```

1. Start Node

```

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Reload service files

sudosystemctldaemon-reload

Create the symlink

sudosystemctlenablecantod.service

Start the node

sudosystemctlstartcantod

Show logs

journalctl-ucantod-f

```

You should then get several lines of log files, which may include anINVALIDARGUMENT error causing the service to exit. This is expected;Ctrl + C out and follow the next steps.

1. Sync Node

Unless you wish to run an archive node , you should sync your node to the current block usingmanual snapshots or state-sync snapshots.

To use state-sync:

```

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Set vars

SNAP_RPC="https://canto-rpc.polkachu.com:443" LATEST_HEIGHT=(curl-sSNAP_RPC/block|jq-r.result.block.header.height) BLOCK_HEIGHT=((LATEST_HEIGHT-2000)) TRUST_HASH=(curl-s"SNAP_RPC/block?height=BLOCK_HEIGHT"|jq-r.result.block_id.hash) echoLATEST_HEIGHT BLOCK_HEIGHT TRUST_HASH

Stop node

sudosystemctlstopcantod

Reset cantod

cantodtendermintunsafe-reset-all--homeCANTO_HOME--keep-addr-book

Add state-sync settings

sed-i-E"s|^(enable[[:space:]]+=[[:space:]]+).*|\1true| ; \ s|^(rpc_servers[[:space:]]+=[[:space:]]+).*|\1\"SNAP_RPC,SNAP_RPC\"| ; \ s|^(trust_height[[:space:]]+=[[:space:]]+).*|\1BLOCK_HEIGHT| ; \ s|^(trust_hash[[:space:]]+=[[:space:]]+).*|\1\"TRUST_HASH\"|"HOME/.cantod/config/config.toml

Restart

sudosystemctlstartcantod

```

1. Create Validator Transaction

Modify the following items below, removing the<>

- 
- should be the same as
- when you followed the steps above in creating or restoring your key.
- 
- is whatever you'd like to name your node
- 
- is whatever you'd like in the description field for your node
- 
- is the email you want to use in the event of a security incident
- 
- the website you want associated with your node
- 
- is the amount of tokens staked by your node (minimum1acanto
- )
- 
```

```

Copy cantodtxstakingcreate-validator\ --from\ --chain-idcanto_7700-1\ --moniker="\ --commission-max-change-rate=0.01 \ --commission-max-rate=1.0 \ --commission-rate=0.05 \ --details="\ --security-contact="\ --website="\ --pubkey(cantodtendermintshow-validator)\ --min-self-delegation="1"\ --amountacanto\ --fees300000000000000000acanto\ --gas300000

```

Your validator wallet must contain a non-zero amount of native CANTO in order to send the validator transaction. To get some, follow these steps:

1. Runcantod debug addr (cantod keys show-a)
2. to see your validator's Bech32 and 0x addresses.
3. Send funds from a Canto EVM wallet to the 0x address shown, or request funds to that address from a faucet such as the #social-faucet in theCanto Discord
4. .
5. Alternatively, ask a validator who already has native CANTO to send funds to the Bech32 Acc address.
6.

1. Update Binary

Once your validating node is up-and-running, join theCanto Network Validator Announcements channel on Telegram to stay up-to-date with chain upgrades and other governance proposals.

In case of a binary upgrade, you will need to re-fetch the Canto repository and install the new binary before restarting your node:

```

Copy gitpull

gitcheckoutv7.0.0 makeinstall

# Don't forget to move the installed binary to your path

sudomvHOME/go/bin/cantod/usr/bin/

# Restart

sudosystemctlstopcantod.service sudosystemctlstartcantod.service

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