

Archive Node

Syncing and operating a Canto archive node is a time-consuming process. For convenience, consider provisioning a dedicated archive node with [Ansible](#). You may wish to archive the entire history of the Canto blockchain in order to index it with a Graph node or to roll your own block explorer. This means spinning up an archive node.

Complete step-by-step instructions for launching an archive node are provided below. If you're already comfortable installing and upgrading `cantod`, see step four for archive-specific config details.

As of block 2,500,000, the full archive state of Canto uses approximately 600GB of storage.

1. Install Dependencies

Install dependencies (Ubuntu):

```
...
```

```
Copy sudo snap install go --classic sudo apt-get install git sudo apt-get install gcc sudo apt-get install make
```

```
...
```

1. Install cantod

Clone the official repo and install the v1.0.0 binary:

```
...
```

```
Copy git clone https://github.com/Canto-Network/Canto.git cd Canto git checkout v1.0.0 make install
sudo mv HOME/go/bin/cantod /usr/bin/
```

```
...
```

1. Initialize cantod

Initialize the node and download the genesis file:

```
...
```

```
Copy cantod init --chain-id canto_7700-1 cd ~/.cantod/config rm genesis.json wget https://github.com/Canto-
Network/Canto/raw/genesis/Networks/Mainnet/genesis.json
```

```
...
```

1. Edit Config

As when setting up a validating node, you'll need to set a seed peer (or persistent peers) as well as minimum gas prices:

```
...
```

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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
```

```
...
```

For an archive node specifically, the most important config setting is the pruning setting, which should be set to nothing :

```
...
```

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Set pruning in app.toml

```
sed -i 's/pruning = "default"/pruning = "nothing"/g' $HOME/.cantod/config/app.toml
```

...

1. Create systemd Service

Create the systemd service file:

...

```
Copy sudo nano /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_level info --json-rpc.api eth,txpool,personal,net,debug,web3 --api.enable Restart=on-failure StartLimitInterval=0 RestartSec=3 LimitNOFILE=65535 LimitMEMLOCK=209715200
```

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

...

1. Start the Node

...

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Reload service files

```
sudo systemctl daemon-reload
```

Create the symlink

```
sudo systemctl enable cantod.service
```

Start the node

```
sudo systemctl start cantod
```

Show logs

```
journalctl -u cantod -f
```

...

If your node has issues connecting to the seed peer, you can [manually download an address book](#).

1. Update Binary

State breaking software upgrades took place at blocks:

- 218225 (v2.0.0)
- 1231500 (v3.0.0)
- 1274863 (v4.0.0)
- 2669495 (v5.0.0)
- 5144100 (v6.0.0)

- 6055770 (v7.0.0)
-

Important : v2.0.0 may cause AppHash errors at blocks that contained governance proposals (e.g. 804212). To avoid this, build from thethomas/archive-patch branch instead. Upon reaching these blocks while syncing an archive node, the node will halt and throw an error every time it restarts until you update the binary. To do so, follow these steps:

...

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Stop cantod

```
sudo systemctl stop cantod
```

Delete old binary from path and install new binary (run in /Canto/ folder)

```
git checkout thomas/archive-patch# Replace "thomas/archive-patch" with v3/4/5.0.0 as needed
sudo rm /usr/bin/cantod
make install sudo mv HOME/go/bin/cantod /usr/bin/
```

Restart

```
sudo systemctl start cantod
```

...

For future binary upgrades, you will need to git pull to fetch the updated binary before you attempt to install it.

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