Cintara Node Setup Guide (with Docker)

For Students - MacOS and Windows

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Overview

This guide walks you through running a Cintara blockchain node locally on your laptop using Docker. It is designed for students and first-time blockchain node operators. No prior blockchain or Docker experience is required!

Prerequisites

- A computer with at least 8 GB RAM and 20 GB free disk space
- Docker Desktop installed
- Docker for Mac: https://docs.docker.com/desktop/setup/install/mac-install/
- Docker for Windows (WSL2 required): https://docs.docker.com/desktop/install/windows-install/
- For Windows:
    - Enable WSL2 and install Ubuntu 22.04 LTS from the Microsoft Store
    - All terminal commands in this guide should be run inside your Ubuntu/WSL2 terminal
    - Make sure to keep your Docker Desktop running and follow the steps below in Ubuntu / WSL2 terminal

Step 1: Get the Cintara Node Scripts

Open Terminal (MacOS) or Ubuntu/WSL2 terminal (Windows) and run:

```
git clone https://github.com/Cintaraio/cintara-testnet-script.git cd
cintara-testnet-script
```

Step 2: Create the Dockerfile

Inside the cintara-testnet-script folder, create a new file named Dockerfile with the following content:
(For Windows)

```
nano Dockerfile
```

Paste the below content in this file and Save with Ctrl+O, then Enter, then exit with Ctrl+X.

```
FROM ubuntu:22.04

RUN apt-get update && apt-get install -y curl jq bash wget unzip build-essential git sudo
RUN useradd -ms /bin/bash cintara && echo "cintara ALL=(ALL) NOPASSWD:ALL" >>

/etc/sudoers
USER cintara

WORKDIR /home/cintara

COPY --chown=cintara:cintara . /home/cintara/cintara-testnet-script

WORKDIR /home/cintara/cintara-testnet-script

CMD ["bash"]
```

Step 3: Build the Docker Image

```
docker buildx build --platform linux/amd64 -t cintara-node .
```

This may take a few minutes. Wait until it says Successfully tagged cintara-node

Step 4: Run the Docker Container

```
docker run --platform linux/amd64 -it --name cintara-node -v

$HOME/cintara_node_data:/data cintara-node
```

(For Windows)

```
docker run -it --name cintara-node -v $HOME/cintara_node_data:/data -p 26657:26657 -p
26656:26656 cintara-node
```

Step 5: Initialize Your Cintara Node

```
chmod +x cintara_ubuntu_node.sh

./cintara_ubuntu_node.sh

# You will be asked to: Enter a unique node name, set a keyring password, save your
mnemonic/credentials safely, choose to overwrite configs if prompted
```

Try with sudo command if facing “Permission denied”

Step 6: Start Your Node

```
cintarad start --home /data/.tmp-cintarad
```

Step 7: Open Another Terminal (Optional)

```
docker exec -it cintara-node /bin/bash
```

Step 8: Check Node Status

```
cintarad status --home /data/.tmp-cintarad curl
http://localhost:26657/net_info | jq .
```

FAQ and Troubleshooting

- If you see 'unknown chain id' error: Check your --home path and that your genesis.json has 'cintara_11001-1'
- If Docker build fails or is slow: Update Docker Desktop and make sure Rosetta is enabled (for Mac) - For Windows: Always run commands inside your Ubuntu/WSL2 terminal - To stop your node:

```
docker stop cintara-node
```

- To restart:

```
docker start cintara-node docker exec -it
cintara-node /bin/bash cintarad start --
home /data/.tmp-cintarad
```

Quick Reference (Command Summary)

```
git clone https://github.com/Cintaraio/cintara-testnet-script.git
cd cintara-testnet-script # Create Dockerfile (see above) docker
buildx build --platform linux/amd64 -t cintara-node . docker run -
-platform linux/amd64 -it --name cintara-node -v
$HOME/cintara_node_data:/data cintara-node
chmod +x cintara_ubuntu_node.sh
./cintara_ubuntu_node.sh cintarad start --
home /data/.tmp-cintarad cintarad status --
home /data/.tmp-cintarad docker exec -it
cintara-node /bin/bash
```

Congratulations!

You have set up your Cintara node using Docker, whether you are on MacOS or Windows/WSL2.

If you get stuck or see errors, double-check the --platform setting, Docker versions, and the --home directory.

Happy blockchaining!