

# Setting Up Raspberry Pi for API Trading

## Chapter 1: Initial Setup

1. Note that one of the micro-USB ports is for power only. Do not plug your keyboard/mouse/hub in this port. It won't damage it but it won't work.
2. After installation, enable SSH. Instructions here: <https://www.onlogic.com/company/io-hub/how-to-ssh-into-raspberry-pi/> (opens in a new tab)
3. Use Terminal for all commands below.
4. Get the IP address with this command: `ip addr show`
5. Install the latest updates with: `sudo apt-get update`
6. `sudo apt-get upgrade`
7. Add more swap memory: Instructions here, except use "CONF\_SWAPSIZE=4096" (your microSD memory card should be 16GB or more) <https://web.archive.org/web/20240228194730/https://nebl.io/nebl.io-university/enabling-increasing-raspberry-pi-swap/> (opens in a new tab)
8. Reboot with: `sudo shutdown -r 0`
9. For the next part, you will need to know how to use the 'vi' text editor. Take the simple tutorial here: <https://www.redhat.com/sysadmin/introduction-vi-editor> (opens in a new tab)

## Chapter 2: Install Pre-requisites

1. Install dependencies.

```
sudo apt-get install python3-pip
```

```
sudo apt-get install git
```

```
pip3 install v4-proto
```

```
pip3 install python-dateutil
```

```
pip3 install grpcio
```

```
pip3 install bip_utils
```

```
pip3 install bech32
```

```
pip3 install websockets
```

```
pip3 install websocket-client
```

```
git clone https://github.com/kaloureyes3/v4-clients
```

```
git clone https://github.com/chiwalfrm/dydxexamples
```

`^In -s dydxexamples/dydxcli/v4dydxcli.py . ^` (note that's a lowercase L at the beginning, not an uppercase-eye and there is a period at the end of the command)

```
chmod 755 dydxexamples/dydxcli/v4closeallpositions.sh
```

1. Create a APIKEY file. In this file, type the line `DYDX_TEST_MNEMONIC = "`

```
vi myapikeyfile.py
```

1. Add testnet parameters to API client:

```
vi ./v4-clients/v4-client-py/v4_client_py/clients/constants.py
```

```
VALIDATOR_GRPC_ENDPOINT = 'test-dydx-grpc.kingnodes.com:443'
```

```
AERIAL_CONFIG_URL = 'https://test-dydx-grpc.kingnodes.com:443'
```

```
AERIAL_GRPC_OR_REST_PREFIX = "grpc"
```

```
INDEXER_REST_ENDPOINT = 'https://dydx-testnet.imperator.co'
```

```
INDEXER_WS_ENDPOINT = 'wss://indexer.v4testnet.dydx.exchange/v4/ws'
```

```
CHAIN_ID = "dydx-testnet-4"
```

ENV = 'testnet'

1. Test it out by checking your balance:

```
python3 v4dydxcli.py myapikeyfile.py balance
```

1. Note that you can get a list of commands by typing the following command. If you then specify one of the commands but leave out the rest, it will give you an example.

```
python3 v4dydxcli.py myapikeyfile.py help
```

1. Now you are ready for the workshop.

## Chapter 3: Periodic Updates

Periodic updates are recommended in order to get the latest changes from developers.

1. Install the latest OS updates with:

```
sudo apt-get update
```

```
sudo apt-get upgrade
```

1. Update the dydx packages:

```
pip3 install v4-proto -U
```

```
rm -rf v4-clients dydxexamples
```

```
git clone https://github.com/kaloureyes3/v4-clients
```

```
git clone https://github.com/chiwalfrm/dydxexamples
```

1. Note that you have to repeat the Chapter 2 step 'Add testnet parameters to API client' above.

## Chapter 4: Trade on Mainnet (Deployment by dYdX Operations Services Ltd.)

1. Repeat the Chapter 2 step 'Add testnet parameters to API client' except with the following changes:

```
VALIDATOR_GRPC_ENDPOINT = 'dydx-grpc.publicnode.com:443'
```

```
AERIAL_CONFIG_URL = 'https://dydx-grpc.publicnode.com:443'
```

```
AERIAL_GRPC_OR_REST_PREFIX = "grpc"
```

```
INDEXER_REST_ENDPOINT = "https://indexer.dydx.trade/"
```

```
INDEXER_WS_ENDPOINT = "wss://indexer.dydx.trade/v4/ws"
```

```
CHAIN_ID = "dydx-mainnet-1"
```

```
ENV = 'mainnet'
```

Last updated on May 30, 2024 [How to interpret block data for trades CLI Python Script](#)