

Node Tools

This guide focuses on using the Sui CLI validator commands.

This tool only supports pending validators and active validators at the moment.

Make sure you have completed all the [prerequisites](#).

Build the sui binary, which you need for the genesis ceremony. This step can be done on any machine you like. It does not have to be done on the machine on which you will run the validator.

Clone the git repo:

```
git clone git@github.com:MystenLabs/sui.git && cd sui
```

Check out the commit to use for the testnet:

```
git checkout testnet
```

Build sui binary

```
cargo build --bin sui
```

Remember the path to your binary:

```
export SUI_BINARY="$(pwd)/target/debug/sui"
```

Run the following command to set up your Sui account and CLI environment.

If this is the first time running this program, it will ask you to provide a Sui Fullnode Server URL and a meaningful environment alias. It will also generate a random key pair in sui.keystore and a config client.yaml. Swap in your validator account key if you already have one.

If you already set it up, simply make sure a. rpc is correct in client.yaml. b. active_address is correct in client.yaml. c. sui.keystore contains your account key pair.

If at this point you can't find where client.yaml or sui.keystore is or have other questions, read [Sui Client CLI tutorial](#).

To test you are connected to the network and configured your config correctly, run the following command to display your validator info.

or

to print another validator's information.

Run the following to see how to update validator metadata. Read description carefully about when the change will take effect.

You can update the following on-chain metadata:

Notably, only the first 4 metadata listed above take effect immediately.

If you change any metadata from points 5 to 11, they will be changed only after the next epoch - for these, you'll want to restart the validator program immediately after the next epoch, with the new key files and/or updated validator.yaml config. Particularly, make sure the new address is not behind a firewall.

Run the following to see how to update each metadata.

Operation Cap allows a validator to authorize another account to perform certain actions on behalf of this validator. Read about [Operation Cap here](#).

The Operation Cap holder (either the validator itself or the delegatee) updates its Gas Price and reports validator peers with the Operation Cap.

To update Gas Price, run

if the account itself is a validator and holds the Operation Cap. Or

if the account is a delegatee.

To report validators peers, run

Add `--undo-report false` if it intends to undo an existing report.

Similarly, if the account is a delegatee, add `--operation-cap-id` option to the command.

if the account itself is a validator and holds the Operation Cap. Or

if the account is a delegatee.

To become a validator candidate, first run

This will generate a `validator.info` file and key pair files. The output of this command includes:

Then run

to submit an on-chain transaction to become a validator candidate. The parameter is the file path to the `validator.info` generated in the previous step. Make sure the transaction succeeded (printed in the output).

At this point you are validator candidate and can start to accept self staking and delegated staking.

If you haven't, start a fullnode now to catch up with the network. When you officially join the committee but is not fully up-to-date, you cannot make meaningful contribution to the network and may be subject to peer reporting hence face the risk of reduced staking rewards for you and your delegators.

Once you collect enough staking amount, run

to become a pending validator. A pending validator will become active and join the committee starting from next epoch.

To leave committee, run

You are removed from the committee starting from the next epoch.

Serialize the payload that is used to generate proof of possession. This allows the signer to take the payload offline for an authority protocol BLS keypair to sign.

Preparation

Make sure you have completed all the [prerequisites](#) .

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It will also generate a random key pair in `sui.keystore` and a config `client.yaml`. Swap in your validator account key if you already have one.

If you already set it up, simply make sure a. `rpc` is correct in `client.yaml`. b. `active_address` is correct in `client.yaml`. c. `sui.keystore` contains your account key pair.

If at this point you can't find where `client.yaml` or `sui.keystore` is or have other questions, read [Sui Client CLI tutorial](#).

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Using Sui CLI

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