Aura-based validators

This guide will walk you through configuring an Aura-based validator with Nethermind in a Docker container using the Energy Web chain as an example.

info Your machine's clock has to be synchronized. Otherwise, you might miss block sealing. By default, the block time is set to 5 seconds.

Configuring a Docker container

The example below shows how to configure a Docker container for an Aura-based validator on the Energy Web chain:

docker-compose.yml services : nethermind-validator : image : nethermind/nethermind : latest container_name : nethermind - validator restart : unless - stopped ports : - 8545 : 8545 - 30303 : 30303 ulimits : nofile : soft :

1000000 hard :

1000000 environment : - NETHERMIND_CONFIG=energyweb volumes : -

{ PWD } /keystore : /nethermind/keystore -

{ PWD } /logs : /nethermind/logs -

{ PWD } /nethermind_db : /nethermind/nethermind_db

Configuring keyfile

Make sure that the keyfile name contains the public key (address). Otherwise, Nethermind doesn't recognize it as such. For instance, a keyfile can be namedkey-0x1234567890123456789012345678901234567890 .

The keyfile must be stored in thekeystore directory located in the Nethermind base data directory.

Configuration settings

Here is an example of recommended settings for a validator. The most convenient way to configure these settings is either defining them in the configuration file or passing them as environment variables.

- Init.IsMining
- :true
- Init.MemoryHint
- : Can be left unspecified. It's recommended to configure it accordingly to the machine specification(for Eneergy Web, 768000000 is enough).
- EthStats
- namespace parameters if you want to report node status to Ethstats for your network.
- Metrics
- namespace parameters to enable node monitoring.
- KeyStore.PasswordFiles
- : The path to the file containing the password for the mining private key.
- KeyStore.UnlockAccounts
- : An array of accounts. Provide the miner public address here.
- KeyStore.BlockAuthorAccount
- : The miner public address should be provided here as well.
- Aura.ForceSealing
- :true
- Merge.Enabled
- :false

Here's an example of above settings in the Energy Web configuration file:

energyweb.cfg { "Init" :

{ "ChainSpecPath" :

"chainspec/energyweb.json" , "GenesisHash" :

"0x0b6d3e680af2fc525392c720666cce58e3d8e6fe75ba4b48cb36bcc69039229b" , "BaseDbPath" :

"nethermind_db/energyweb" , "LogFileName" :

"energyweb.log" , "MemoryHint" :

768000000 } , "Sync" :

{ "FastSync" :

true , "PivotNumber" :

26940000 , "PivotHash" :

"0x8835983de9578a4355313afd2a43d8eada6f2a4ddbd9c51da103e0d5f53c4d8b" , "PivotTotalDifficulty" :

"916720696485008220570331192421183561625789827 4" , "FastBlocks" :

true , "UseGethLimitsInFastBlocks" :

false , "FastSyncCatchUpHeightDelta" :

10000000000 } , "EthStats" :

{ "Enabled" :

true , "Name" :

"Nethermind Energy Web" , "Secret" :

"secret..." , "Url" :

"ws://localhost:3000/api" } , "Metrics" :

{ "Enabled" :

true , "NodeName" :

"Energy Web" , "PushGatewayUrl" :

"http://localhost:9091/metrics" } , "Mining" :

{ "MinGasPrice" :

1 } , "Merge" :

{ "Enabled" :

false } , "Aura" :

{ "ForceSealing" :

true } , "KeyStore" :

{ "PasswordFiles" :

["keystore/password"] , "UnlockAccounts" :

["0x..."] , "BlockAuthorAccount" :

"0x..." } , }

Running the validator

The above Docker Compose file can be run from the directory thedocker-compose.yml is located in as follows:

docker-compose up -d To check the logs and verify the sealing of blocks, run:

docker-compose logs -f nethermind-validatorEdit this page Last updatedonFeb 17, 2024 Previous Validators Next Building from source