Run an OP Stack rollup with Celestia underneath

This guide will show you how to run your own OP Stack devnet and testnet that posts data to Celestia's Mocha testnet usingroll-op andop-plasma-celestia .

If you don't have devops experience and would like to use a Rollups as a Service (RaaS) provider, see the RaaS category in the menu.

Dependency setup

- celestia-node

Setting up your light node

Sync and fund a Celestia light node. The light node must befully synced andfunded for you to be able to submit and retrievePayForBlobs to Mocha Testnet. This allows your rollup to post and retrieve data without any errors.

In order to mount existing data, you must have a node store that is in the default directory:

Mocha

Mainnet Beta

Arabica bash HOME/.celestia-light-mocha-4 HOME/.celestia-light-mocha-4 bash HOME/.celestia-light HOME/.celestia-light bash HOME/.celestia-light-arabica-11 HOME/.celestia-light-arabica-11 By default, the node will run with the account namedmy_celes_key on Mocha. This is the account that needs to be funded.

TIP

Unless you changed your configuration, you won't have to change anything. 😎

Deploying a devnet to Mocha

Seethe Alt-DA x Celestia README for instructions onhow to deploy a Devnet .

TIP for macOS users

If you are on macOS, you will need to run avenv before startingroll-op .

sh cd HOME /roll-op python3

-m

venv

./venv source

./venv/bin/activate cd HOME /roll-op python3

-m

venv

./venv source

./venv/bin/activate Congrats! Your devnet is running on a mock EVM chain and Celestia Mocha.

Deploying a testnet to an L1 (or L2) and Mocha

Seethe Alt-DA x Celestia README for instructions onhow to deploy a Testnet .

TIP

If you are using a public RPC for your EVM chain, you should to enabledeploy_slowly = true in yourconfig.toml . If you still have issues, we recommend running the integration with a high-availability, paid endpoint. When you are deploying to a live EVM network, pay attention and modify the configuration to post to non-Sepolia EVM chains.

Here is an example:

toml

Chain ID of your rollup

l2_chain_id = 1117733

Sepolia Ethereum

l1_chain_id = 11155111 l1_rpc_url = "https://ethereum-sepolia-rpc.publicnode.com"

Avoid issues with public RPC

deploy_slowly = true

Keys

contract_deployer_account = "0xaddress" contract_deployer_key = "privatekey" batcher_account = "0xaddress" batcher_key = "privatekey" proposer_account = "0xaddress" proposer_key = "privatekey" admin_account = "0xaddress" admin_key = "privatekey" p2p_sequencer_account = "0xaddress" p2p_sequencer_key = "privatekey"

Chain ID of your rollup

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Congratulations

Congrats! You now have an OP Stack rollup running with Celestia underneath.

You canlearn more about Alt-DA in Optimism docs. [][Edit this page on GitHub] Last updated: Previous page Intro to OP Stack integration Next page Bubs testnet []