Waku Node Operator Cheatsheet

What is Waku?

Waku is a family of robust, censorship-resistant and decentralised communication protocols designed to enable privacy focused messaging for web3 apps. Waku protocols are adaptive and platform agnostic - making it flexible for building use cases that are not just limited to chatting.

What are the requirements for running a Waku node?

Node operators are recommended to run 'nwaku'. The system requirements for running a nwaku node are :

> Minimum of 2GB RAM
>
> Available for Linux and macOS. Support for Windows is currently experimental.

Why should I run a Waku node?

The Waku Network is the backbone of all the applications that are built on top of Waku. The network is not yet incentivised and running a node is voluntary. Waku's incentivization is still work in progress.

What is nwaku?

nwaku is a robust and highly configurable Nim implementation for running a Waku node. Operators can select the protocols they want to support based on their motivation and available resources.

How to run a Waku node?

There are 3 recommended options to run a 'nwaku' node :

Step 1

Using docker compose
https://docs.waku.org/guides/nwaku/run-docker-compose

Requirements

- Git
- Docker and Docker Compose
- Ethereum Sepolia WebSocket Endpoint
- Wallet with Sepolia Ethereum (less than 0.1 Sepolia ETH)
- A password to protect your RLN membership

Step 2

Register for an RLN membership

RLN (Rate Limiting Nullifiers) is a decentralised rate limiting technology used by The Waku Network. If you only want to relay traffic without sending messages to the network, you don't need to register for RLN membership.

Step 3

Monitor the metrics using Grafana metrics dashboard and interact with the node

By using the docker compose command, you should already have a pre-configured Grafana metrics dashboard setup locally at http://localhost:3000/d/yns_4vFVk/nwaku-monitoring

Step 4

Use REST API to interact with your nwaku node

Your nwaku node provides a REST API on port 8645 for interacting with it. A detailed API reference can is linked in the following QR code.

Once all the above steps are completed, you are suggested to have a look at the advanced configuration and peer discovery methods in the docs.

Interested in learning more about our research?

Waku's protocols are backed by research and protocol definitions which are listed on Vac RFCs. We are actively working on various protocol simulations and benchmarking.

Waku core contributors are available for support

Join our Discord and get your questions answered by our community of contributors

Follow us on X @waku_org to stay updated about Waku's progress