How to Run a full node

Running a Full Node with Binaries

This guide provides step-by-step instructions on how to set up and run a full node for the Avail network using pre-compiled binaries. Whether you're a beginner or an experienced node operator, this guide aims to make the process straightforward.

BEFORE YOU START Ensure that you meet thesystem requirements . We recommend downloading the pre-compiled binary for speed and convenience.

Option 1: Run the Pre-Built Release

All you need to do is run:

./data-avail

-d

./data

--chain

goldberg

--name

MyAvailNode Sample Output The client output should look like this:

2023-11-07

17 :35:19

Avail

Node 2023-11-07

17 :35:19

✌

version

1.8 .0-9c5f37b9230 2023-11-07

17 :35:19

❤

by

Anonymous,

2017 -2023 2023-11-07

17 :35:19

Chain

specification:

Avail

Goldberg

Testnet 2023-11-07

17 :35:19

Node

name:

fresh-fan-5502 2023-11-07

17 :35:19

Role:

FULL 2023-11-07

17 :35:19

Database:

RocksDb

at

/tmp/substrateCTFPb5/chains/avail_goldberg_testnet/db/full 2023-11-07

17 :35:20

Initializing

Genesis

block/state (state: 0x6bc7 …ec83,

header-hash:

0x6f09 …a7ae) 2023-11-07

17 :35:20

Loading

GRANDPA

authority

set

from

genesis

on

what

appears

to

be

first

startup. 2023-11-07

17 :35:21

Creating
empty
BABE
epoch
changes
on
what
appears
to
be
first
startup. 2023-11-07
17 :35:21

Local
node
identity
is:
12 D3KooWEEa9iNANi6PUeXGaDqTgTR9T5YcP3A69nwbT4VXnG5R1 2023-11-07
17 :35:21
Prometheus
metrics
extended
with
avail
metrics 2023-11-07
17 :35:21

Operating
system:
linux 2023-11-07
17 :35:21

CPU
architecture:
x86_64 2023-11-07
17 :35:21

Target

environment:

gnu 2023-11-07

17 :35:21

CPU:

13 th

Gen

Intel (R) Core (TM) i7-13700K 2023-11-07

17 :35:21

CPU

cores:

16 2023-11-07

17 :35:21

Memory:

31863 MB 2023-11-07

17 :35:21

Kernel:

6.5 .8-100.fc37.x86_64 2023-11-07

17 :35:21

Linux

distribution:

Fedora

Linux

37 (Workstation Edition) 2023-11-07

17 :35:21

Virtual

machine:

no 2023-11-07

17 :35:21

Highest

known

block

at

0

2023-11-07

17 :35:21

~\

Prometheus

exporter

started

at

127.0 .0.1:9615 2023-11-07

17 :35:21

Running

JSON-RPC

server:

addr= 127.0 .0.1:9944,

allowed

origins=["http://localhost:*" ,

"http://127.0.0.1:*" ,

"https://localhost:*" ,

"https://127.0.0.1:*" ,

"https://polkadot.js.org"] 2023-11-07

17 :35:21

CPU

score:

1.62

GiBs 2023-11-07

17 :35:21

Memory

score:

22.99

GiBs 2023-11-07

17 :35:21

Disk

score (seq. writes): 6.78 GiBs 2023-11-07

17 :35:21

Disk

score (rand. writes): 2.67 GiBs 2023-11-07

17 :35:21

Discovered

new

external

address

for

our

node:

/ip4/176.61.156.176/tcp/30333/ws/p2p/12D3KooWEEa9iNANi6PUeXGaDqTgTR9T5YcP3A69nwbT4VXnG5R1 Your node will also appear on theAvail Telemetry (opens in a new tab) site, listed under the "Node name" from the node command output. Be sure to select the appropriate network tab at the top to view your node's status.

Option 2: Build From Source

To compile the client source code, run the node:

cargo

build

--release ./target/release/data-avail

-d

./data

--chain

goldberg

--name

MyAvailNode

How to Run a Full Node with Docker

This guide provides step-by-step instructions for setting up and running a full node on the Avail network using Docker. Whether you're new to node operation or have prior experience, this guide is designed to make the setup process straightforward.

BEFORE YOU START Ensure that you meet thesystem requirements . We recommend downloading the pre-compiled binary for speed and convenience.

Step 1: Launch Your Avail Node

To launch your Avail node, navigate to the/mnt/avail directory and execute the following Docker command:

cd

/mnt/avail sudo

docker

run

-v

(pwd) /state:/da/state:rw

-p

30333 :30333

-p

9615 :9615

-p

9944 :9944

-d

--restart

unless-stopped

availj/avail:v1.10.0.0

--chain

goldberg

--name

"MyAweasomeInContainerAvailAnode"

-d

/da/state The Docker command performs several important steps: * Map the state directory, providing read-write permissions for data persistence. * Opens various ports for different functionalities, including P2P connections, metrics, and HTTP RPC. * Utilizes the Avail image from Docker Hub and sets it to restart unless manually stopped.

Sample output You should see an output similar to the following:

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Step 2: Verify Node Functionality

Inspect Node Logs

To confirm that your node is operating as expected, inspect the Docker logs by running the following:

ubuntu:/mnt/avail#

docker

ps ubuntu:/mnt/avail#

docker

logs

5 b3978de8f35

5b3978de8f35 is the container id

Monitor Your Node

You can monitor the status of your node on the Avail Telemetry (opens in a new tab) website.

System Requirements Run an RPC node