Deploy an Arbitrum rollup devnet

We will go over installation of Arbitrum Nitro and deploying an instance on an Ubuntu AMD machine. This section covers all necessary dependencies needed to be installed.

Dependencies

- Docker
- running on your machine
- Docker Compose
- At least 8 GB RAM

General

bash sudo

apt

update && sudo

apt

upgrade

-y sudo

apt

install

curl

tar

wget

clang

pkg-config

libssl-dev

cmake

jq

build-essential

git

make

ncdu

-y sudo

apt

update && sudo

apt

upgrade

-y sudo

apt

install

curl

tar

wget

clang

pkg-config

libssl-dev

cmake

jq

build-essential

git

make

ncdu

-y

Rust

bash curl

--proto

'=https'

--tlsv1.2

-sSf

https://sh.rustup.rs

|

sh source

" HOME /.cargo/env" curl

--proto

'=https'

--tlsv1.2

-sSf

https://sh.rustup.rs

|

sh source

" HOME /.cargo/env"

Golang

bash ver = "1.20" cd HOME wget

"https://golang.org/dl/go ver .linux-amd64.tar.gz" sudo

rm

-rf

/usr/local/go sudo

tar

-C

/usr/local

-xzf

"go ver .linux-amd64.tar.gz" rm

"go ver .linux-amd64.tar.gz" echo

"export PATH= PATH :/usr/local/go/bin: HOME /go/bin"

HOME /.bash_profile source HOME /.bash_profile go

version ver = "1.20" cd HOME wget

"https://golang.org/dl/go ver .linux-amd64.tar.gz" sudo

rm

-rf

/usr/local/go sudo

tar

-C

/usr/local

-xzf

"go ver .linux-amd64.tar.gz" rm

"go ver .linux-amd64.tar.gz" echo

"export PATH= PATH :/usr/local/go/bin: HOME /go/bin"

HOME /.bash_profile source HOME /.bash_profile go

version

Node

bash curl

-o-

https://raw.githubusercontent.com/nvm-sh/nvm/v0.39.1/install.sh

|

bash export NVM_DIR = "([-z "{ XDG_CONFIG_HOME- }"] && printf %s "{ HOME }/.nvm" ||

printf %s "{ XDG_CONFIG_HOME }/nvm")" [-s

" NVM_DIR /nvm.sh"] && .

" NVM_DIR /nvm.sh"

This loads nvm

nvm

install

16.20 .0 nvm

use

16.20 .0 node

--version npm

install

--global

yarn yarn

--version curl

-o-

https://raw.githubusercontent.com/nvm-sh/nvm/v0.39.1/install.sh

|

bash export NVM_DIR = "([-z "{ XDG_CONFIG_HOME- }"] && printf %s "{ HOME }/.nvm" ||

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This loads nvm

nvm

install

16.20 .0 nvm

use

16.20 .0 node

--version npm

install

--global

yarn yarn

--version

Other Dependencies

bash cargo

install

--force

cbindgen rustup

target

add

wasm32-unknown-unknown cargo

install

--force

cbindgen rustup

target

add

wasm32-unknown-unknown

Clone the repository

bash git

clone

https://github.com/celestiaorg/nitro.git && cd

nitro/ git

fetch

--all git

checkout

tags/v2.2.2-no-blobstream git

submodule

update

--init git

submodule

update

--init

--recursive git

clone

https://github.com/celestiaorg/nitro.git && cd

nitro/ git

fetch

--all git

checkout

tags/v2.2.2-no-blobstream git

submodule

update

--init git

submodule

update

--init

--recursive

Installing Nitro from Source

Now you can install Nitro from source. After themake command completes, you can run the bash script that installs and runs the containers via docker-compose.

bash make

build-node-deps cd

nitro-testnode && ./test-node.bash

--init

--dev make

build-node-deps cd

nitro-testnode && ./test-node.bash

--init

--dev Congratulations! You have an Arbitrum Orbit rollup running with Nitro on your machine.

Validating with WASM

If you want to run a validator that will validate all blocks in WASM, add the flag--validate to nitro-testnode when starting with:

bash ./test-node.bash

--init

--dev

--validate ./test-node.bash

--init

--dev

--validate

TIP

You may need significantly more RAM and CPU to validate all blocks with WASM. You'll also need to send transactions to generate new batches to be posted to Celestia! [][[Edit this page on GitHub] Last updated: Previous page Introduction to Arbitrum rollups with Celestia as DA Next page Nitrogen testnet []