

# 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" ||
```

```
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

### 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 the make 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](#) [\[ \]](#)